

# I 000009 STIP

Section I - Rate Recommendation  
 Subsection A - Introduction  
 7/1/2016

Section I - A  
 Exhibit 1

## RATE INDICATION SUMMARY

<b>Statewide Rate Change Summary</b>		
<i>Indication Effective Date: 7/1/2016</i>		
(1)	Indicated Rate Change Based on Policy Year 2012 Data (Section I-B, Exhibit 1)	-0.3%
(2)	Indicated Rate Change Based on Policy Year 2013 Data (Section I-B, Exhibit 1)	3.3%
(3)	Average Indicated Rate Change = [ (1) + (2) ] / 2.0	1.5%

<b>Expense Constants</b>		
	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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 Subsection B - Calculation of Indicated Rate Change  
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Calculation of Indicated Rate Change	Policy Year <u>2012</u>	Policy Year <u>2013</u>
(1) Standard Earned Premium plus Adjusted ARAP Premium (Section I-D, Exhibit 2)	986,076,718	1,026,831,743
(2) Composite Adjustment Factor (Section I-D, Exhibit 2)	1.002	1.014
(3) Adjusted Standard Earned Premium plus Adjusted ARAP = [ (1) x (2) ]	987,813,075	1,041,537,390
(4) Cumulative Premium Development Factor to Ultimate (Section I-D, Exhibit 2)	0.999	1.003
(5) Rate On-Level Factor (Section I-D, Exhibit 2)	1.000	1.000
(6) Factor to Remove Expense Constant (Section I-D, Exhibit 2)	0.956	0.957
(7) Adjusted On-Level Standard Earned Premium plus Adjusted ARAP at Ultimate = [ (3) x (4) x (5) x (6) ]	943,321,497	999,808,461
(8) Annual Wage Trend (Section I-D, Exhibit 4)	0.024	0.024
(9) Wage Trend Factor to 7/1/2017 (based on Section I-D, Exhibit 4)	1.110	1.085
(10) Standard Earned Premium plus ARAP Projected to Prospective Effective Period = [ (7) x (9) ]	1,047,342,772	1,084,544,770
(11) Average On-Level Incurred Losses Projected to Prospective Effective Period (Section I-C Exhibit I, Page 1 Item (26), Page 2 Item (26))	670,317,247	720,313,956
(12) Loss Ratio Projected to Prospective Effective Period = [ (11) / (10) ]	0.640	0.664
(13) Factor to Remove the Large Deductible Contribution to the Residual Market Subsidy (Section I-E)	0.999	0.999
(14) Loss Adjustment Expense Factor (Section I-D, Exhibit 5)	1.200	1.200
(15) Fixed Expense Ratio (Section I-D, Exhibit 5)	0.050	0.051
(16) Indicated Policy Year Loss, LAE, and Fixed Expense Ratio = { [ (12) x (14) ] + (15) } x (13)	0.817	0.846
(17) Commission and Other Acquisition Expense Ratio (Section I-D, Exhibit 5)	0.109	0.109
(18) Premium Tax Ratio (Section I-D, Exhibit 5)	0.022	0.022
(19) Premium Discount Ratio (Section I-D, Exhibit 5)	0.050	0.050
(20) Variable Expense Ratio = [ (17) + (18) + (19) ]	0.180	0.180
(21) Underwriting Profit Provision (Section VII-A)	0.000	0.000
(22) Permissible Loss, LAE, and Fixed Expense Ratio = [ 1.0 - (20) - (21) ]	0.820	0.820
(23) Indicated Rate Change = [ (16) / (22) ] - 1.0	<b>-0.3%</b>	<b>3.3%</b>
(24) Overall Indicated Rate Change = [ (23) PY2012 + (23) PY2013 ] / 2.0		<b>1.5%</b>

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 Subsection C - Indicated Rate Change Detail  
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Incurred Losses Projected to the Prospective Effective Period  
 Policy Year 2012

	<u>Paid Method</u>	<u>Paid + Case Method</u>
<b>Indemnity Losses</b>		
(1) Indemnity Losses at Latest Month - Industry Total (Section I-D, Exhibit 1)	211,503,088	298,541,375
(2) Indemnity Loss Development Factor to 252 Months (Section I-D, Exhibit 1)	1.932	1.335
(3) Tail Factor 252 Months to Ultimate (Section I-D, Exhibit 1)	1.041	1.016
(4) Factor to Adjust for Escalated Benefits (Section I-D, Exhibit 1)	1.042	1.008
(5) Estimated Ultimate Indemnity Loss = [ (1) x (2) x (3) x (4) ]	443,319,571	407,891,894
(6) Annual Indemnity Loss Trend (Section I-D, Exhibit 4)	0.004	0.004
(7) Indemnity Loss Trend Factor to 7/1/2017	1.017	1.017
(8) Estimated Indemnity Losses Trended = [ (5) x (7) ]	450,935,003	414,898,742
(9) Estimated Benefit Change Factor Prior to 1/1/2016 (Section I-D, Exhibit 3)	1.021	1.021
(10) On Level Losses = [ (8) x (9) ]	460,193,116	423,416,998
(11) Estimated Benefit Change Factor Subsequent to 1/1/2016 (Section I-D, Exhibit 3)	1.007	1.007
(12) On-Level Incurred Losses Projected to Prospective Effective Period = [ (10) x (11) ]	463,436,445	426,401,137
<b>Medical Losses</b>		
(13) Medical Losses at Latest Month - Industry Total (Section I-D, Exhibit 1)	149,553,450	211,833,812
(14) Medical Loss Development Factor to 252 Months (Section I-D, Exhibit 1)	1.312	1.061
(15) Tail Factor 252 Months to Ultimate (Section I-D, Exhibit 1)	1.060	1.031
(16) Factor to Adjust for Escalated Benefits (1.000 for Medical Losses)	1.000	1.000
(17) Estimated Ultimate Medical Loss = [ (13) x (14) x (15) x (16) ]	208,023,641	231,806,051
(18) Annual Medical Loss Trend (Section I-D, Exhibit 4)	0.005	0.005
(19) Medical Loss Trend Factor to 7/1/2017	1.025	1.025
(20) Estimated Medical Losses Trended = [ (17) x (19) ]	213,210,742	237,586,170
(21) Estimated Benefit Change Factor Prior to 1/1/2016 (Section I-D, Exhibit 3)	1.000	1.000
(22) On Level Losses = [ (20) x (21) ]	213,210,742	237,586,170
(23) Estimated Benefit Change Factor Subsequent to 1/1/2016 (Section I-D, Exhibit 3)	1.000	1.000
(24) On-Level Incurred Losses Projected to Prospective Effective Period = [ (22) x (23) ]	213,210,742	237,586,170
<b>Total Combined Medical and Indemnity Losses</b>		
(25) Total Estimated Ultimate Losses Trended and On Level = [ (12) + (24) ]	676,647,187	663,987,307
(26) Average On-Level Incurred Losses Projected to Prospective Effective Period	670,317,247	

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## Incurred Losses Projected to the Prospective Effective Period Policy Year 2013

	<u>Paid Method</u>	<u>Paid + Case Method</u>
<b>Indemnity Losses</b>		
(1) Indemnity Losses at Latest Month - Industry Total (Section I-D, Exhibit 1)	121,090,186	233,858,456
(2) Indemnity Loss Development Factor to 252 Months (Section I-D, Exhibit 1)	3.695	1.884
(3) Tail Factor 252 Months to Ultimate (Section I-D, Exhibit 1)	1.041	1.016
(4) Factor to Adjust for Escalated Benefits (Section I-D, Exhibit 1)	1.042	1.008
(5) Estimated Ultimate Indemnity Loss = [ (1) x (2) x (3) x (4) ]	485,279,028	451,051,902
(6) Annual Indemnity Loss Trend (Section I-D, Exhibit 4)	0.004	0.004
(7) Indemnity Loss Trend Factor to 7/1/2017	1.013	1.013
(8) Estimated Indemnity Losses Trended = [ (5) x (7) ]	491,749,897	457,066,376
(9) Estimated Benefit Change Factor Prior to 1/1/2016 (Section I-D, Exhibit 3)	1.016	1.016
(10) On Level Losses = [ (8) x (9) ]	499,764,538	464,515,738
(11) Estimated Benefit Change Factor Subsequent to 1/1/2016 (Section I-D, Exhibit 3)	1.007	1.007
(12) On-Level Incurred Losses Projected to Prospective Effective Period = [ (10) x (11) ]	503,286,756	467,789,531
<b>Medical Losses</b>		
(13) Medical Losses at Latest Month - Industry Total (Section I-D, Exhibit 1)	119,079,317	209,823,828
(14) Medical Loss Development Factor to 252 Months (Section I-D, Exhibit 1)	1.675	1.152
(15) Tail Factor 252 Months to Ultimate (Section I-D, Exhibit 1)	1.060	1.031
(16) Factor to Adjust for Escalated Benefits (1.000 for Medical Losses)	1.000	1.000
(17) Estimated Ultimate Medical Loss = [ (13) x (14) x (15) x (16) ]	211,381,562	249,261,632
(18) Annual Medical Loss Trend (Section I-D, Exhibit 4)	0.005	0.005
(19) Medical Loss Trend Factor to 7/1/2017	1.019	1.019
(20) Estimated Medical Losses Trended = [ (17) x (19) ]	215,469,494	254,082,131
(21) Estimated Benefit Change Factor Prior to 1/1/2016 (Section I-D, Exhibit 3)	1.000	1.000
(22) On Level Losses = [ (20) x (21) ]	215,469,494	254,082,131
(23) Estimated Benefit Change Factor Subsequent to 1/1/2016 (Section I-D, Exhibit 3)	1.000	1.000
(24) On-Level Incurred Losses Projected to Prospective Effective Period = [ (22) x (23) ]	215,469,494	254,082,131
<b>Total Combined Medical and Indemnity Losses</b>		
(25) Total Estimated Ultimate Losses Trended and On Level = [ (12) + (24) ]	718,756,251	721,871,662
(26) Average On-Level Incurred Losses Projected to Prospective Effective Period	720,313,956	

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## Summary of Estimated Ultimate Losses

### Paid Loss Development Method

Policy Year (1)	Benefit Type (2)	Paid Losses at 12/31/14 (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)
2012	Indemnity	211,503,088	1.932	408,709,259	1.041	1.042	443,319,571
2012	Medical	149,553,450	1.312	196,273,741	1.060	1.000	208,023,641
2012	Total	361,056,538		604,983,000			651,343,213
2013	Indemnity	121,090,186	3.695	447,392,908	1.041	1.042	485,279,028
2013	Medical	119,079,317	1.675	199,441,995	1.060	1.000	211,381,562
2013	Total	240,169,503		646,834,902			696,660,590

### Paid Plus Case Loss Development Method

Policy Year (9)	Benefit Type (10)	Paid Plus Case Losses at 12/31/14 (8)	Cumulative Factors from Latest Month to 252 Months (9)	Losses Developed to 252 Months (10)	Tail Factor from 252 Months to Ultimate (11)	Factor to Adjust for Escalated Benefits (12)	Estimated Ultimate Losses (16)
2012	Indemnity	298,541,375	1.335	398,529,044	1.016	1.008	407,891,894
2012	Medical	211,833,812	1.061	224,739,417	1.031	1.000	231,806,051
2012	Total	510,375,187		623,268,461			639,697,946
2013	Indemnity	233,858,456	1.884	440,698,347	1.016	1.008	451,051,902
2013	Medical	209,823,828	1.152	241,662,861	1.031	1.000	249,261,632
2013	Total	443,682,284		682,361,208			700,313,534

Notes:

- (3), (11): Aggregate Financial Data.
- (4) = (5) / (3)
- (5) Section II: Exhibit 1, Page 2, Column (5) + Exhibit 1, Page 3, Column (5).
- (6): Section II - C, Exhibit 1, Page 1.
- (7): Section II - D, Exhibit 1, Page 1.
- (8) = (5) x (6) x (7)
- (12) = (13) / (11)
- (13) Section II: Exhibit 1, Page 2, Column (10) + Exhibit 1, Page 3, Column (10).
- (14): Section II - C, Exhibit 2, Page 1.
- (15): Section II - D, Exhibit 2, Page 1.
- (16) = (13) x (14) x (15)

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## Summary of Estimated Ultimate Losses Remainder of Industry

### Paid Loss Development Method

Policy Year (1)	Benefit Type (2)	Paid Losses at 12/31/14 (3)	Cumulative Factors from Latest Month to 252 Months (4)	Losses Developed to 252 Months (5)
2012	Indemnity	185,741,467	1.910	354,849,348
2012	Medical	133,329,827	1.304	173,903,511
2012	Total	319,071,294		528,752,859
2013	Indemnity	105,957,011	3.632	384,840,923
2013	Medical	106,634,364	1.654	176,352,491
2013	Total	212,591,375		561,193,413

### Paid Plus Case Loss Development Method

Policy Year (6)	Benefit Type (7)	Paid Plus Case Losses at 12/31/14 (8)	Cumulative Factors from Latest Month to 252 Months (9)	Losses Developed to 252 Months (10)
2012	Indemnity	262,232,357	1.333	349,548,817
2012	Medical	191,033,204	1.070	204,469,268
2012	Total	453,265,561		554,018,086
2013	Indemnity	206,491,681	1.861	384,370,188
2013	Medical	189,332,014	1.156	218,798,368
2013	Total	395,823,695		603,168,556

Notes:

- (3), (8): Aggregate Financial Data.
- (4), (9): Section II - B, Exhibit 1, Page 1.
- (5) = (3) x (4)
- (10) = (8) x (9)

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## Summary of Estimated Ultimate Losses AIG

### Paid Loss Development Method

Policy Year (1)	Benefit Type (2)	Paid Losses at 12/31/14 (3)	Cumulative Factors from Latest Month to 252 Months (4)	Losses Developed to 252 Months (5)
2012	Indemnity	25,761,621	2.091	53,859,911
2012	Medical	16,223,623	1.379	22,370,230
2012	Total	41,985,244		76,230,141
2013	Indemnity	15,133,175	4.133	62,551,985
2013	Medical	12,444,953	1.855	23,089,504
2013	Total	27,578,128		85,641,489

### Paid Plus Case Loss Development Method

Policy Year (6)	Benefit Type (7)	Paid Plus Case Losses at 12/31/14 (8)	Cumulative Factors from Latest Month to 252 Months (9)	Losses Developed to 252 Months (10)
2012	Indemnity	36,309,018	1.349	48,980,227
2012	Medical	20,800,608	0.974	20,270,148
2012	Total	57,109,626		69,250,375
2013	Indemnity	27,366,775	2.058	56,328,158
2013	Medical	20,491,814	1.116	22,864,493
2013	Total	47,858,589		79,192,651

Notes:

- (3), (8): Aggregate Financial Data.
- (4), (9): Section II - B, Exhibit 1, Page 2.
- (5) = (3) x (4)
- (10) = (8) x (9)

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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 12/31/2014	
	2012	2013
(1) Standard Earned Premium plus Adjusted ARAP Premium	986,076,718	1,026,831,743
(2) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.002	1.015
(3) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	1.000	1.000
(4) Composite Adjustment Factor = (2) x (3)	1.002	1.014
(5) Adjusted Standard Earned Premium plus ARAP = (1) x (4)	987,813,075	1,041,537,390
(6) Cumulative Premium Development Factor to Ultimate (see Section III, Exhibit 1, Page 2)	0.999	1.003
(7) Rate On-Level Factor	1.000	1.000
(8) Factor to Remove Expense Constant	0.956	0.957
(9) Adjusted On-Level Earned Premium at Ultimate = (5) x (6) x (7) x (8)	943,321,497	999,808,461

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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 Subsection D - Benefit Change Adjustments Summary  
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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
1/1/2016	Prosp. Eff. Period					1.007	1.000
PY 2012	1/1/2016					1.021	1.000
PY 2013	1/1/2016					1.016	1.000
PY 2004	Prosp. Eff. Period					1.093	1.036
PY 2005	Prosp. Eff. Period	1.052	1.059	1.106	1.032	1.082	1.032
PY 2006	Prosp. Eff. Period	1.047	1.051	1.090	1.028	1.070	1.032
PY 2007	Prosp. Eff. Period	1.041	1.042	1.074	1.023	1.059	1.032
PY 2008	Prosp. Eff. Period	1.035	1.034	1.059	1.018	1.047	1.024
PY 2009	Prosp. Eff. Period	1.033	1.031	1.054	1.016	1.043	1.002
PY 2010	Prosp. Eff. Period	1.033	1.032	1.055	1.017	1.044	1.000
PY 2011	Prosp. Eff. Period	1.030	1.027	1.046	1.015	1.037	1.000
PY 2012	Prosp. Eff. Period	1.025	1.020	1.035	1.011	1.028	1.000
PY 2013	Prosp. Eff. Period	1.023	1.017	1.030	1.010	1.023	1.000
PY 2011	CPY 2012_07	1.006	1.009	1.015	1.004		1.000
PY 2012	CPY 2013_07	1.004	1.004	1.008	1.003		1.000
PY 2013	CPY 2014_07	1.012	1.007	1.012	1.004		1.000
CPY 2012_07	Prosp. Eff. Period						1.016
CPY 2013_07	Prosp. Eff. Period						1.014
CPY 2014_07	Prosp. Eff. Period						1.009
CPY 2008_09	Prosp. Eff. Period						1.029
Prior Eff. Period (using benefit level projections from prior filing)	Prosp. Eff. Period					1.017	1.000
							1.012

**Notes:**

1/1/2016 refers to a point in time. All other time periods refer to Policy Years.

Example: PY 2005 to Prosp. Eff. Period for Permanent Partial = 1.106 = 1.131 / 1.023

where 1.131 is the Index Factor for Prosp. Eff. Period and 1.023 is the Index Factor for PY 2005 for Indemnity Permanent Partial, from Exhibit 2.

**Trend Summary**

		Indemnity		Medical				SAWW
		Severity	Frequency	Lost Time Medical		Medical Only		
				Severity	Frequency	Severity	Frequency	
(1)	Massachusetts Trend	3.3%	-1.5%	4.5%	-1.5%	2.2%	-4.3%	2.4%
	5 Year	3.5%	-1.4%	4.9%	-1.4%	3.2%	-4.6%	2.4%
	6 Year	3.2%	-1.0%	5.7%	-1.0%	2.1%	-4.2%	2.7%
	7 Year	3.4%	-1.4%	4.8%	-1.4%	1.6%	-4.4%	2.4%
	8 Year	3.2%	-1.5%	4.0%	-1.5%	1.7%	-4.3%	2.1%
	9 Year	3.3%	-1.7%	4.1%	-1.7%	2.0%	-4.2%	2.2%
	10 Year	3.0%	-1.9%	3.7%	-1.9%	2.5%	-4.2%	2.3%
(2)	Complement of Credibility	-0.7%	-3.2%	1.7%	-3.2%	4.9%	-4.7%	2.7%
(3)	Credibility Weighted Trend	2.6%	-2.1%	3.1%	-2.1%	2.9%	-4.4%	2.4%
	5 Year	1.3%	-2.5%	2.8%	-2.5%	3.5%	-4.7%	2.4%
	6 Year	1.9%	-2.0%	3.7%	-2.0%	3.3%	-4.4%	2.7%
	7 Year	2.8%	-2.1%	3.3%	-2.1%	2.8%	-4.5%	2.4%
	8 Year	3.2%	-1.9%	2.8%	-1.9%	2.3%	-4.4%	2.1%
	9 Year	3.3%	-2.1%	3.1%	-2.1%	2.4%	-4.3%	2.2%
	10 Year	3.0%	-2.2%	3.0%	-2.2%	3.1%	-4.2%	2.3%
(4)	Selected Trend	2.6%	-2.1%	3.1%	-2.1%	2.9%	-4.4%	2.4%

	Lost Time Medical	Medical Only
(5) Medical Loss Trend	0.9%	-1.7%
(6) Fraction of Total Medical	86.5%	13.5%
(7) Total Medical Loss Trend	0.5%	

	Indemnity	Medical
(8) Total Loss Trend	0.4%	0.5%
(9) SAWW Trend	2.4%	2.4%
(10) Total Net Trend	-1.9%	-1.8%

Notes:

(1),(2),(3): Section V, Exhibit 2 Severity; Exhibit 3 Frequency and SAWW.

(4) = 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

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Exhibit 5

## Summary of Expense Ratios

(1)	Commission and Other Acquisition Expense Ratio	10.9%
(2)	Average Premium Discount as a % of Standard Premium + ARAP	5.0%
(3)	Premium Tax Ratio = 2.28% x [ 1.0 - (2) ]	2.2%
(4)	Variable Expense Ratio = (1) + (2) + (3)	18.0%
(5)	Fixed Expense Ratio	5.0%
(6)	Total Loss Adjustment Expense Ratio (LAE / Loss)	20.0%

### 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.

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## 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	82.0%		
(2)	Fixed Expense Ratio	5.0%		
(3)	Permissible Loss and LAE Ratio = [ (1) - (2) ]	76.9%		
(4)	Loss Ratio Differential, r	1.161		
(5)	Market Weight - $w_x$		22%	78%
(6)	Implied Permissible Loss and LAE Ratio		0.863	0.743
(7)	Implied Permissible Loss, LAE, and Fixed Expense Ratio		0.913	0.793
(8)	Implied Permissible Loss, LAE, and Fixed Expense Ratio Differential	1.151		
(9)	Variable Expense Ratio	18.0%	11.2%	20.0%
(10)	Underwriting Profit Provision	0.00%		
(11)	Implied Rate Factor Equivalent		1.028	0.991
(12)	Implied Rate Differential, d	1.037		
(13)	Residual Market Rate equivalent, $Q_{rm}$	1.028		
(14)	Proportion of Total Voluntary Assessable Premium Not from Large Deductibles, u	0.792		
(15)	Factor to Remove the Large Deductible Contribution to the Residual Market Subsidy	<b>0.999</b>		

### 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-D, 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 <sub>rm</sub> / LR <sub>vol</sub> = (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)
2007	1,042	551	52.9%	169	93	55.2%	874	458	52.4%	1.054
2008	857	515	60.1%	125	77	61.3%	732	439	59.9%	1.024
2009	822	519	63.2%	110	77	70.4%	712	442	62.1%	1.135
2010	893	541	60.6%	108	71	65.9%	785	470	59.9%	1.101
2011	959	558	58.2%	133	101	75.9%	825	457	55.3%	1.371
2012	984	510	51.9%	176	114	64.7%	808	397	49.1%	1.317
2013	1,025	444	43.3%	210	97	46.3%	815	347	42.5%	1.088
(12) Average Last 2 Years				193	105	54.7%	811	372	45.8%	1.194
(13) Average All Years				147	90	61.2%	793	430	54.2%	1.129
(14) Selected Loss Ratio Differential										<b>1.161</b>

Notes:  
 Data as of 12/31/2014 from Aggregate Financial Database, excluding large deductible policies.

I 000026 STIP

Residual Market Weight "w<sub>rm</sub>"  
 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 <sub>rm</sub> " = (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)
2013	941	26	28	205	197	746	0.210	0.791
2014	965	26	27	234	200	766	0.228	0.793
Selected	953	26	27	220	198	756	0.219	0.792

Note:

Refers to the prospective effective period from 7/1/2016 through 7/1/2017.

(2),(3),(4),(5),(6): Massachusetts Workers' Compensation Assigned Risk Pool Special Bulletin No. 11-14 for Calendar Year 2013 and Special Bulletin No. 1115 for Calendar Year 2014

(2),(3),(4),(5),(6),(7): Selected based on two-year average of Calendar Year 2013 and 2014.

## II 000011 STIP

Section II - Loss Development  
 Subsection A - Loss Development Summary  
 7/1/2016

Section II - A  
 Exhibit 1  
 Page 1

### Summary of Estimated Ultimate Losses

#### Paid Loss Development Method

Policy Year (1)	Benefit Type (2)	Paid Losses at 12/31/14 (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)
2012	Indemnity	211,503,088	1.932	408,709,259	1.041	1.042	443,319,571
2012	Medical	149,553,450	1.312	196,273,741	1.060	1.000	208,023,641
2012	Total	361,056,538		604,983,000			651,343,213
2013	Indemnity	121,090,186	3.695	447,392,908	1.041	1.042	485,279,028
2013	Medical	119,079,317	1.675	199,441,995	1.060	1.000	211,381,562
2013	Total	240,169,503		646,834,902			696,660,590

#### Paid Plus Case Loss Development Method

Policy Year (9)	Benefit Type (10)	Paid Plus Case Losses at 12/31/14 (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)
2012	Indemnity	298,541,375	1.335	398,529,044	1.016	1.008	407,891,894
2012	Medical	211,833,812	1.061	224,739,417	1.031	1.000	231,806,051
2012	Total	510,375,187		623,268,461			639,697,946
2013	Indemnity	233,858,456	1.884	440,698,347	1.016	1.008	451,051,902
2013	Medical	209,823,828	1.152	241,662,861	1.031	1.000	249,261,632
2013	Total	443,682,284		682,361,208			700,313,534

**Notes:**

(3), (11): Aggregate Financial Data.

(4) = (5) / (3)

(5) Section II: Exhibit 1, Page 2, Column (5) + Exhibit 1, Page 3, Column (5).

(6): Section II - C, Exhibit 1, Page 1.

(7): Section II - D, Exhibit 1, Page 1.

(8) = (5) x (6) x (7)

(12) = (13) / (11)

(13) Section II: Exhibit 1, Page 2, Column (10) + Exhibit 1, Page 3, Column (10).

(14): Section II - C, Exhibit 2, Page 1.

(15): Section II - D, Exhibit 2, Page 1.

(16) = (13) x (14) x (15)

## II 000012 STIP

Section II - Loss Development  
 Subsection A - Loss Development Summary  
 7/1/2016

Section II - A  
 Exhibit 1  
 Page 2

### Summary of Estimated Ultimate Losses Remainder of Industry

#### Paid Loss Development Method

Policy Year (1)	Benefit Type (2)	Paid Losses at 12/31/14 (3)	Cumulative Factors from Latest Month to 252 Months (4)	Losses Developed to 252 Months (5)
2012	Indemnity	185,741,467	1.910	354,849,348
2012	Medical	133,329,827	1.304	173,903,511
2012	Total	319,071,294		528,752,859

2013	Indemnity	105,957,011	3.632	384,840,923
2013	Medical	106,634,364	1.654	176,352,491
2013	Total	212,591,375		561,193,413

#### Paid Plus Case Loss Development Method

Policy Year (6)	Benefit Type (7)	Paid Plus Case Losses at 12/31/14 (8)	Cumulative Factors from Latest Month to 252 Months (9)	Losses Developed to 252 Months (10)
2012	Indemnity	262,232,357	1.333	349,548,817
2012	Medical	191,033,204	1.070	204,469,268
2012	Total	453,265,561		554,018,086

2013	Indemnity	206,491,681	1.861	384,370,188
2013	Medical	189,332,014	1.156	218,798,368
2013	Total	395,823,695		603,168,556

Notes:

(3), (8): Aggregate Financial Data.

(4), (9): Section II - B, Exhibit 1, Page 1.

(5) = (3) x (4)

(10) = (8) x (9)



## II 000013 STIP

Section II - Loss Development  
 Subsection A - Loss Development Summary  
 7/1/2016

Section II - A  
 Exhibit 1  
 Page 3

### Summary of Estimated Ultimate Losses AIG

#### Paid Loss Development Method

Policy Year (1)	Benefit Type (2)	Paid Losses at 12/31/14 (3)	Cumulative Factors from Latest Month to 252 Months (4)	Losses Developed to 252 Months (5)
2012	Indemnity	25,761,621	2.091	53,859,911
2012	Medical	16,223,623	1.379	22,370,230
2012	Total	41,985,244		76,230,141

2013	Indemnity	15,133,175	4.133	62,551,985
2013	Medical	12,444,953	1.855	23,089,504
2013	Total	27,578,128		85,641,489

#### Paid Plus Case Loss Development Method

Policy Year (6)	Benefit Type (7)	Paid Plus Case Losses at 12/31/14 (8)	Cumulative Factors from Latest Month to 252 Months (9)	Losses Developed to 252 Months (10)
2012	Indemnity	36,309,018	1.349	48,980,227
2012	Medical	20,800,608	0.974	20,270,148
2012	Total	57,109,626		69,250,375

2013	Indemnity	27,366,775	2.058	56,328,158
2013	Medical	20,491,814	1.116	22,864,493
2013	Total	47,858,589		79,192,651

Notes:

(3), (8): Aggregate Financial Data.

(4), (9): Section II - B, Exhibit 1, Page 2.

(5) = (3) x (4)

(10) = (8) x (9)

Policy Year Aggregate Financial Data  
 Summary of Loss Development Factors  
 Remainder of 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
<b>(1) Indemnity Paid Losses</b>																			
2 Year Average	1.901	1.354	1.158	1.073	1.026	1.025	1.013	1.006	1.010	1.006	1.014	1.007	1.003	1.003	1.003	1.002	1.006	1.002	1.003
Cumulative Factor to 252	3.632	1.910	1.411	1.218	1.136	1.107	1.080	1.066	1.059	1.049	1.043	1.029	1.022	1.018	1.016	1.012	1.011	1.005	1.003
<b>(2) Medical Paid Losses</b>																			
2 Year Average	1.268	1.086	1.037	1.014	1.010	1.014	1.010	1.007	1.010	1.011	1.009	1.008	1.009	1.010	1.007	1.007	1.009	1.006	1.006
Cumulative Factor to 252	1.654	1.304	1.201	1.158	1.143	1.131	1.116	1.105	1.097	1.085	1.074	1.064	1.056	1.046	1.036	1.028	1.021	1.012	1.006
<b>(3) Indemnity Paid Plus Case Losses</b>																			
2 Year Average	1.396	1.147	1.072	1.021	1.011	1.007	1.004	1.003	1.006	1.000	1.012	1.005	1.000	1.001	1.002	1.002	1.004	1.001	1.001
Cumulative Factor to 252	1.861	1.333	1.163	1.085	1.062	1.050	1.043	1.039	1.036	1.029	1.029	1.016	1.011	1.011	1.010	1.008	1.006	1.002	1.001
<b>(4) Medical Paid Plus Case Losses</b>																			
2 Year Average	1.080	1.032	1.011	0.995	0.997	1.018	0.992	0.999	1.003	1.004	0.996	1.001	1.014	0.992	1.012	0.999	1.002	1.000	1.002
Cumulative Factor to 252	1.156	1.070	1.037	1.026	1.031	1.034	1.016	1.024	1.025	1.022	1.017	1.021	1.021	1.007	1.015	1.003	1.004	1.002	1.002

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

II 000014 STIP

Policy Year Aggregate Financial Data  
 Summary of Loss Development Factors  
 AIG

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
<b>(1) Indemnity Paid Losses</b>																			
5 Year Average	1.977	1.386	1.188	1.081	1.046	1.025	1.016	1.005	1.009	1.005	1.006	1.010	1.010	1.006	1.005	1.021	1.000	1.000	1.000
Cumulative Factor to 252	4.133	2.091	1.509	1.270	1.175	1.123	1.096	1.079	1.073	1.064	1.059	1.052	1.042	1.032	1.026	1.021	1.000	1.000	1.000
<b>(2) Medical Paid Losses</b>																			
5 Year Average	1.346	1.107	1.044	1.024	1.018	1.016	1.017	1.014	1.011	1.010	1.012	1.012	1.012	1.010	1.006	1.007	1.003	1.003	1.001
Cumulative Factor to 252	1.855	1.379	1.245	1.193	1.164	1.143	1.125	1.106	1.091	1.079	1.068	1.056	1.043	1.031	1.020	1.014	1.007	1.004	1.001
<b>(3) Indemnity Paid Plus Case Losses</b>																			
5 Year Average	1.526	1.192	1.070	1.032	1.001	0.998	1.005	1.002	1.004	0.999	1.002	1.006	1.007	1.006	0.996	1.007	1.008	0.995	0.989
Cumulative Factor to 252	2.058	1.349	1.131	1.058	1.025	1.024	1.026	1.021	1.020	1.015	1.016	1.014	1.008	1.001	0.994	0.999	0.991	0.984	0.989
<b>(4) Medical Paid Plus Case Losses</b>																			
5 Year Average	1.145	1.036	0.994	0.988	0.976	0.978	0.988	0.996	0.997	0.997	1.007	1.018	1.002	0.988	1.012	0.992	0.999	1.013	0.995
Cumulative Factor to 252	1.116	0.974	0.940	0.946	0.958	0.981	1.003	1.016	1.020	1.023	1.026	1.019	1.001	0.999	1.012	0.999	1.007	1.008	0.995

Notes:

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



## II 000017 STIP

Section II - Loss Development  
 Subsection B - Policy Year Data  
 7/1/2016

Section II - B  
 Exhibit 2  
 Page 2

### Policy Year Aggregate Financial Data Calculation of Medical Paid Loss Development Factors Remainder of 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	
2011	97,411	122,145	1.254	2001	121,093	122,224	1.009
2012	103,883	133,177	1.282	2002	128,349	129,502	1.009
Average			1.268	Average			1.009
	36	48			156	168	
2010	116,208	125,444	1.079	2000	119,846	120,782	1.008
2011	122,145	133,521	1.093	2001	122,224	123,221	1.008
Average			1.086	Average			1.008
	48	60			168	180	
2009	120,487	124,884	1.036	1999	119,577	120,775	1.010
2010	125,444	130,026	1.037	2000	120,782	121,841	1.009
Average			1.037	Average			1.009
	60	72			180	192	
2008	118,707	120,016	1.011	1998	109,110	109,952	1.008
2009	124,884	126,933	1.016	1999	120,775	122,242	1.012
Average			1.014	Average			1.010
	72	84			192	204	
2007	127,500	129,263	1.014	1997	92,834	93,405	1.006
2008	120,016	120,804	1.007	1998	109,952	110,831	1.008
Average			1.010	Average			1.007
	84	96			204	216	
2006	114,623	116,183	1.014	1996	94,354	95,191	1.009
2007	129,263	131,085	1.014	1997	93,405	93,877	1.005
Average			1.014	Average			1.007
	96	108			216	228	
2005	112,633	113,762	1.010	1995	95,782	96,641	1.009
2006	116,183	117,356	1.010	1996	95,191	96,015	1.009
Average			1.010	Average			1.009
	108	120			228	240	
2004	120,304	121,291	1.008	1994	108,050	108,658	1.006
2005	113,762	114,506	1.007	1995	96,641	97,248	1.006
Average			1.007	Average			1.006
	120	132			240	252	
2003	123,568	125,238	1.014	1994	108,658	109,361	1.006
2004	121,291	122,133	1.007	Average			1.006
Average			1.010				
	132	144					
2002	127,249	128,349	1.009				
2003	125,238	126,805	1.013				
Average			1.011				

Notes:  
 Losses from Aggregate Financial Data.









# II 000021 STIP

Section II - Loss Development  
 Subsection B - Policy Year Data  
 7/1/2016

Section II - B  
 Exhibit 3  
 Page 2

## Policy Year Aggregate Financial Data Calculation of Medical Paid Plus Case Loss Development Factors Remainder of 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	
2011	151,860	166,146	1.094	2001	148,409	148,390	1.000
2012	179,158	190,861	1.065	2002	151,882	150,678	0.992
Average			1.080	Average			0.996
	36	48			156	168	
2010	159,940	164,373	1.028	2000	152,306	152,948	1.004
2011	166,146	172,291	1.037	2001	148,390	148,034	0.998
Average			1.032	Average			1.001
	48	60			168	180	
2009	154,369	155,978	1.010	1999	142,716	144,458	1.012
2010	164,373	166,193	1.011	2000	152,948	155,241	1.015
Average			1.011	Average			1.014
	60	72			180	192	
2008	141,136	138,632	0.982	1998	136,471	133,473	0.978
2009	155,978	157,080	1.007	1999	144,458	145,381	1.006
Average			0.995	Average			0.992
	72	84			192	204	
2007	151,105	152,436	1.009	1997	102,803	103,620	1.008
2008	138,632	136,588	0.985	1998	133,473	135,526	1.015
Average			0.997	Average			1.012
	84	96			204	216	
2006	135,005	135,715	1.005	1996	108,670	108,520	0.999
2007	152,436	157,215	1.031	1997	103,620	103,630	1.000
Average			1.018	Average			0.999
	96	108			216	228	
2005	135,486	133,412	0.985	1995	105,612	105,985	1.004
2006	135,715	135,595	0.999	1996	108,520	108,511	1.000
Average			0.992	Average			1.002
	108	120			228	240	
2004	142,275	141,958	0.998	1994	122,132	121,595	0.996
2005	133,412	133,495	1.001	1995	105,985	106,480	1.005
Average			0.999	Average			1.000
	120	132			240	252	
2003	143,786	144,346	1.004	1994	121,595	121,814	1.002
2004	141,958	142,299	1.002	Average			1.002
Average			1.003				
	132	144					
2002	152,198	151,882	0.998				
2003	144,346	145,872	1.011				
Average			1.004				

Notes:  
 Losses from Aggregate Financial Data.





## II 000024 STIP

### Paid Loss Tail Factors

#### Indemnity 252nd Month to Ultimate Loss Tail Development Factor

(1) Valuation Date [Y]	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
(2) Prior to Policy Year 1994 at [Y]	9,320,159,948	9,332,981,116	9,347,695,913	9,367,395,552	9,386,010,494
(3) Prior to Policy Year 1994 at [Y] - 1 yr	9,297,626,746	9,320,159,948	9,332,981,116	9,347,695,913	9,367,395,552
(4) Difference = (2) - (3)	22,533,202	12,821,168	14,714,797	19,699,639	18,614,942
(5) Policy Year 1994 at [Y]	223,524,193	225,227,100	225,586,479	226,128,171	226,761,861
(6) Ratio = (4) / (5)	0.101	0.057	0.065	0.087	0.082
(7) Growth Factor	0.600	0.600	0.600	0.600	0.600
(8) Product = (6) x (7)	0.060	0.034	0.039	0.052	0.049
(9) Factor to Ultimate = 1.000 + (8)	1.060	1.034	1.039	1.052	1.049
(10) Month [M]	204	216	228	240	252
(11) Factor to Ultimate = (9)	1.060	1.034	1.039	1.052	1.049
(12) Factor from [252] to [M]	0.987	0.991	0.996	0.997	1.000
(13) Indicated [252] to Ultimate Tail Factor = (11) x (12)	1.046	1.025	1.035	1.050	1.049
(14) Five Year Average					1.041

#### Medical 252nd Month to Ultimate Loss Tail Development Factor

(15) Valuation Date [Y]	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
(16) Prior to Policy Year 1994 at [Y]	2,879,010,747	2,891,163,868	2,906,163,786	2,922,013,906	2,935,484,626
(17) Prior to Policy Year 1994 at [Y] - 1 yr	2,866,065,010	2,879,010,747	2,891,163,868	2,906,163,786	2,922,013,906
(18) Difference = (16) - (17)	12,945,737	12,153,121	14,999,918	15,850,120	13,470,720
(19) Policy Year 1994 at [Y]	112,442,844	113,011,699	113,602,008	114,216,593	114,926,352
(20) Ratio = (18) / (19)	0.115	0.108	0.132	0.139	0.117
(21) Growth Factor	0.600	0.600	0.600	0.600	0.600
(22) Product = (20) x (21)	0.069	0.065	0.079	0.083	0.070
(23) Factor to Ultimate = 1.000 + (22)	1.069	1.065	1.079	1.083	1.070
(24) Month [M]	204	216	228	240	252
(25) Factor to Ultimate = (23)	1.069	1.065	1.079	1.083	1.070
(26) Factor from [252] to [M]	0.974	0.981	0.989	0.994	1.000
(27) Indicated [252] to Ultimate Tail Factor = (25) x (26)	1.041	1.044	1.067	1.077	1.070
(28) Five Year Average					1.060

**Notes:**

- (2), (3), (5): Indemnity Paid Losses from Aggregate Financial Data.
- (16), (17), (19): Medical Paid Losses from Aggregate Financial Data.
- (7), (21): Exhibit 1, Page 2.
- (12), (26): 1.0 / Cumulative LDF from Section II - B, Exhibit 1.

## II 000025 STIP

Section II - Loss Development  
 Subsection C - Tail Factor Calculation  
 7/1/2016

Section II - C  
 Exhibit 1  
 Page 2

### Growth Factor Adjustment Paid Losses

Policy Year (1)	Incurred Losses (2)	Relative Development for Report Interval (3)	Prior to 1994 Dollar Development (4)	On-Level Prior to 1994 Dollar Development (5)
1969	88,882,878	0.016%	14,455	54,506
1970	91,578,561	0.033%	29,786	109,012
1971	94,976,425	0.049%	46,337	163,518
1972	101,973,366	0.065%	66,334	218,024
1973	122,533,804	0.081%	99,636	272,530
1974	125,138,370	0.098%	122,105	327,036
1975	129,523,874	0.114%	147,448	381,542
1976	151,014,836	0.130%	196,472	436,048
1977	172,707,061	0.146%	252,781	490,554
1978	232,880,158	0.163%	378,725	545,060
1979	268,279,182	0.179%	479,922	599,566
1980	297,480,525	0.195%	580,539	654,072
1981	355,741,107	0.211%	752,088	708,578
1982	375,851,395	0.228%	855,727	763,084
1983	425,499,290	0.244%	1,037,962	817,589
1984	498,831,008	0.260%	1,297,970	872,095
1985	609,891,252	0.276%	1,686,136	926,601
1986	753,590,368	0.293%	2,205,968	981,107
1987	931,691,350	0.309%	2,878,836	1,035,613
1988	1,016,576,810	0.325%	3,306,446	1,090,119
1989	1,086,504,061	0.342%	3,710,581	1,144,625
1990	999,727,924	0.358%	3,576,809	1,199,131
1991	710,908,977	0.374%	2,659,090	1,253,637
1992	474,146,514	0.390%	1,850,611	1,308,143
1993	392,682,840	0.407%	1,596,516	1,362,649
<b>1994</b>	<b>335,160,453</b>			
	10,843,772,389		29,829,280	17,714,439
<b>(6) Indicated Growth Factor:</b>				<b>0.59</b>
<b>(7) Selected Growth Factor:</b>				<b>0.6</b>

**Notes:**

A growth factor of 0.600 has been selected.

(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 (4) 1994

(6) = [ Sum of (5) ] / [ Sum of (4) ]

(7): Rounded to the nearest tenth

## II 000026 STIP

### Paid Plus Case Loss Tail Factors

#### Indemnity 252nd Month to Ultimate Loss Tail Development Factor

(1) Valuation Date [Y]	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
(2) Prior to Policy Year 1994 at [Y]	9,462,825,316	9,467,494,142	9,475,767,809	9,488,646,235	9,496,459,458
(3) Prior to Policy Year 1994 at [Y] - 1 yr	9,455,020,703	9,462,825,316	9,467,494,142	9,475,767,809	9,488,646,235
(4) Difference = (2) - (3)	7,804,613	4,668,826	8,273,667	12,878,426	7,813,223
(5) Policy Year 1994 at [Y]	230,650,870	231,218,824	231,572,062	231,907,643	232,104,368
(6) Ratio = (4) / (5)	0.034	0.020	0.036	0.056	0.034
(7) Growth Factor	0.500	0.500	0.500	0.500	0.500
(8) Product = (6) x (7)	0.017	0.010	0.018	0.028	0.017
(9) Factor to Ultimate = 1.000 + (8)	1.017	1.010	1.018	1.028	1.017
(10) Month [M]	204	216	228	240	252
(11) Factor to Ultimate = (9)	1.017	1.010	1.018	1.028	1.017
(12) Factor from [252] to [M]	0.993	0.996	1.000	1.000	1.000
(13) Indicated [252] to Ultimate Tail Factor = (11) x (12)	1.010	1.006	1.018	1.028	1.017
(14) Five Year Average					1.016

#### Medical 252nd Month to Ultimate Loss Tail Development Factor

(15) Valuation Date [Y]	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
(16) Prior to Policy Year 1994 at [Y]	3,064,709,175	3,076,999,446	3,080,215,140	3,084,735,612	3,094,167,718
(17) Prior to Policy Year 1994 at [Y] - 1 yr	3,051,287,085	3,064,709,175	3,076,999,446	3,080,215,140	3,084,735,612
(18) Difference = (16) - (17)	13,422,090	12,290,271	3,215,694	4,520,472	9,432,106
(19) Policy Year 1994 at [Y]	127,774,256	127,808,173	127,807,493	127,304,717	127,494,781
(20) Ratio = (18) / (19)	0.105	0.096	0.025	0.036	0.074
(21) Growth Factor	0.500	0.500	0.500	0.500	0.500
(22) Product = (20) x (21)	0.053	0.048	0.013	0.018	0.037
(23) Factor to Ultimate = 1.000 + (22)	1.053	1.048	1.013	1.018	1.037
(24) Month [M]	204	216	228	240	252
(25) Factor to Ultimate = (23)	1.053	1.048	1.013	1.018	1.037
(26) Factor from [252] to [M]	0.997	0.996	0.998	0.999	1.000
(27) Indicated [252] to Ultimate Tail Factor = (25) x (26)	1.050	1.044	1.010	1.017	1.037
(28) Five Year Average					1.031

**Notes:**

- (2), (3), (5): Indemnity Paid Plus Case Losses from Aggregate Financial Data.
- (16), (17), (19): Medical Paid Plus Case Losses from Aggregate Financial Data.
- (7), (21): Exhibit 2, Page 2.
- (12), (26): 1.0 / Cumulative LDF from Section II - B, Exhibit 1.

## II 000027 STIP

Section II - Loss Development  
 Subsection C - Tail Factor Calculation  
 7/1/2016

Section II - C  
 Exhibit 2  
 Page 2

### Growth Factor Adjustment Paid Plus Case Losses

Policy Year (1)	Incurred Losses (2)	Percent Development for Report Interval (3)	Prior to 1994 Dollar Development (4)	On-Level Prior to 1994 Dollar Development (5)
1974	125,138,370	0.012%	14,638	39,205
1975	129,523,874	0.023%	30,302	78,410
1976	151,014,836	0.035%	52,995	117,616
1977	172,707,061	0.047%	80,809	156,821
1978	232,880,158	0.058%	136,205	196,026
1979	268,279,182	0.070%	188,291	235,231
1980	297,480,525	0.082%	243,584	274,437
1981	355,741,107	0.094%	332,901	313,642
1982	375,851,395	0.105%	395,685	352,847
1983	425,499,290	0.117%	497,726	392,052
1984	498,831,008	0.129%	641,856	431,258
1985	609,891,252	0.140%	856,101	470,463
1986	753,590,368	0.152%	1,145,962	509,668
1987	931,691,350	0.164%	1,525,778	548,873
1988	1,016,576,810	0.175%	1,783,704	588,079
1989	1,086,504,061	0.187%	2,033,493	627,284
1990	999,727,924	0.199%	1,988,026	666,489
1991	710,908,977	0.211%	1,496,849	705,694
1992	474,146,514	0.222%	1,053,798	744,900
1993	392,682,840	0.234%	918,678	784,105
<b>1994</b>	<b>335,160,453</b>		-	-
	10,343,827,355		15,417,381	8,233,100
<b>(6) Indicated Growth Factor:</b>				<b>0.53</b>
<b>(7) Selected Growth Factor:</b>				<b>0.5</b>

Notes:

A growth factor of 0.500 has been selected.

(2): Losses from Aggregate Financial Data evaluated as of 108 months.

(3): Estimated % paid plus case loss emergence for the report interval.

(4) = (2) x (3)

(5) = (3) x (4) 1994

(6) = [ Sum of (5) ] / [ Sum of (4) ]

(7): Rounded to the nearest tenth

## II 000028 STIP

Section II - Loss Development  
 Subsection D - Adjustment for Escalation of Benefits  
 7/1/2016

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	1.098	1.095	1.092	1.088	1.085
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	1.038	1.036	1.035	1.033	1.031

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	<b>1.058</b>	<b>1.057</b>	<b>1.055</b>	<b>1.054</b>	<b>1.052</b>

Selected Differential in Indemnity Loss Development at Month 336 1.042

Notes:

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

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



## II 000029 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	1.79%
Escalated	Permanent Total	1,668,738	409,709	448,697	488,350	528,641	569,759	6.09%
Escalated	Other Indemnity							56.85%
Escalated	Total Indemnity							64.74%
Unescalated	Fatal	465,615	239,708	250,218	260,195	269,862	279,221	0.95%
Unescalated	Permanent Total	824,906	336,400	359,427	381,858	403,713	424,987	3.01%
Unescalated	Other Indemnity							56.85%
Unescalated	Total Indemnity							60.82%

Escalated or Unescalated (6)	Injury Type (7)	Estimated Losses at Month					
		Ultimate (8)	168	180	192 (9)	204	216
Escalated	Fatal	1,791	590	626	663	699	736
Escalated	Permanent Total	6,094	1,496	1,639	1,784	1,931	2,081
Escalated	Other Indemnity	56,852	56,852	56,852	56,852	56,852	56,852
Escalated	Total Indemnity	64,737	58,938	59,117	59,298	59,481	59,669
Unescalated	Fatal	953	491	512	533	552	572
Unescalated	Permanent Total	3,013	1,229	1,313	1,395	1,474	1,552
Unescalated	Other Indemnity	56,852	56,852	56,852	56,852	56,852	56,852
Unescalated	Total Indemnity	60,817	58,571	58,676	58,779	58,878	58,975

**Notes:**

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

(3),(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. 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 000030 STIP

Section II - Loss Development  
 Subsection D - Adjustment for Escalation of Benefits  
 7/1/2016

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	1.035	1.033	1.031	1.030	1.028
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	1.013	1.012	1.011	1.011	1.010

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	<b>1.022</b>	<b>1.021</b>	<b>1.020</b>	<b>1.019</b>	<b>1.018</b>

Selected Differential in Indemnity Loss Development at Month 336 1.008

Notes:

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

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

## II 000031 STIP

Section II - Loss Development  
 Subsection D - Adjustment for Escalation of Benefits  
 7/1/2016

Section II - D  
 Exhibit 2  
 Page 2

### Differential in Indemnity Loss Development

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

Escalated or Unescalated (1)	Injury Type (2)	Losses at Month						Injury Type Weights @ Ultimate (5)
		Ultimate (3)	168	180	192 (4)	204	216	
Escalated	Fatal	874,958	641,246	652,979	664,504	675,808	686,874	1.79%
Escalated	Permanent Total	1,668,738	1,193,905	1,219,988	1,245,595	1,270,688	1,295,221	6.09%
Escalated	Other Indemnity							56.85%
Escalated	Total Indemnity							64.74%
Unescalated	Fatal	465,615	384,035	388,719	393,217	397,535	401,676	0.95%
Unescalated	Permanent Total	824,906	658,201	668,658	678,696	688,321	697,538	3.01%
Unescalated	Other Indemnity							56.85%
Unescalated	Total Indemnity							60.82%

Escalated or Unescalated (6)	Injury Type (7)	Estimated Losses at Month					
		Ultimate (8)	168	180	192 (9)	204	216
Escalated	Fatal	1,791	1,313	1,337	1,360	1,383	1,406
Escalated	Permanent Total	6,094	4,360	4,456	4,549	4,641	4,730
Escalated	Other Indemnity	56,852	56,852	56,852	56,852	56,852	56,852
Escalated	Total Indemnity	64,737	62,524	62,644	62,761	62,876	62,988
Unescalated	Fatal	953	786	796	805	814	822
Unescalated	Permanent Total	3,013	2,404	2,442	2,479	2,514	2,548
Unescalated	Other Indemnity	56,852	56,852	56,852	56,852	56,852	56,852
Unescalated	Total Indemnity	60,817	60,042	60,089	60,135	60,179	60,221

**Notes:**

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

(3),(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. 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  
 Remainder of Industry

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	2.971	1.598	1.246	1.122	1.036	1.024	1.021	1.008	1.009	1.007	1.005	1.019	1.003	1.004	1.002	1.002	1.005	1.004	1.002	1.003	1.041	1.042
Cumulative	8.370	2.817	1.763	1.415	1.262	1.218	1.189	1.165	1.156	1.146	1.138	1.132	1.111	1.108	1.105	1.102	1.100	1.094	1.090	1.088	1.085	1.042
<u>(2) Medical Paid Losses</u>																						
2 Yr Average	1.931	1.141	1.053	1.027	1.008	1.013	1.012	1.010	1.009	1.010	1.011	1.008	1.007	1.010	1.008	1.007	1.008	1.008	1.006	1.005	1.060	1.000
Cumulative	2.903	1.504	1.318	1.252	1.219	1.209	1.194	1.180	1.168	1.158	1.147	1.134	1.125	1.116	1.105	1.096	1.089	1.080	1.071	1.065	1.060	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 000032 STIP

## II 000033 STIP

Section II - Loss Development  
 Subsection E - Accident Year Data  
 7/1/2016

Section II - E  
 Exhibit 1  
 Page 2

### Accident Year Aggregate Financial Data Calculation of Indemnity Paid Loss Development Factors Remainder of Industry

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	
2012	43,327	125,363	2.893	2002	237,129	237,895	1.003
2013	49,019	149,451	3.049	2003	240,014	241,672	1.007
Average			2.971	Average			1.005
	24	36			144	156	
2011	125,268	198,778	1.587	2001	242,055	250,626	1.035
2012	125,363	201,745	1.609	2002	237,895	238,275	1.002
Average			1.598	Average			1.019
	36	48			156	168	
2010	166,934	208,079	1.246	2000	249,337	250,169	1.003
2011	198,778	247,400	1.245	2001	250,626	251,048	1.002
Average			1.246	Average			1.003
	48	60			168	180	
2009	199,742	224,334	1.123	1999	218,033	218,443	1.002
2010	208,079	233,183	1.121	2000	250,169	251,462	1.005
Average			1.122	Average			1.004
	60	72			180	192	
2008	225,363	232,448	1.031	1998	209,533	210,055	1.002
2009	224,334	233,410	1.040	1999	218,443	218,728	1.001
Average			1.036	Average			1.002
	72	84			192	204	
2007	216,598	221,799	1.024	1997	183,146	183,422	1.002
2008	232,448	238,061	1.024	1998	210,055	210,743	1.003
Average			1.024	Average			1.002
	84	96			204	216	
2006	200,848	205,120	1.021	1996	195,617	196,102	1.002
2007	221,799	226,281	1.020	1997	183,422	184,859	1.008
Average			1.021	Average			1.005
	96	108			216	228	
2005	213,757	214,590	1.004	1995	204,135	205,428	1.006
2006	205,120	207,673	1.012	1996	196,102	196,382	1.001
Average			1.008	Average			1.004
	108	120			228	240	
2004	236,654	239,068	1.010	1994	239,408	239,741	1.001
2005	214,590	216,091	1.007	1995	205,428	205,821	1.002
Average			1.009	Average			1.002
	120	132			240	252	
2003	237,671	240,014	1.010	1994	239,741	240,506	1.003
2004	239,068	240,149	1.005	Average			1.003
Average			1.007				

Notes:  
 Losses from Aggregate Financial Data.

## II 000034 STIP

Section II - Loss Development  
 Subsection E - Accident Year Data  
 7/1/2016

Section II - E  
 Exhibit 1  
 Page 3

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

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	
2012	58,230	112,074	1.925	2002	123,306	124,696	1.011
2013	66,386	128,612	1.937	2003	131,695	133,194	1.011
Average			1.931	Average			1.011
	24	36			144	156	
2011	113,017	128,280	1.135	2001	115,859	116,600	1.006
2012	112,074	128,547	1.147	2002	124,696	125,968	1.010
Average			1.141	Average			1.008
	36	48			156	168	
2010	118,772	124,735	1.050	2000	121,082	122,235	1.010
2011	128,280	135,322	1.055	2001	116,600	117,228	1.005
Average			1.053	Average			1.007
	48	60			168	180	
2009	116,620	119,699	1.026	1999	115,542	116,477	1.008
2010	124,735	128,147	1.027	2000	122,235	123,770	1.013
Average			1.027	Average			1.010
	60	72			180	192	
2008	126,244	127,281	1.008	1998	102,615	103,476	1.008
2009	119,699	120,714	1.008	1999	116,477	117,448	1.008
Average			1.008	Average			1.008
	72	84			192	204	
2007	123,874	125,942	1.017	1997	90,573	91,131	1.006
2008	127,281	128,374	1.009	1998	103,476	104,187	1.007
Average			1.013	Average			1.007
	84	96			204	216	
2006	109,942	111,092	1.010	1996	95,995	96,842	1.009
2007	125,942	127,656	1.014	1997	91,131	91,807	1.007
Average			1.012	Average			1.008
	96	108			216	228	
2005	114,276	115,361	1.009	1995	99,160	99,976	1.008
2006	111,092	112,245	1.010	1996	96,842	97,684	1.009
Average			1.010	Average			1.008
	108	120			228	240	
2004	126,949	128,506	1.012	1994	111,548	112,106	1.005
2005	115,361	116,030	1.006	1995	99,976	100,606	1.006
Average			1.009	Average			1.006
	120	132			240	252	
2003	130,506	131,695	1.009	1994	112,106	112,627	1.005
2004	128,506	129,781	1.010	Average			1.005
Average			1.010				

Notes:  
 Losses from Aggregate Financial Data.

Accident Year Aggregate Financial Data  
 Summary of Loss Development Factors  
 AIG

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>																						
5 Yr Average	3.157	1.627	1.270	1.127	1.058	1.033	1.018	1.010	1.007	1.006	1.004	1.010	1.007	1.013	1.005	1.012	1.004	1.000	1.001	1.000	1.041	1.042
Cumulative	9.604	3.042	1.869	1.472	1.305	1.233	1.194	1.173	1.161	1.152	1.145	1.141	1.130	1.122	1.108	1.103	1.090	1.086	1.086	1.085	1.085	1.042
<u>(2) Medical Paid Losses</u>																						
5 Yr Average	2.061	1.171	1.072	1.030	1.022	1.014	1.016	1.015	1.014	1.011	1.010	1.010	1.013	1.013	1.007	1.004	1.007	1.003	1.003	1.000	1.060	1.000
Cumulative	3.319	1.610	1.375	1.283	1.246	1.219	1.202	1.183	1.166	1.150	1.137	1.126	1.115	1.100	1.086	1.078	1.074	1.067	1.064	1.060	1.060	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 000035 STIP







# III 000006 STIP

Section III - Premiums  
 Subsection A - Summary  
 7/1/2016

Section III - A  
 Exhibit 1  
 Page 1

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

Summary Exhibit

	Policy Year as of 12/31/2014	
	2012	2013
(1) Standard Earned Premium plus Adjusted ARAP Premium	986,076,718	1,026,831,743
(2) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	1.002	1.015
(3) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	1.000	1.000
(4) Composite Adjustment Factor = (2) x (3)	1.002	1.014
(5) Adjusted Standard Earned Premium plus ARAP = (1) x (4)	987,813,075	1,041,537,390
(6) Cumulative Premium Development Factor to Ultimate (see Page 2)	0.999	1.003
(7) Rate On-Level Factor	1.000	1.000
(8) Factor to Remove Expense Constant	0.956	0.957
(9) Adjusted On-Level Earned Premium at Ultimate = (5) x (6) x (7) x (8)	943,321,497	999,808,461

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		1.009	0.998	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		1.007	0.998	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
5 Year Average		1.005	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		1.003	0.999	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Notes:  
 From Page 3

III 00007 STIP

# III 00008 STIP

Section III - Premiums  
 Subsection A - Summary  
 7/1/2016

Section III - A  
 Exhibit 1  
 Page 3

## Policy Year Aggregate Financial Data Calculation of Standard Premium plus Adjusted ARAP Premium Development Factor: 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	
2008	560,522	555,544	0.991	1999	547,004	546,990	1.000
2009	565,587	568,295	1.005	2000	523,258	523,258	1.000
2010	604,562	609,720	1.009	2001	556,308	556,308	1.000
2011	656,467	662,392	1.009	2002	621,374	621,374	1.000
2012	701,194	707,706	1.009	2003	613,053	613,053	1.000
2 yr Average			1.009	2 yr Average			1.000
5 yr Average			1.005	5 yr Average			1.000
	36	48			144	156	
2007	633,347	633,668	1.001	1998	557,563	557,620	1.000
2008	555,544	554,385	0.998	1999	546,990	546,990	1.000
2009	568,295	567,862	0.999	2000	523,258	523,209	1.000
2010	609,720	610,159	1.001	2001	556,308	556,307	1.000
2011	662,392	659,357	0.995	2002	621,374	621,374	1.000
2 yr Average			0.998	2 yr Average			1.000
5 yr Average			0.999	5 yr Average			1.000
	48	60			156	168	
2006	636,518	636,257	1.000	1997	555,436	555,436	1.000
2007	633,668	634,130	1.001	1998	557,620	557,620	1.000
2008	554,385	554,158	1.000	1999	546,990	546,990	1.000
2009	567,862	567,842	1.000	2000	523,209	523,209	1.000
2010	610,159	609,903	1.000	2001	556,307	556,307	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	
2005	594,569	594,570	1.000	1996	585,822	585,822	1.000
2006	636,257	636,207	1.000	1997	555,436	555,436	1.000
2007	634,130	634,055	1.000	1998	557,620	557,620	1.000
2008	554,158	554,430	1.000	1999	546,990	546,991	1.000
2009	567,842	567,823	1.000	2000	523,209	523,209	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	
2004	575,766	575,637	1.000	1995	605,172	605,172	1.000
2005	594,570	594,619	1.000	1996	585,822	585,822	1.000
2006	636,207	635,957	1.000	1997	555,436	555,436	1.000
2007	634,055	633,708	0.999	1998	557,620	557,620	1.000
2008	554,430	554,423	1.000	1999	546,991	546,991	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	
2003	613,046	613,000	1.000	1994	713,482	713,485	1.000
2004	575,637	575,640	1.000	1995	605,172	605,172	1.000
2005	594,619	594,631	1.000	1996	585,822	585,822	1.000
2006	635,957	635,964	1.000	1997	555,436	555,436	1.000
2007	633,708	633,720	1.000	1998	557,620	557,620	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	
2002	621,365	621,372	1.000	1994	713,485	713,487	1.000
2003	613,000	612,997	1.000	1995	605,172	605,172	1.000
2004	575,640	575,649	1.000	1996	585,822	585,822	1.000
2005	594,631	594,625	1.000	1997	555,436	555,436	1.000
2006	635,964	635,955	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	
2001	556,274	556,364	1.000	1994	713,487	713,489	1.000
2002	621,372	621,374	1.000	1995	605,172	605,172	1.000
2003	612,997	613,057	1.000	1996	585,822	585,822	1.000
2004	575,649	575,648	1.000	2 yr Average			1.000
2005	594,625	594,606	1.000	5 yr Average			1.000
2 yr Average			1.000				
5 yr Average			1.000				
	120	132			228	240	
2000	523,233	523,258	1.000	1994	713,489	713,491	1.000
2001	556,364	556,308	1.000	1995	605,172	605,172	1.000
2002	621,374	621,374	1.000	2 yr Average			1.000
2003	613,057	613,053	1.000	5 yr Average			1.000
2004	575,648	575,649	1.000				
2 yr Average			1.000				
5 yr Average			1.000				
	132	144			240	252	
2000	523,233	523,258	1.000	1994	713,491	713,492	1.000
2001	556,364	556,308	1.000	2 yr Average			1.000
2002	621,374	621,374	1.000	5 yr Average			1.000
2003	613,057	613,053	1.000				
2004	575,648	575,649	1.000				
2 yr Average			1.000				
5 yr Average			1.000				

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

Rate Level Effective Date (1)	Experience Mod for Non-Merit Rated Risks		Merit Rating Impact		Average Experience Mod and Merit Rating Factor (6)	ARAP Charge in Rates (7)	Construction Credit in Construction Rates (8)	Policy Year Written Weights		Calendar Year Earned Weights		
	Anticipated in Rates (2)	Percentage of Premium (3)	Anticipated in Rates (4)	Percentage of Premium (5)				2012	2013	2012	2013	2014
								(9)	(10)	(11)	(12)	(13)
9/1/2008	1.000	0.880	-0.027	0.120	0.997	0.045	-0.036					
9/1/2010	1.000	0.860	-0.020	0.140	0.997	0.049	-0.053	100.0%	100.0%	100.0%	100.0%	70.2%
4/1/2014	1.000	0.841	-0.019	0.159	0.997	0.052	-0.032					29.8%

	Policy Year		Calendar Year Earned		
	2012 (9)	2013 (10)	2012 (11)	2013 (12)	2014 (13)
(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	0.049	0.049	0.049	0.049	0.050
(16) Percentage of Premium for CCPAP Eligible Classes	0.333	0.341	0.325	0.337	0.337
(17) Weighted Average Construction Credit anticipated in rates	-0.018	-0.018	-0.017	-0.018	-0.016
(18) Combined Weighted Average impact anticipated in rates = (14) x [ 1.0 + (15) ] x [ 1.0 + (17) ]	1.027	1.027	1.028	1.027	1.030
(19) Manual Premium	926,808,771	983,846,095	911,484,742	955,327,433	
(20) Standard Earned Premium at DSR Level, excluding Expense Constants	900,160,250	944,824,430	890,086,731	922,492,340	
(21) ARAP Premium	47,699,238	48,772,769	47,739,904	48,236,004	
(22) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.052	1.047	1.055	1.050	
(23) Standard Earned Premium plus Adjusted ARAP = (20) + [ (21) x (22) ]	950,353,055	995,910,457	940,441,286	973,126,295	
(24) Combined Actual impact = (23) / (19)	1.025	1.012	1.032	1.019	1.019
(25) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance = (18) / (24)	<b>1.002</b>	<b>1.015</b>	<b>0.996</b>	<b>1.008</b>	<b>1.011</b>

Notes:  
 (3) = 1.0 - (5)  
 (2), (4), (5), (7), (8): Previous filings.  
 (6) = [ (2) x (3) ] + [ 1.0 + (4) ] x (5)  
 (9),(10): Section III-D, Exhibit 2.  
 (11),(12): Section III-D, Exhibit 3.  
 (13): Section III-D, Exhibit 4.  
 (14) = Sum [ (6) x (9) through (13) ]  
 (15) = Sum [ (7) x (9) through (13) ]  
 (17) = Sum [ (8) x (9) through (13) ] x (16)  
 (16), (19), (20), (21): Unit Statistical Plan Data, Excluding Large Deductible Policies. CY 2014 uses CY 2013 values  
 (22): from Section III-B, Exhibit 2.

III 00009 STIP

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

	Policy Year valued as of 12/31/2014		Calendar Years		
	2012	2013	2012	2013	2014
(1) Aggregate Financial: Standard Earned Premium at DSR Level	935,969,043	977,090,701	927,830,332	956,828,487	1,008,427,899
(2) Aggregate Financial: Standard Earned Premium at Company Level	889,470,324	932,846,450	879,652,900	911,514,465	963,051,632
(3) Aggregate Financial: ARAP Premium	47,618,338	47,488,687	46,945,684	48,501,174	48,122,308
(4) Adjustment Factor to Adjust from Company Level to DSR Level Premium = (1) / (2)	1.052	1.047	1.055	1.050	1.047
(5) Adjusted ARAP Premium = (3) x (4)	50,107,675	49,741,042	49,516,837	50,912,308	50,389,695
(6) Standard Earned Premium plus adjusted ARAP Premium = (1) + (5)	986,076,718	1,026,831,743	977,347,169	1,007,740,795	1,058,817,594

Notes:

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

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

Rate Level Effective Date (1)	Loading for Recoupment of Insolvency Fund Assessments (2)	Policy Year Weights		Calendar Year Earned Weights		
		2012 (3)	2013 (4)	2012 (5)	2013 (6)	2014 (7)
9/1/2008	-0.06%					
9/1/2010	0.02%	100.0%	100.0%	100.0%	100.0%	70.2%
4/1/2014	0.19%					29.8%

Policy Year		Calendar Year Earned		
2012	2013	2012	2013	2014

(8) Weighted Average Loading for Recoupment of Insolvency Fund Assessment in the Rates = Sum [ (2) x (3) through (7) ]	0.0002	0.0002	0.0002	0.0002	0.0007
(9) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments = [ 1.0 - (8) ]	<b>1.000</b>	<b>1.000</b>	<b>1.000</b>	<b>1.000</b>	<b>0.999</b>

Notes:

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

# III 000012 STIP

Section III - Premiums  
 Subsection D - Rate On-Level Factors  
 7/1/2016

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	
				2012 (5)	2013 (6)
9/1/2008		1.000	0.976		
9/1/2010	0.976	0.976	1.000	100.0%	100.0%
4/1/2014	1.000	0.976	1.000		

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

Policy Year	
2012	2013
1.000	1.000

**Notes:**

(4): (3)<sub>latest rate level effective date</sub> / (3).

(5),(6): From Exhibit 2.



### III 000013 STIP

Section III - Premiums  
 Subsection D - Premium On-Level Factors  
 7/1/2016

Section III - D  
 Exhibit 2

#### Policy Year Weights for On-Leveling Earned Premium

Policy Year (1)	Policy Month (2)	Standard Earned Premium at Rate Level Effective			Earned Premiums (6)
		9/1/2008 (3)	9/1/2010 (4)	4/1/2014 (5)	
2012	1		164,440,160		164,440,160
2012	2		64,288,695		64,288,695
2012	3		71,629,426		71,629,426
2012	4		89,192,284		89,192,284
2012	5		66,547,848		66,547,848
2012	6		83,279,390		83,279,390
2012	7		104,283,442		104,283,442
2012	8		57,968,740		57,968,740
2012	9		77,167,533		77,167,533
2012	10		79,119,476		79,119,476
2012	11		54,362,185		54,362,185
2012	12		77,444,884		77,444,884
2012	Total		989,724,066		989,724,066

2013	1		168,301,056		168,301,056
2013	2		63,520,658		63,520,658
2013	3		75,778,635		75,778,635
2013	4		93,902,958		93,902,958
2013	5		73,201,179		73,201,179
2013	6		95,847,338		95,847,338
2013	7		106,691,061		106,691,061
2013	8		65,132,887		65,132,887
2013	9		76,739,381		76,739,381
2013	10		76,988,303		76,988,303
2013	11		58,021,733		58,021,733
2013	12		82,534,489		82,534,489
2013	Total		1,036,659,680		1,036,659,680

2014	1		173,549,402		173,549,402
2014	2		65,511,758		65,511,758
2014	3		78,142,020		78,142,020
2014	4			96,831,470	96,831,470
2014	5			75,484,114	75,484,114
2014	6			98,836,375	98,836,375
2014	7			110,018,380	110,018,380
2014	8			67,164,200	67,164,200
2014	9			79,132,746	79,132,746
2014	10			79,389,386	79,389,386
2014	11			59,831,241	59,831,241
2014	12			85,108,236	85,108,236
2014	Total		317,203,179	751,796,148	1,068,999,327

Rate Level Effective Date (7)	Policy Year Weights		
	2012 (8)	2013 (9)	2014 (10)
9/1/2008			
9/1/2010	100.0%	100.0%	29.7%
4/1/2014			70.3%

**Notes:**

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

(3),(4),(5): From Unit Statistical Plan Data. PY 2014 estimated from PY 2013 data.

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

# III 000014 STIP

Section III - Premiums  
 Subsection D - Premium On-Level Factors  
 7/1/2016

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 at Rate Level Effective			Earned Premiums (7)
			9/1/2008 (4)	9/1/2010 (5)	4/1/2014 (6)	
2010	12	2012		4,843		4,843
2011	1	2012		1,536,632		1,536,632
2011	2	2012		6,191,818		6,191,818
2011	3	2012		13,671,223		13,671,223
2011	4	2012		22,266,232		22,266,232
2011	5	2012		22,747,343		22,747,343
2011	6	2012		35,909,154		35,909,154
2011	7	2012		51,974,609		51,974,609
2011	8	2012		33,388,857		33,388,857
2011	9	2012		50,041,919		50,041,919
2011	10	2012		56,147,552		56,147,552
2011	11	2012		46,338,470		46,338,470
2011	12	2012		76,136,766		76,136,766
2012	1	2012		162,815,898		162,815,898
2012	2	2012		57,936,357		57,936,357
2012	3	2012		58,075,117		58,075,117
2012	4	2012		65,907,048		65,907,048
2012	5	2012		43,703,303		43,703,303
2012	6	2012		46,624,690		46,624,690
2012	7	2012		51,905,029		51,905,029
2012	8	2012		23,446,269		23,446,269
2012	9	2012		23,664,508		23,664,508
2012	10	2012		18,520,380		18,520,380
2012	11	2012		7,986,280		7,986,280
2012	12	2012		2,965,698		2,965,698
Total		2012		979,905,994		979,905,994

2011	12	2013		258		258
2012	1	2013		1,645,600		1,645,600
2012	2	2013		6,358,647		6,358,647
2012	3	2013		13,558,279		13,558,279
2012	4	2013		23,289,734		23,289,734
2012	5	2013		22,846,693		22,846,693
2012	6	2013		36,655,731		36,655,731
2012	7	2013		52,378,096		52,378,096
2012	8	2013		34,521,107		34,521,107
2012	9	2013		53,498,383		53,498,383
2012	10	2013		60,593,511		60,593,511
2012	11	2013		46,371,667		46,371,667
2012	12	2013		74,471,473		74,471,473
2013	1	2013		166,602,204		166,602,204
2013	2	2013		57,248,744		57,248,744
2013	3	2013		61,405,792		61,405,792
2013	4	2013		69,465,777		69,465,777
2013	5	2013		48,328,101		48,328,101
2013	6	2013		53,682,351		53,682,351
2013	7	2013		53,464,983		53,464,983
2013	8	2013		26,445,642		26,445,642
2013	9	2013		23,516,380		23,516,380
2013	10	2013		18,222,532		18,222,532
2013	11	2013		8,644,615		8,644,615
2013	12	2013		3,048,218		3,048,218
Total		2013		1,016,264,518		1,016,264,518

Rate Level Effective Date (8)	Calendar Year Earned Weights	
	2012 (9)	2013 (10)
9/1/2008		
9/1/2010	100.0%	100.0%
4/1/2014		

**Notes:**

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

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

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

# III 000015 STIP

Section III - Premiums  
 Subsection D - Premium On-Level Factors  
 7/1/2016

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 at Rate Level Effective			PY Premiums Earned During CY (7)
			9/1/2008 (4)	9/1/2010 (5)	4/1/2014 (6)	
2012	12	2014				0
2013	1	2014		1,720,032		1,720,032
2013	2	2014		6,277,175		6,277,175
2013	3	2014		14,378,215		14,378,215
2013	4	2014		24,443,876		24,443,876
2013	5	2014		24,877,026		24,877,026
2013	6	2014		42,169,778		42,169,778
2013	7	2014		53,231,846		53,231,846
2013	8	2014		38,689,323		38,689,323
2013	9	2014		53,224,937		53,224,937
2013	10	2014		58,766,856		58,766,856
2013	11	2014		49,377,332		49,377,332
2013	12	2014		79,483,643		79,483,643
2014	1	2014		171,772,717		171,772,717
2014	2	2014		59,037,175		59,037,175
2014	3	2014		63,314,428		63,314,428
2014	4	2014			71,623,956	71,623,956
2014	5	2014			49,830,385	49,830,385
2014	6	2014			55,350,211	55,350,211
2014	7	2014			55,124,602	55,124,602
2014	8	2014			27,267,426	27,267,426
2014	9	2014			24,246,540	24,246,540
2014	10	2014			18,788,597	18,788,597
2014	11	2014			8,913,254	8,913,254
2014	12	2014			3,142,913	3,142,913
	Total	2014		740,764,360	314,287,884	1,055,052,244

Rate Level Effective Date (8)	Calendar Year Earned Weights
	2014 (9)
9/1/2008	
9/1/2010	70.2%
4/1/2014	29.8%

Notes:

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

(4),(5),(6): From Unit Statistical Plan Data. PY 2014 based on PY 2013 data subject to adjustments for rate level, exposure growth, and wage changes.

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

# III 000016 STIP

Section III - Premiums  
 Subsection E - Premium Adjustment Factors  
 7/1/2016

Section III - E  
 Exhibit 1

## Calculation of Premium Adjustment Factor PY 2013 to Prospective Effective Period 7/1/2016 - 6/30/2017

(1)	Wage Trend from PY 2013 to Prospective Effective Period 7/1/2016 - 6/30/2017	1.093
(2)	Exposure Growth	1.093
(3)	Rate On-Level Factor	1.000
(4)	Overall Indicated Rate Change for Policies Effective 7/1/2016	1.015
(5)	Adjustment Factor to Balance Experience Rating, ARAP, and Construction Credits	1.015
(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)	1.227
(8)	<b>Selected Factor</b>	<b>1.23</b>

**Notes:**

(1):	Statewide Average Weekly Wage for PY 2013 (Section V-G, Exhibit 2)	1,225.60
	Statewide Average Weekly Wage for 10/1/2015, based on data period 4/1/14 to 4/1/15 (Section V-G, Exhibit 2)	1,256.47
	Statewide Average Weekly Wage at 7/1/2017 (using wage trend of 2.4%, Section V-A, Exhibit 3)	1,339.50
(2):	Exposure growth from PY 2013 to Prospective Effective Period 7/1/2016 - 6/30/2017 (Section V-H, Exhibit 3)	
(3):	Section III-D Exhibit 1.	
(5):	Exhibit 2.	
(6):	PY 2013 factor to load for Recoupment of Insolvency Fund (Section III-C, Exhibit 1: [ 1.0 + (8) ]).	1.000
	Policy Effective factor to load for Recoupment of Insolvency Fund Assessments (Section I-E, Exhibit 1, Page 1).	0.998

# III 000017 STIP

Section III - Premiums  
Subsection E - Premium Adjustment Factors  
7/1/2016

Section III - E  
Exhibit 2

## Factor to Balance Experience Rating, ARAP, and Construction Credit

### Beginning Period - PY 2013

(1)	Anticipated Impact on Manual Rates of Experience Rating, ARAP, and Construction Credits	1.027
(2)	Actual Impact on Manual Rates of Experience Rating, ARAP, and Construction Credits	1.012
(3)	Ratio of Anticipated to Actual = (1) / (2)	1.015

### Ending Period - Prospective Effective Period 7/1/2016 - 6/30/2017

(4)	Anticipated Impact on Manual Rates of Experience Rating, ARAP, and Construction Credits	1.034
(5)	Actual is Assumed to be equal to the Anticipated, Since the Actual Impact has yet to be Determined	1.034
(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)	1.015

### Notes:

(1),(2): PY 2013, 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  
 7/1/2016

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
1/1/2016	Prosp. Eff. Period					1.007	1.000	
PY 2012	1/1/2016					1.021	1.000	
PY 2013	1/1/2016					1.016	1.000	
PY 2004	Prosp. Eff. Period					1.093	1.036	
PY 2005	Prosp. Eff. Period	1.052	1.059	1.106	1.032	1.082	1.032	
PY 2006	Prosp. Eff. Period	1.047	1.051	1.090	1.028	1.070	1.032	
PY 2007	Prosp. Eff. Period	1.041	1.042	1.074	1.023	1.059	1.032	
PY 2008	Prosp. Eff. Period	1.035	1.034	1.059	1.018	1.047	1.024	
PY 2009	Prosp. Eff. Period	1.033	1.031	1.054	1.016	1.043	1.002	
PY 2010	Prosp. Eff. Period	1.033	1.032	1.055	1.017	1.044	1.000	
PY 2011	Prosp. Eff. Period	1.030	1.027	1.046	1.015	1.037	1.000	
PY 2012	Prosp. Eff. Period	1.025	1.020	1.035	1.011	1.028	1.000	
PY 2013	Prosp. Eff. Period	1.023	1.017	1.030	1.010	1.023	1.000	
PY 2011	CPY 2012_07	1.006	1.009	1.015	1.004		1.000	
PY 2012	CPY 2013_07	1.004	1.004	1.008	1.003		1.000	
PY 2013	CPY 2014_07	1.012	1.007	1.012	1.004		1.000	
CPY 2012_07	Prosp. Eff. Period							1.016
CPY 2013_07	Prosp. Eff. Period							1.014
CPY 2014_07	Prosp. Eff. Period							1.009
CPY 2008_09	Prosp. Eff. Period							1.029
Prior Eff. Period (using benefit level projections from prior filing)	Prosp. Eff. Period					1.017	1.000	1.012

**Notes:**

1/1/2016 refers to a point in time. All other time periods refer to Policy Years.

Example: PY 2005 to Prosp. Eff. Period for Permanent Partial = 1.106 = 1.131 / 1.023

where 1.131 is the Index Factor for Prosp. Eff. Period and 1.023 is the Index Factor for PY 2005 for Indemnity Permanent Partial, from Exhibit 2.

Benefit Level Changes and Weights

Date of Change	Injury Type: Temporary Total																	Weighted Average Benefit Level		
	10/1/2003	9/1/2004	10/1/2004	10/1/2005	10/1/2006	10/1/2007	10/1/2008	4/1/2009	10/1/2009	10/1/2010	10/1/2011	10/1/2012	10/1/2013	10/1/2014	3/24/2015	10/1/2015	10/1/2016		10/1/2017	
Benefit Level Change	1.000	1.000	1.004	1.004	1.004	1.005	1.005	1.000	1.000	0.999	1.004	1.003	1.001	1.003	1.000	1.003	1.002	1.002		
Cumulative Benefit Level Change	1.000	1.000	1.004	1.008	1.012	1.017	1.022	1.022	1.022	1.021	1.025	1.028	1.029	1.032	1.032	1.036	1.038	1.041		
Time Period																				
PY 2004	0.280	0.061	0.630	0.028																1.003
PY 2005			0.336	0.635	0.029															1.007
PY 2006				0.341	0.631	0.027														1.011
PY 2007					0.343	0.630	0.027													1.016
PY 2008						0.350	0.417													1.020
PY 2009							0.055	0.290	0.025											1.022
PY 2010									0.629	0.026										1.022
PY 2011									0.333	0.640										1.024
PY 2012										0.343	0.027									1.027
PY 2013										0.632	0.025									1.029
CPY 2012_07										0.341	0.634	0.025								1.030
CPY 2013_07										0.036	0.689	0.275								1.029
CPY 2014_07											0.047	0.679	0.230	0.043						1.030
CPY 2008_09							0.004	0.180	0.426	0.390			0.047	0.248	0.431	0.274				1.033
Prior Eff. Period													0.179	0.404	0.343	0.074	0.679	0.273		1.022
Prosp. Eff. Period																				1.032
PY 2004	0.280	0.061	0.630	0.028																1.039
PY 2005			0.336	0.635	0.029															1.003
PY 2006				0.341	0.631	0.027														1.007
PY 2007					0.343	0.630	0.027													1.011
PY 2008						0.350	0.417	0.209	0.025											1.016
PY 2009							0.055	0.290	0.025	0.026										1.020
PY 2010									0.629	0.640										1.022
PY 2011									0.333	0.343	0.027									1.022
PY 2012										0.343	0.640									1.024
PY 2013											0.341	0.634	0.025							1.027
1/1/2016														0.025						1.029
																1.000				1.036

Indemnity All Injury Types - Average Benefit Level for Current Policy Period. Estimated at 7/1/2014 (using benefit level projections from prior filing).

Date of Change	10/1/2003	9/1/2004	10/1/2004	10/1/2005	10/1/2006	10/1/2007	10/1/2008	4/1/2009	10/1/2009	10/1/2010	10/1/2011	10/1/2012	10/1/2013	10/1/2014	3/24/2015	10/1/2015	Weighted Average Benefit Level	
Benefit Level Change	1.000	1.000	1.009	1.011	1.011	1.011	1.012	1.000	1.000	0.998	1.011	1.008	1.002	1.006	1.000	1.006		
Cumulative Benefit Level Change	1.000	1.000	1.009	1.020	1.031	1.043	1.055	1.055	1.055	1.053	1.065	1.073	1.075	1.082	1.082	1.088		1.061

Medical All Injury Types - Average Benefit Level for Current Policy Period. Estimated at 7/1/2014 (using benefit level projections from prior filing).

Date of Change	10/1/2003	9/1/2004	10/1/2004	10/1/2005	10/1/2006	10/1/2007	10/1/2008	4/1/2009	10/1/2009	10/1/2010	10/1/2011	10/1/2012	10/1/2013	10/1/2014	3/24/2015	10/1/2015	Weighted Average Benefit Level	
Benefit Level Change	1.000	1.014	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 Benefit Level Change	1.000	1.014	1.014	1.014	1.014	1.014	1.014	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046		1.046

All Injury Types - Average Benefit Level for Current Policy Period. Estimated at 7/1/2014 (using benefit level projections from prior filing).

Date of Change	10/1/2003	9/1/2004	10/1/2004	10/1/2005	10/1/2006	10/1/2007	10/1/2008	4/1/2009	10/1/2009	10/1/2010	10/1/2011	10/1/2012	10/1/2013	10/1/2014	3/24/2015	10/1/2015	Weighted Average Benefit Level	
Benefit Level Change	1.000	1.005	1.006	1.007	1.007	1.007	1.007	1.013	1.000	0.999	1.007	1.005	1.001	1.003	1.000	1.004		
Cumulative Benefit Level Change	1.000	1.005	1.011	1.018	1.025	1.032	1.040	1.053	1.053	1.052	1.059	1.065	1.066	1.069	1.069	1.073		1.069

Index Factors for All Injury Types

Time Period	Indemnity				All Injury Types	Medical All Injury Types	Total All Injury Types
	Death	Permanent Total	Permanent Partial	Temporary Total			
PY 2004	1.003	1.005	1.008	1.003	1.006	1.010	1.008
PY 2005	1.008	1.013	1.023	1.007	1.017	1.014	1.016
PY 2006	1.014	1.020	1.038	1.011	1.028	1.014	1.023
PY 2007	1.019	1.028	1.053	1.016	1.039	1.014	1.030
PY 2008	1.025	1.037	1.067	1.020	1.051	1.022	1.040
PY 2009	1.027	1.040	1.073	1.022	1.055	1.045	1.052
PY 2010	1.027	1.039	1.072	1.022	1.054	1.046	1.053
PY 2011	1.030	1.044	1.081	1.024	1.061	1.046	1.057
PY 2012	1.035	1.051	1.093	1.027	1.070	1.046	1.063
PY 2013	1.037	1.054	1.098	1.029	1.075	1.046	1.066
CPY 2012_07	1.037	1.053	1.097	1.029	1.073	1.046	1.065
CPY 2013_07	1.039	1.056	1.102	1.030	1.077	1.046	1.067
CPY 2014_07	1.050	1.061	1.112	1.033	1.085	1.046	1.072
CPY 2008_09	1.027	1.040	1.073	1.022	1.055	1.040	1.051
Prior Eff. Period	1.045	1.059	1.108	1.032	1.082	1.046	1.070
Prosp. Eff. Period	1.061	1.072	1.131	1.039	1.100	1.046	1.082
PY 2004	1.003	1.005	1.008	1.003	1.006	1.010	1.008
PY 2005	1.008	1.013	1.023	1.007	1.017	1.014	1.016
PY 2006	1.014	1.020	1.038	1.011	1.028	1.014	1.023
PY 2007	1.019	1.028	1.053	1.016	1.039	1.014	1.030
PY 2008	1.025	1.037	1.067	1.020	1.051	1.022	1.040
PY 2009	1.027	1.040	1.073	1.022	1.055	1.045	1.052
PY 2010	1.027	1.039	1.072	1.022	1.054	1.046	1.053
PY 2011	1.030	1.044	1.081	1.024	1.061	1.046	1.057
PY 2012	1.035	1.051	1.093	1.027	1.070	1.046	1.063
PY 2013	1.037	1.054	1.098	1.029	1.075	1.046	1.066
10/1/2013	1.037	1.053	1.097	1.028	1.073	1.046	1.065
1/1/2016	1.056	1.066	1.121	1.036	1.092	1.046	1.077

Notes:  
 1/1/2016 refers to a point in time. All other time periods refer to Policy Years.  
 Index Factors for All Injury Types Table is an Excel Data Table that repeats the calculation of the Weighted Average Benefit Level for all Injury Types.

IV 00008 STIP

## IV 00009 STIP

Section IV - Benefit Change Adjustments  
 Subsection A - Summary  
 7/1/2016

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)
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	0.3%	0.4%	0.7%	0.2%	0.6%	0.0%	0.4%
10/1/2017	0.4%	0.4%	0.7%	0.2%	0.6%	0.0%	0.4%

**Notes:**

Estimated changes for 10/1/2016 and 10/1/2017 use projected SAWW values for 10/1/2016 and 10/1/2017 .



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 10/1/2014		Effects of SAWW Change of 3/24/2015		Effects of SAWW Change of 10/1/2015		Effects of SAWW Change of 10/1/2016		Effects of SAWW Change of 10/1/2017	
						10/1/2013 Cost (7)	10/1/2014 Cost (8)	10/1/2014 Cost (9)	3/24/2015 Cost (10)	10/1/2014 Cost (9)	10/1/2015 Cost (10)	10/1/2015 Cost (11)	10/1/2016 Cost (12)	10/1/2016 Cost (13)	10/1/2017 Cost (14)
None	204	0	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Spouse, No Children	212	1	40	$a_{40:\overline{Life}}$	26.24	196,482,397	197,274,363	201,248,094	201,248,094	201,248,094	202,181,180	206,295,490	206,937,650	206,513,768	207,322,334
Spouse with Children	407	1	38	$a_{38:\overline{Life}}$	26.26	377,582,961	379,104,892	386,741,268	386,741,268	386,741,268	388,534,390	396,440,917	397,674,967	396,860,387	398,414,217
Child(ren)		1.9	10	$a_{\overline{6}}$	7.45										
Orphan, No Sibling	21	1	13	$a_{13:\overline{5}}$	4.73	3,508,289	3,522,430	3,593,383	3,593,383	3,593,383	3,610,043	3,683,506	3,694,972	3,687,404	3,701,841
Orphan with Sibling(s)	15	2.5	12	$a_{\overline{6}}$	5.65	2,994,493	3,006,563	3,067,125	3,067,125	3,067,125	3,081,345	3,144,049	3,153,836	3,147,376	3,159,699
Other Dependents (No Spouse)	141	1.7	58	$a_{58:\overline{Life}}$	20.14	19,589,396	19,589,396	19,589,740	19,589,740	19,589,740	19,589,740	19,590,092	19,590,092	19,590,133	19,590,133
(15) Total Survivor Benefits	1,000					600,157,536	602,497,643	614,239,609	614,239,609	614,239,609	616,996,698	629,154,054	631,051,517	629,799,068	632,188,225
(16) Cost of Burial (1,000 cases)						4,000,000	4,000,000	4,000,000	9,719,920	9,719,920	10,051,760	10,051,760	10,288,391	10,288,391	10,530,592
(17) Total Monetary Cost [= (15) + (16)]						604,157,536	606,497,643	618,239,609	623,959,529	623,959,529	627,048,458	639,205,814	641,339,908	640,087,459	642,718,817
(18) Fatal Benefit Change Factors							1.004		1.009		1.005		1.003		1.004

IV 000010 STIP

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 4/1/2015).
- 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) =  $52 \times (2) \times (6) \times$  [ Page 2, (14) ] for Spouses and Orphans and =  $52 \times (2) \times (3) \times (6) \times$  [ Page 2, (30) ] for All Others Dependents
- (8), (10), (12), (14) =  $52 \times (2) \times (6) \times$  [ Page 2, (15) ] for Spouses and Orphans and =  $52 \times (2) \times (3) \times (6) \times$  [ Page 2, (31) ] for All Others Dependents
- (16): Since average cost of a funeral in 2011 was approximately \$6,500, well above the statutory maximum, we assume funeral benefit equal to statutory maximum.
- (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 10/1/2014

(1)	Nominal Rate of Compensation Based on Gross Wages ("Comp. Rate")	66.67%
(2)	Min Weekly Compensation	110.00
(3)	Max Weekly Compensation	1,214.99
(4)	Average Injured Worker Weekly Wage ("AIWWWW") for 12 months starting 10/1/2014	1,051.33

Wage Intervals (5)	Benefit (6)	Wage Distribution Entry Ratios = (5) / (4) (7)		Percentage in Interval		Average Wage in Interval = (9) / (8) x (4) (10)	Average Benefit in Interval (11)
				Workers (8)	Wages (9)		
0.00 - 165.00	Statutory Minimum	0.00	0.15	0.42%	0.04%	102.01	110.00
165.00 - 1,822.49	Actual Wage x Comp. Rate	0.15	1.75	92.44%	84.88%	965.31	643.54
1,822.49 - over	Statutory Maximum	1.75	over	7.14%	15.08%	2,220.89	1,214.99

(12) Average Weekly Benefit **682.10**

	Effects of SAWW Change			
	10/1/2014	10/1/2015	10/1/2016	10/1/2017
(13) Starting date of 12 month period for AIWWWW				
(14) Benefits Effective Average Weekly Benefits	10/1/2013 679.37	10/1/2014 695.84	10/1/2015 713.30	10/1/2016 714.05
(15) Benefits Effective Average Weekly Benefits	10/1/2014 <b>682.10</b>	10/1/2015 699.07	10/1/2016 715.52	10/1/2017 716.85
(16) Fatal: Spouse and Orphans Benefit Change Factors	1.004	1.005	1.003	1.004

### Fatal: All Others - Effective 10/1/2014

(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 ("AIWWWW") for 12 months starting 10/1/2014	1,051.33

Wage Intervals (21)	Benefit (22)	Wage Distribution Entry Ratios = (21) / (20) (23)		Percentage in Interval		Average Wage in Interval = (25) / (24) x (20) (26)	Average Benefit in Interval (27)
				Workers (24)	Wages (25)		
0.00 - 0.00	Statutory Minimum	0.00	0.00	0.00%	0.00%	0.00	0.00
0.00 - 120.00	Actual Wage x Comp. Rate	0.00	0.10	0.18%	0.01%	50.60	33.73
120.00 - over	Statutory Maximum	0.10	over	99.82%	99.99%	1,053.10	80.00

(28) Average Weekly Benefit **79.92**

	Effects of SAWW Change			
	10/1/2014	10/1/2015	10/1/2016	10/1/2017
(29) Starting date of 12 month period for AIWWWW				
(30) Benefits Effective Average Weekly Benefits	10/1/2013 79.92	10/1/2014 79.92	10/1/2015 79.92	10/1/2016 79.92
(31) Benefits Effective Average Weekly Benefits	10/1/2014 <b>79.92</b>	10/1/2015 79.92	10/1/2016 79.92	10/1/2017 79.92
(32) Fatal: All Others Benefit Change Factors	1.000	1.000	1.000	1.000

**Notes:**

- (1)-(3), (17)-(19): Section IV-C, Exhibit 1.
- (4), (20): Section IV-D, Exhibit 3.
- (5), (21): Wage Intervals follow Massachusetts General Law = (2) / (1)
- (7), (23): Rounded to nearest 0.05.
- (8), (24): Section IV-D, Exhibit 1, column (2).
- (9), (25): Section IV-D, Exhibit 1, column (3).
- (11), (27): Comp Rate x Average Wage in Interval, subject to a statutory maximum and statutory minimum.
- (12) = Sum [ (8) x (11) ]
- (28) = Sum [ (24) x (27) ]
- (14), (15): Average Weekly Benefits results from an Excel Data Table that repeats the calculation of (12) for different dates.
- (16) = (15) / (14)
- (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  
 7/1/2016

Section IV-B  
 Exhibit 2

## Determination of the Average Weekly Benefit for Permanent Totals

### Permanent Total - Effective 10/1/2014

(1)	Nominal Rate of Compensation Based on Gross Wages ("Comp. Rate")	66.67%
(2)	Min Weekly Compensation	243.00
(3)	Max Weekly Compensation	1,214.99
(4)	Average Injured Worker Weekly Wage ("AIWW") for 12 months starting 10/1/2014	1051.33

Wage Intervals (5)	Benefit (6)	Wage Distribution Entry Ratios = (5) / (4) (7)		Percentage in Interval		Average Wage in Interval = (9) / (8) x (4) (10)	Average Benefit in Interval (11)
		Workers (8)	Wages (9)	Workers (8)	Wages (9)		
0.00 - 364.50	Statutory Minimum	0.00	0.35	5.07%	1.29%	267.30	243.00
364.50 - 1,822.49	Actual Wage x Comp. Rate	0.35	1.75	87.79%	83.63%	1,001.49	667.66
1,822.49 over	Statutory Maximum	1.75	over	7.14%	15.08%	2,220.89	1,214.99

(12) Average Weekly Benefit **685.21**

	Effects of SAWW Change			
	10/1/2014	10/1/2015	10/1/2016	10/1/2017
(13) Starting date of 12 month period for AIWW	10/1/2014	10/1/2015	10/1/2016	10/1/2017
(14) Benefits Effective Average Weekly Wage Loss Benefit	10/1/2013 682.13	10/1/2014 698.75	10/1/2015 716.41	10/1/2016 733.27
(15) Benefits Effective Average Weekly Wage Loss Benefit	10/1/2014 <b>685.21</b>	10/1/2015 702.39	10/1/2016 718.93	10/1/2017 735.85
(16) Permanent Total Wage Loss Benefit Change Factors	1.005	1.005	1.004	1.004
(17) Specific Injury Benefits SAWW Effect on Specific Injury Benefits	1.029	1.034	1.024	1.024
(18) Benefit Proportions Associated with Permanent Total Claims				
(a) Permanent Total Wage Loss Benefits	96.50%	96.50%	96.50%	96.50%
(b) Specific Injury Benefits	3.50%	3.50%	3.50%	3.50%
(19) Permanent Total Benefit Change Factors = [(16) x (18a)] + [(17) x (18b)]	1.005	1.006	1.004	1.004

**Notes:**

- (1), (2), (3): Section IV-C, Exhibit 1.
- (4): Section IV-D, Exhibit 3.
- (5): Wage Intervals follow Massachusetts General Law = (2) / (1)
- (7): Rounded to nearest 0.05.
- (8): Section IV-D, Exhibit 1, column (2).
- (9): Section IV-D, Exhibit 1, column (3).
- (11): Comp Rate x Average Wage in Interval, subject to a statutory maximum and statutory minimum
- (12) = Sum [ (8) x (11) ]
- (14), (15): Average Weekly Benefits results from an Excel Data Table that repeats the calculation of (12) for different dates
- (16) = (15) / (14)
- (17): Ratio of SAWW from Section IV-D, Exhibit 3.  
 Example: Effect of SAWW Change of 10/1/2015 = SAWW 10/1/2015 / SAWW 10/1/2014 = 1.034 = 1,256.47 / 1,214.99
- (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  
 7/1/2016

Section IV-B  
 Exhibit 3

## Determination of the Average Weekly Benefit for Permanent Partials

### Permanent Partial - Effective 10/1/2014

(1)	Nominal Rate of Compensation Based on Gross Wages ("Comp. Rate")	37.20%
(2)	Min Weekly Compensation	0.00
(3)	Max Weekly Compensation	911.24
(4)	Average Injured Worker Weekly Wage ("AIWWW") for 12 months starting 10/1/2014	1,051.33
(5)	SAWW effective 10/1/2014	1,214.99

Wage Intervals (6)	Benefit (7)	Wage Distribution Entry Ratios = (6) / (4) (8)		Percentage in Interval		Average Wage in Interval =(10) / (9) x (4) (11)	Average Benefit in Interval (12)
				Workers (9)	Wages (10)		
0.00 - 2,449.58	Actual Wage x Comp. Rate	0.00	2.35	99.02%	96.95%	1,029.45	382.96
2,449.58 - 3,996.68	Statutory Maximum	2.35	3.80	0.83%	2.30%	2,894.17	911.24
3,996.68 - 6,394.68	Statutorily Reduced	3.80	6.10	0.11%	0.52%	4,821.16	597.94
6,394.68 over	Exceeds Statutory Limit	6.10	over	0.04%	0.23%	6,488.80	0.00

(13) Average Weekly Benefit 387.46

	Effects of SAWW Change			
	10/1/2014	10/1/2015	10/1/2016	10/1/2017
(14) Starting date of 12 month period for AIWWW	10/1/2014	10/1/2015	10/1/2016	10/1/2017
(15) Benefits Effective	10/1/2013	10/1/2014	10/1/2015	10/1/2016
Average Weekly Wage Loss Benefit	387.13	396.31	405.76	415.32
(16) Benefits Effective	10/1/2014	10/1/2015	10/1/2016	10/1/2017
Average Weekly Wage Loss Benefit	<b>387.46</b>	396.69	406.03	415.59
(17) Permanent Partial Wage Loss Benefit Change Factors	1.001	1.001	1.001	1.001
(18) Specific Injury Benefits				
SAWW Effect on Specific Injury Benefits	1.029	1.034	1.024	1.024
(19) Permanent Partial Healing Period				
Effect on Healing Period Benefits	1.003	1.003	1.002	1.002
(20) Benefit Proportions Associated with Permanent Partial Claims				
(a) Permanent Partial Wage Loss Benefits	27%	27%	27%	27%
(b) Specific Injury Benefits	26%	26%	26%	26%
(c) Healing Period - Temporary Total Benefits	47%	47%	47%	47%
(21) Permanent Partial Benefit Change Factors	1.009	1.011	1.007	1.007
= [(17) x (20a)] + [(18) x (20b)] + [(19) x (20c)]				

**Notes:**

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

(4), (5): Section IV-D, Exhibit 3.

(6): Wage Intervals follow Massachusetts General Law = (2) / (1)

(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 10/1/2015 = 1.034 = 1,256.47 / 1,214.99

(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  
 7/1/2016

Section IV-B  
 Exhibit 4

## Determination of the Average Weekly Benefit for Temporary Totals

### Temporary Total - Effective 10/1/2014

(1)	Nominal Rate of Compensation Based on Gross Wages ("Comp. Rate")	60.00%
(2)	Min Weekly Compensation	243.00
(3)	Max Weekly Compensation	1,214.99
(4)	Average Injured Worker Weekly Wage ("AIWWW") for 12 months starting 10/1/2014	1,051.33

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	243.00	Actual Wage	0.00	0.25	2.23%	0.43%	203.68	203.68
243.00	405.00	Statutory Minimum	0.25	0.40	4.62%	1.53%	347.42	243.00
405.00	2,024.98	Actual Wage x Comp. Rate	0.40	1.95	89.39%	89.19%	1,048.97	629.38
2,024.98	over	Statutory Maximum	1.95	over	3.76%	8.85%	2,474.28	1,214.99

(12) Average Weekly Benefit

**624.07**

	Effects of SAWW Change			
	10/1/2014	10/1/2015	10/1/2016	10/1/2017
(13) Starting date of 12 month period for AIWW	10/1/2014	10/1/2015	10/1/2016	10/1/2017
(14) Benefits Effective Average Weekly Benefits	10/1/2013 622.18	10/1/2014 637.21	10/1/2015 652.91	10/1/2016 668.28
(15) Benefits Effective Average Weekly Benefits	10/1/2014 <b>624.07</b>	10/1/2015 639.37	10/1/2016 654.42	10/1/2017 669.82
(16) Temporary Total Benefit Change Factors	1.003	1.003	1.002	1.002

**Notes:**

- (1), (2), (3): Section IV-C, Exhibit 1.
- (4): Section IV-D, Exhibit 3.
- (5): Wage Intervals follow Massachusetts General Law = (2) / (1)
- (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

	10/1/2013	10/1/2014	3/24/2015	10/1/2015	10/1/2016	10/1/2017
(1) Fatal						
% Rate of Compensation	66.67%	66.67%	66.67%	66.67%	66.67%	66.67%
Minimum Weekly Benefit						
Widow/Orphan	\$110.00	\$110.00	\$110.00	\$110.00	\$110.00	\$110.00
Others	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Maximum Weekly Benefit						
Widow/Orphan	\$1,181.28	\$1,214.99	\$1,214.99	\$1,256.47	\$1,286.05	\$1,316.32
Others	\$80.00	\$80.00	\$80.00	\$80.00	\$80.00	\$80.00
Each Additional Child	\$6.00, if benefit under \$150.00	\$6.00, if benefit under \$150.00	\$6.00, if benefit under \$150.00	\$6.00, if benefit under \$150.00	\$6.00, if benefit under \$150.00	\$6.00, if benefit under \$150.00
Maximum Aggregate Payable	250 x SAWW	250 x SAWW	250 x SAWW	250 x SAWW	250 x SAWW	250 x SAWW
Burial Allowance	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000
Cost of Living Adjustment - benefits increase annually by:	Each October 1 after 2 years after injury. Based on the lesser of 5%, N.E. region urban area CPI, and the % change in the SAWW	Each October 1 after 2 years after injury. Based on the lesser of 5%, N.E. region urban area CPI, and the % change in the SAWW	Each October 1 after 2 years after injury. Based on the lesser of 5%, N.E. region urban area CPI, and the % change in the SAWW	Each October 1 after 2 years after injury. Based on the lesser of 5%, N.E. region urban area CPI, and the % change in the SAWW	Each October 1 after 2 years after injury. Based on the lesser of 5%, N.E. region urban area CPI, and the % change in the SAWW	Each October 1 after 2 years after injury. Based on the lesser of 5%, N.E. region urban area CPI, and the % change in the SAWW
(2) Total Disability						
Permanent Total						
% Rate of Compensation	66.67%	66.67%	66.67%	66.67%	66.67%	66.67%
Minimum Weekly Benefit	\$236.26	\$243.00	\$243.00	\$251.29	\$257.21	\$263.26
Maximum Weekly Benefit	\$1,181.28	\$1,214.99	\$1,214.99	\$1,256.47	\$1,286.05	\$1,316.32
Duration	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime
Cost of Living Adjustment - benefits increase annually by:	Same as Fatal	Same as Fatal	Same as Fatal	Same as Fatal	Same as Fatal	Same as Fatal
Temporary Total						
% Rate of Compensation	60.00%	60.00%	60.00%	60.00%	60.00%	60.00%
Minimum Weekly Benefit	\$236.26	\$243.00	\$243.00	\$251.29	\$257.21	\$263.26
Maximum Weekly Benefit	\$1,181.28	\$1,214.99	\$1,214.99	\$1,256.47	\$1,286.05	\$1,316.32
Waiting Period/Retroactive After	5 days/21 days	5 days/21 days	5 days/21 days	5 days/21 days	5 days/21 days	5 days/21 days
(3) Permanent Partial Disability						
% Rate of Compensation	37.20%	37.20%	37.20%	37.20%	37.20%	37.20%
Minimum Weekly Benefit	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Maximum Weekly Benefit	\$885.96	\$911.24	\$911.24	\$942.35	\$964.54	\$987.24
(4) Specific Injury Payments						
Scheduled Injuries	According to the injury, a scheduled number multiplied by the SAWW	According to the injury, a scheduled number multiplied by the SAWW	According to the injury, a scheduled number multiplied by the SAWW	According to the injury, a scheduled number multiplied by the SAWW	According to the injury, a scheduled number multiplied by the SAWW	According to the injury, a scheduled number multiplied by the SAWW
Non-Scheduled Injuries	32 x SAWW	32 x SAWW	32 x SAWW	32 x SAWW	32 x SAWW	32 x SAWW
Disfigurement						
Maximum Benefit	\$15,000	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00
Benefit	As determined by the reviewing board	As determined by the reviewing board	As determined by the reviewing board	As determined by the reviewing board	As determined by the reviewing board	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  
 7/1/2016

Section IV-D  
 Exhibit 1

Massachusetts Standard Wage Distribution Table

R = Entry Ratio to Average Wage

A = Percentage of workers receiving not more than the percentage of the average wage indicated by column R

B = Percentage of wages received by the % of workers in column A

R (1)	A (2)	B (3)	R (1)	A (2)	B (3)	R (1)	A (2)	B (3)
0.05	0.0856	0.0013	2.40	99.1195	97.2019	4.75	99.9236	99.5618
0.10	0.1766	0.0085	2.45	99.2068	97.4138	4.80	99.9259	99.5728
0.15	0.4174	0.0405	2.50	99.2808	97.5971	4.85	99.9281	99.5834
0.20	0.9257	0.1319	2.55	99.3443	97.7576	4.90	99.9302	99.5937
0.25	2.2314	0.4323	2.60	99.3993	97.8994	4.95	99.9322	99.6035
0.30	3.5317	0.7887	2.65	99.4474	98.0258	5.00	99.9342	99.6135
0.35	5.0674	1.2884	2.70	99.4897	98.1390	5.05	99.9360	99.6226
0.40	6.8493	1.9583	2.75	99.5271	98.2411	5.10	99.9378	99.6317
0.45	8.8185	2.8024	2.80	99.5604	98.3335	5.15	99.9395	99.6404
0.50	11.3281	4.0021	2.85	99.5902	98.4178	5.20	99.9412	99.6492
0.55	14.4745	5.6622	2.90	99.6170	98.4949	5.25	99.9428	99.6576
0.60	18.4932	7.9785	2.95	99.6412	98.5658	5.30	99.9443	99.6655
0.65	23.0308	10.8200	3.00	99.6631	98.6310	5.35	99.9458	99.6735
0.70	28.5691	14.5564	3.05	99.6831	98.6915	5.40	99.9472	99.6810
0.75	35.0225	19.2288	3.10	99.7013	98.7475	5.45	99.9486	99.6886
0.80	40.0471	23.1320	3.15	99.7180	98.7998	5.50	99.9499	99.6957
0.85	44.3868	26.7137	3.20	99.7333	98.8484	5.55	99.9512	99.7029
0.90	48.9940	30.7458	3.25	99.7474	98.8939	5.60	99.9524	99.7096
0.95	53.5531	34.9727	3.30	99.7604	98.9365	5.65	99.9536	99.7164
1.00	57.4700	38.7995	3.35	99.7724	98.9764	5.70	99.9547	99.7226
1.05	61.0338	42.4490	3.40	99.7836	99.0143	5.75	99.9558	99.7289
1.10	64.9829	46.6881	3.45	99.7939	99.0496	5.80	99.9569	99.7353
1.15	68.2577	50.3695	3.50	99.8035	99.0829	5.85	99.9579	99.7411
1.20	71.1419	53.7606	3.55	99.8125	99.1147	5.90	99.9589	99.7470
1.25	73.9565	57.2095	3.60	99.8209	99.1447	5.95	99.9599	99.7529
1.30	76.3431	60.2534	3.65	99.8288	99.1734	6.00	99.9608	99.7583
1.35	78.8313	63.5465	3.70	99.8361	99.2002	6.05	99.9617	99.7637
1.40	80.9932	66.5149	3.75	99.8430	99.2260	6.10	99.9626	99.7692
1.45	83.1764	69.6230	3.80	99.8495	99.2505	6.15	99.9634	99.7741
1.50	85.3328	72.8012	3.85	99.8556	99.2739	6.20	99.9643	99.7796
1.55	87.3234	75.8346	3.90	99.8613	99.2960	6.25	99.9650	99.7840
1.60	89.0732	78.5889	3.95	99.8667	99.3172	6.30	99.9658	99.7890
1.65	90.4645	80.8478	4.00	99.8718	99.3375	6.35	99.9666	99.7941
1.70	91.5989	82.7450	4.05	99.8767	99.3572	6.40	99.9673	99.7985
1.75	92.8617	84.9207	4.10	99.8812	99.3755	6.45	99.9680	99.8030
1.80	93.8677	86.7057	4.15	99.8856	99.3937	6.50	99.9687	99.8076
1.85	94.6704	88.1702	4.20	99.8897	99.4108	6.55	99.9693	99.8115
1.90	95.4837	89.6937	4.25	99.8935	99.4269	6.60	99.9700	99.8161
1.95	96.2382	91.1467	4.30	99.8972	99.4427	6.65	99.9706	99.8201
2.00	96.9125	92.4774	4.35	99.9008	99.4583	6.70	99.9712	99.8241
2.05	97.4495	93.5662	4.40	99.9041	99.4727	6.75	99.9718	99.8281
2.10	97.9350	94.5748	4.45	99.9073	99.4869	6.80	99.9724	99.8322
2.15	98.2808	95.3105	4.50	99.9103	99.5003	6.85	99.9729	99.8356
2.20	98.5368	95.8679	4.55	99.9132	99.5135	6.90	99.9735	99.8397
2.25	98.7336	96.3063	4.60	99.9160	99.5263	6.95	99.9740	99.8432
2.30	98.8893	96.6609	4.65	99.9186	99.5383	7.00	99.9745	99.8467
2.35	99.0155	96.9546	4.70	99.9211	99.5500			

Notes:

Based on Massachusetts workers' compensation data from accident years 1987 to 1994.

For R > 2.00,  $B_i = B_{i-1} + [(0.55 \times R_i) + (0.45 \times R_{i-1})] \times (A_i - A_{i-1})$

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Section IV - Benefit Change Adjustments  
 Subsection D - Massachusetts Data  
 7/1/2016

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	<b>204</b>	<b>0</b>	N/A
Spouse, No Children	<b>212</b>	<b>1</b>	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
<b>Spouse with Children</b>	<b>407</b>	<b>1</b>	38
<b>Summary</b>		<b>1.9</b>	10
<b>Orphan, No Sibling</b>	<b>21</b>	<b>1</b>	13
1 Child			
Orphans with Sibling(s)	10	2	12
2 Children		3	12
3 Children	3	3	12
4 Children	1	4	12
More than 4 Children	1	5	12
<b>Orphans with Sibling(s)</b>	<b>15</b>	<b>2.5</b>	12
<b>Summary</b>			
Other Dependents (No Spouse)	41	1	62
1 Parent			
2 Parents	91	2	58
Sibling	7	1	37
Other	2	2	31
<b>Other Dependents</b>	<b>141</b>	<b>1.7</b>	58
<b>Summary</b>			

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)	Effective AIWWW (8)
10/1/2013	4/1/12 to 4/1/13	10/1/2012	1,181.28		1,181.28	10/1/13 to 10/1/14	1,021.95
10/1/2014	4/1/13 to 4/1/14	10/1/2013	1,214.99		1,214.99	10/1/14 to 10/1/15	1,051.33
10/1/2015	4/1/14 to 4/1/15	10/1/2014	1,256.47		1,256.47	10/1/15 to 10/1/16	1,076.08
10/1/2016	4/1/15 to 4/1/16	10/1/2015		1.024	1,286.05	10/1/16 to 10/1/17	1,101.41
10/1/2017	4/1/16 to 4/1/17	10/1/2016		1.024	1,316.32	10/1/17 to 10/1/18	1,127.34

Notes:

(4): Section V-G, Exhibit 2.

(5): 2.4% Estimated Annual Trend in SAWW, Section V-A, Exhibit 1.

(6) For SAWW Effective Date 10/1/2014 & 10/1/2015, (6) = (4)

For SAWW Effective Date 10/1/2016 & 10/1/2017, (6) = (5) x (6 from Prior Period)

(8): For the AIWWW Period 10/1/15 to 10/1/16, (8) is the product of .827 and the average of the SAWWs effective 10/1/2016 and 10/1/2017, respectively.

For the AIWWW Periods 10/1/16 to 10/1/17 and 10/1/17 to 10/1/18, (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  
 7/1/2016

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)	
<b>Average Wage Loss for Major Permanent Partial Claimants</b>						
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
<b>(6) Selected Average Wage Loss for Major Permanent Partial Claimants</b>						<b>0.62</b>

<b>Average Wage Loss for Minor Permanent Partial Claimants</b>						
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
<b>(7) Selected Average Wage Loss for Minor Permanent Partial Claimants</b>						<b>0.62</b>

**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	2005	3,905,032	1.052	4,108,400	9,690,411	1.052	10,195,073	14,303,474	
Death	2006	2,577,437	1.047	2,698,187	5,588,091	1.047	5,849,886	8,548,073	
Death	2007	2,485,219	1.041	2,587,053	6,414,478	1.041	6,677,316	9,264,369	
Death	2008	4,211,056	1.035	4,358,325	5,006,389	1.035	5,181,472	9,539,797	
Death	2009	1,444,202	1.033	1,491,628	6,993,542	1.033	7,223,204	8,714,833	
Total Death		14,622,946		15,243,593	33,692,911		35,126,952	50,370,545	1.81%
Permanent Total	2005	22,554,473	1.059	23,878,395	0	1.059	0	23,878,395	
Permanent Total	2006	31,142,625	1.051	32,730,244	0	1.051	0	32,730,244	
Permanent Total	2007	31,406,926	1.042	32,737,392	0	1.042	0	32,737,392	
Permanent Total	2008	32,238,746	1.034	33,335,257	0	1.034	0	33,335,257	
Permanent Total	2009	36,154,020	1.031	37,280,869	0	1.031	0	37,280,869	
Total Permanent Total		153,496,790		159,962,156	0		0	159,962,156	5.73%
Permanent Partial	2005	120,391,311	1.106	133,160,809	113,154,329	1.106	125,156,225	258,317,035	
Permanent Partial	2006	108,344,407	1.090	118,079,590	101,438,695	1.090	110,553,372	228,632,962	
Permanent Partial	2007	96,948,054	1.074	104,167,309	114,278,721	1.074	122,788,508	226,955,817	
Permanent Partial	2008	85,792,220	1.059	90,893,914	119,609,771	1.059	126,722,449	217,616,363	
Permanent Partial	2009	77,912,092	1.054	82,122,688	116,126,732	1.054	122,402,558	204,525,246	
Total Permanent Partial		489,388,084		528,424,311	564,608,248		607,623,112	1,136,047,423	40.73%
Temporary Total	2005	25,645,228	1.032	26,463,948	57,397,849	1.032	59,230,266	85,694,214	
Temporary Total	2006	27,769,894	1.028	28,542,214	61,137,709	1.028	62,838,035	91,380,248	
Temporary Total	2007	26,414,237	1.023	27,023,344	61,349,294	1.023	62,763,995	89,787,339	
Temporary Total	2008	25,772,236	1.018	26,239,686	62,248,241	1.018	63,377,283	89,616,968	
Temporary Total	2009	27,990,293	1.016	28,449,109	57,888,559	1.016	58,837,467	87,286,577	
Total Temporary Total		133,591,888		136,718,300	300,021,652		307,047,046	443,765,346	15.91%
(11) Total Indemnity		791,099,708		840,348,360	898,322,811		949,797,110	1,790,145,471	64.18%

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- (12) Aggregate Financial Policy Year Call, Indemnity Fifth to Ultimate Development Factor Paid + Case 1.082
- (13) Tail Development Attributed to Likely to Develop Claims 0.8
- (14) Percentage Likely to Develop 0.469
- (15) Indemnity Likely to Develop - Loss Development Factor from 5th Report to Ultimate =  $1.0 + \{ [(12) - 1.0] \times (13) \} / (14)$  1.140
- (16) Indemnity Not Likely to Develop - Loss Development Factor from 5th Report to Ultimate =  $1.0 + \{ [(12) - 1.0] \times [1.0 - (13)] \} / [1.0 - (14)]$  1.031

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	2005	319,781	1.032	330,014	550,716	1.032	568,339	898,353	
Death	2006	44,965	1.032	46,404	296,470	1.032	305,957	352,361	
Death	2007	3,931,530	1.032	4,057,339	714,126	1.032	736,978	4,794,317	
Death	2008	38,596	1.024	39,536	278,090	1.024	284,865	324,401	
Death	2009	834,291	1.002	835,729	378,555	1.002	379,207	1,214,936	
<b>Total Death</b>		<b>5,169,163</b>		<b>5,309,022</b>	<b>2,217,957</b>		<b>2,275,346</b>	<b>7,584,368</b>	<b>0.27%</b>
Permanent Total	2005	21,183,498	1.032	21,861,370	0	1.032	0	21,861,370	
Permanent Total	2006	25,095,926	1.032	25,898,996	0	1.032	0	25,898,996	
Permanent Total	2007	12,166,839	1.032	12,556,178	0	1.032	0	12,556,178	
Permanent Total	2008	14,171,386	1.024	14,516,623	0	1.024	0	14,516,623	
Permanent Total	2009	19,400,533	1.002	19,433,968	0	1.002	0	19,433,968	
<b>Total Permanent Total</b>		<b>92,018,182</b>		<b>94,267,135</b>	<b>0</b>		<b>0</b>	<b>94,267,135</b>	<b>3.38%</b>
Permanent Partial	2005	50,150,368	1.032	51,755,180	42,571,430	1.032	43,933,716	95,688,896	
Permanent Partial	2006	46,823,409	1.032	48,321,758	37,322,177	1.032	38,516,487	86,838,245	
Permanent Partial	2007	44,352,317	1.032	45,771,591	44,359,983	1.032	45,779,502	91,551,094	
Permanent Partial	2008	33,750,124	1.024	34,572,330	44,900,412	1.024	45,994,257	80,566,587	
Permanent Partial	2009	37,739,430	1.002	37,804,471	49,981,208	1.002	50,067,347	87,871,818	
<b>Total Permanent Partial</b>		<b>212,815,648</b>		<b>218,225,330</b>	<b>219,135,210</b>		<b>224,291,308</b>	<b>442,516,639</b>	<b>15.86%</b>
Temporary Total	2005	15,575,393	1.032	16,073,806	45,646,112	1.032	47,106,788	63,180,593	
Temporary Total	2006	13,300,446	1.032	13,726,060	48,157,136	1.032	49,698,164	63,424,225	
Temporary Total	2007	13,944,083	1.032	14,390,294	50,373,527	1.032	51,985,480	66,375,774	
Temporary Total	2008	14,431,246	1.024	14,782,814	46,287,610	1.024	47,415,249	62,198,063	
Temporary Total	2009	13,247,417	1.002	13,270,248	46,283,629	1.002	46,363,395	59,633,643	
<b>Total Temporary Total</b>		<b>70,498,585</b>		<b>72,243,221</b>	<b>236,748,014</b>		<b>242,569,076</b>	<b>314,812,297</b>	<b>11.29%</b>
Medical Only	2005	0	1.032	0	29,007,660	1.032	29,935,905	29,935,905	
Medical Only	2006	0	1.032	0	28,416,079	1.032	29,325,394	29,325,394	
Medical Only	2007	0	1.032	0	28,898,333	1.032	29,823,080	29,823,080	
Medical Only	2008	0	1.024	0	26,426,881	1.024	27,070,681	27,070,681	
Medical Only	2009	0	1.002	0	23,865,970	1.002	23,907,101	23,907,101	
<b>Total Medical Only</b>		<b>0</b>		<b>0</b>	<b>136,614,923</b>		<b>140,062,161</b>	<b>140,062,161</b>	<b>5.02%</b>
<b>(11) Total Medical</b>		<b>380,501,578</b>		<b>390,044,708</b>	<b>594,716,104</b>		<b>609,197,891</b>	<b>999,242,600</b>	<b>35.82%</b>
<b>(12) Total Medical &amp; Indemnity</b>		<b>1,171,601,286</b>		<b>1,230,393,069</b>	<b>1,493,038,915</b>		<b>1,558,995,002</b>	<b>2,789,388,071</b>	
<b>(13) Medical Only fraction of Total Medical</b>									<b>14.02%</b>

- (14) Aggregate Financial Policy Year Call, Medical Fifth to Ultimate Development Factor Paid + Case 1.056
- (15) Tail Development Attributed to Likely to Develop Claims 0.8
- (16) Percentage Likely to Develop 0.390
- (17) Medical Likely to Develop - Loss Development Factor from 5th Report to Ultimate =  $1.0 + \{ [(14) - 1.0] \times (15) \} / (16)$  1.115
- (18) Medical Not Likely to Develop - Loss Development Factor from 5th Report to Ultimate =  $1.0 + \{ [(14) - 1.0] \times [1.0 - (15)] \} / [1.0 - (16)]$  1.018
- (19) Indemnity Likely Weight at 5th Report 30.13%
- (20) Indemnity Not Likely Weight at 5th Report 34.05%
- (21) Medical Likely Weight at 5th Report 13.98%
- (22) Medical Not Likely Weight at 5th Report 21.84%

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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	2005	4,108,400	1.140	4,684,677	10,195,073	1.031	10,511,386	15,196,063	
Death	2006	2,698,187	1.140	3,076,655	5,849,886	1.031	6,031,385	9,108,040	
Death	2007	2,587,053	1.140	2,949,933	6,677,316	1.031	6,884,487	9,834,421	
Death	2008	4,358,325	1.140	4,969,658	5,181,472	1.031	5,342,233	10,311,890	
Death	2009	1,491,628	1.140	1,700,856	7,223,204	1.031	7,447,312	9,148,168	
<b>Total Death</b>		<b>15,243,593</b>		<b>17,381,779</b>	<b>35,126,952</b>		<b>36,216,803</b>	<b>53,598,582</b>	<b>1.79%</b>
Permanent Total	2005	23,878,395	1.140	27,227,766	0	1.031	0	27,227,766	
Permanent Total	2006	32,730,244	1.140	37,321,245	0	1.031	0	37,321,245	
Permanent Total	2007	32,737,392	1.140	37,329,395	0	1.031	0	37,329,395	
Permanent Total	2008	33,335,257	1.140	38,011,121	0	1.031	0	38,011,121	
Permanent Total	2009	37,280,869	1.140	42,510,177	0	1.031	0	42,510,177	
<b>Total Permanent Total</b>		<b>159,962,156</b>		<b>182,399,704</b>	<b>0</b>		<b>0</b>	<b>182,399,704</b>	<b>6.09%</b>
Permanent Partial	2005	133,160,809	1.140	151,838,990	125,156,225	1.031	129,039,330	280,878,320	
Permanent Partial	2006	118,079,590	1.140	134,642,361	110,553,372	1.031	113,983,408	248,625,768	
Permanent Partial	2007	104,167,309	1.140	118,778,634	122,788,508	1.031	126,598,152	245,376,785	
Permanent Partial	2008	90,893,914	1.140	103,643,408	126,722,449	1.031	130,654,148	234,297,555	
Permanent Partial	2009	82,122,688	1.140	93,641,861	122,402,558	1.031	126,200,227	219,842,088	
<b>Total Permanent Partial</b>		<b>528,424,311</b>		<b>602,545,253</b>	<b>607,623,112</b>		<b>626,475,265</b>	<b>1,229,020,517</b>	<b>41.07%</b>
Temporary Total	2005	26,463,948	1.140	30,175,989	59,230,266	1.031	61,067,948	91,243,937	
Temporary Total	2006	28,542,214	1.140	32,545,769	62,838,035	1.031	64,787,651	97,333,420	
Temporary Total	2007	27,023,344	1.140	30,813,850	62,763,995	1.031	64,711,315	95,525,165	
Temporary Total	2008	26,239,686	1.140	29,920,270	63,377,283	1.031	65,343,630	95,263,900	
Temporary Total	2009	28,449,109	1.140	32,439,605	58,837,467	1.031	60,662,962	93,102,567	
<b>Total Temporary Total</b>		<b>136,718,300</b>		<b>155,895,482</b>	<b>307,047,046</b>		<b>316,573,507</b>	<b>472,468,989</b>	<b>15.79%</b>
<b>(11) Total Indemnity</b>		<b>840,348,360</b>		<b>958,222,218</b>	<b>949,797,110</b>		<b>979,265,575</b>	<b>1,937,487,793</b>	<b>64.74%</b>

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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	2005	330,014	1.115	368,006	568,339	1.018	578,812	946,818	
Death	2006	46,404	1.115	51,746	305,957	1.018	311,595	363,341	
Death	2007	4,057,339	1.115	4,524,432	736,978	1.018	750,558	5,274,990	
Death	2008	39,536	1.115	44,088	284,865	1.018	290,114	334,202	
Death	2009	835,729	1.115	931,940	379,207	1.018	386,195	1,318,135	
Total Death		5,309,022		5,920,212	2,275,346		2,317,274	8,237,486	0.28%
Permanent Total	2005	21,861,370	1.115	24,378,114	0	1.018	0	24,378,114	
Permanent Total	2006	25,898,996	1.115	28,880,563	0	1.018	0	28,880,563	
Permanent Total	2007	12,556,178	1.115	14,001,681	0	1.018	0	14,001,681	
Permanent Total	2008	14,516,623	1.115	16,187,819	0	1.018	0	16,187,819	
Permanent Total	2009	19,433,968	1.115	21,671,263	0	1.018	0	21,671,263	
Total Permanent Total		94,267,135		105,119,441	0		0	105,119,441	3.51%
Permanent Partial	2005	51,755,180	1.115	57,713,386	43,933,716	1.018	44,743,288	102,456,674	
Permanent Partial	2006	48,321,758	1.115	53,884,699	38,516,487	1.018	39,226,235	93,110,934	
Permanent Partial	2007	45,771,591	1.115	51,040,950	45,779,502	1.018	46,623,087	97,664,037	
Permanent Partial	2008	34,572,330	1.115	38,552,397	45,994,257	1.018	46,841,799	85,394,196	
Permanent Partial	2009	37,804,471	1.115	42,156,632	50,067,347	1.018	50,989,945	93,146,576	
Total Permanent Partial		218,225,330		243,348,064	224,291,308		228,424,354	471,772,417	15.76%
Temporary Total	2005	16,073,806	1.115	17,924,269	47,106,788	1.018	47,974,831	65,899,099	
Temporary Total	2006	13,726,060	1.115	15,306,244	49,698,164	1.018	50,613,959	65,920,203	
Temporary Total	2007	14,390,294	1.115	16,046,946	51,985,480	1.018	52,943,423	68,990,369	
Temporary Total	2008	14,782,814	1.115	16,484,654	47,415,249	1.018	48,288,976	64,773,630	
Temporary Total	2009	13,270,248	1.115	14,797,957	46,363,395	1.018	47,217,740	62,015,697	
Total Temporary Total		72,243,221		80,560,071	242,569,076		247,038,928	327,598,999	10.95%
Medical Only	2005	0	1.115	0	29,935,905	1.018	30,487,538	30,487,538	
Medical Only	2006	0	1.115	0	29,325,394	1.018	29,865,776	29,865,776	
Medical Only	2007	0	1.115	0	29,823,080	1.018	30,372,633	30,372,633	
Medical Only	2008	0	1.115	0	27,070,681	1.018	27,569,516	27,569,516	
Medical Only	2009	0	1.115	0	23,907,101	1.018	24,347,641	24,347,641	
Total Medical Only		0		0	140,062,161		142,643,105	142,643,105	4.77%
(11) Total Medical		390,044,708		434,947,787	609,197,891		620,423,661	1,055,371,449	35.26%
(12) Total Medical & Indemnity		1,230,393,069		1,393,170,006	1,558,995,002		1,599,689,236	2,992,859,242	
(13) Medical Only fraction of Total Medical									13.52%

Ind & Med N/L Weights at Ult	
Indemnity Likely	32.02%
Indemnity Not Likely	32.72%
Medical Likely	14.53%
Medical Not Likely	20.73%

IV 000023 STIP

USL&HW Benefit Level Factors

All Injury Types

Time Period		Indemnity					Medical	Total
Beginning Period	Ending Period	Death	Permanent Total	Permanent Partial	Temporary Total	All Injury Types	All Injury Types	All Injury Types
PY 2009	Prosp. Eff. Period	1.034	1.030	1.012	1.030		1.000	
PY 2010	Prosp. Eff. Period	1.030	1.027	1.012	1.027		1.000	
PY 2011	Prosp. Eff. Period	1.026	1.023	1.011	1.023		1.000	
PY 2012	Prosp. Eff. Period	1.019	1.019	1.009	1.019		1.000	
PY 2013	Prosp. Eff. Period	1.015	1.015	1.007	1.015		1.000	
CPY 2012_07	Prosp. Eff. Period							1.008
CPY 2013_07	Prosp. Eff. Period							1.006
CPY 2014_07	Prosp. Eff. Period							1.004
Prior Eff. Period (using benefit level projections from prior filing)	Prosp. Eff. Period					1.007	1.000	1.004

IV 000024 STIP

Notes:

All time periods refer to Policy Years.

Example: PY 2013 to Prosp. Eff. Period for Indemnity Permanent Partial = 1.007 = 1.009 / 1.006

where 1.009 is the Index Factor of Prosp. Eff. Period and 1.006 is the Index Factor of PY 2013 for Indemnity Permanent Partial, from Exhibit 2.

USL&HW Benefit Level Changes and Weights

Death											
Benefit Level Change	10/1/2008	10/1/2009	10/1/2010	10/1/2011	10/1/2012	10/1/2013	10/1/2014	10/1/2015	10/1/2016	10/1/2017	Weighted Average Benefit Level
Cumulative Benefit Level Change	1.000	1.009	1.011	1.017	1.023	1.026	1.030	1.034	1.039	1.043	
Time Period											
PY 2009	0.276	0.711	0.012								<b>1.007</b>
PY 2010		0.310	0.679	0.012							<b>1.010</b>
PY 2011			0.386	0.606	0.008						<b>1.015</b>
PY 2012				0.336	0.651	0.013					<b>1.021</b>
PY 2013					0.363	0.623	0.014				<b>1.025</b>
CPY 2012_07				0.005	0.544	0.450					<b>1.025</b>
CPY 2013_07					0.010	0.460	0.530				<b>1.028</b>
CPY 2014_07						0.010	0.460	0.530			<b>1.033</b>
Prior Eff. Period						0.225	0.697	0.077			<b>1.030</b>
Prosp. Eff. Period								0.010	0.460	0.530	<b>1.041</b>

Indemnity All Injury Types - Average Benefit Level for Current Policy Period, Estimated at 7/1/2014 (using benefit level projections from prior filing).

Date of Change	10/1/2008	10/1/2009	10/1/2010	10/1/2011	10/1/2012	10/1/2013	10/1/2014	10/1/2015	Weighted Average Benefit Level
Benefit Level Change	1.000	1.003	1.001	1.003	1.003	1.003	1.003	1.003	
Cumulative Level Change	1.000	1.003	1.004	1.007	1.010	1.013	1.016	1.019	<b>1.016</b>

Medical All Injury Types - Average Benefit Level for Current Policy Period, Estimated at 7/1/2014 (using benefit level projections from prior filing).

Date of Change	10/1/2008	10/1/2009	10/1/2010	10/1/2011	10/1/2012	10/1/2013	10/1/2014	10/1/2015	Weighted Average Benefit Level
Benefit Level Change	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	<b>1.000</b>

All Injury Types - Average Benefit Level for Current Policy Period, Estimated at 7/1/2014 (using benefit level projections from prior filing).

Date of Change	10/1/2008	10/1/2009	10/1/2010	10/1/2011	10/1/2012	10/1/2013	10/1/2014	10/1/2015	Weighted Average Benefit Level
Benefit Level Change	1.000	1.001	1.000	1.001	1.002	1.002	1.002	1.002	
Cumulative Level Change	1.000	1.001	1.001	1.002	1.004	1.006	1.008	1.010	<b>1.008</b>

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 2009	<b>1.007</b>	1.004	1.001	1.004	1.002	1.000	1.001
PY 2010	<b>1.010</b>	1.006	1.001	1.006	1.004	1.000	1.001
PY 2011	<b>1.015</b>	1.010	1.002	1.010	1.006	1.000	1.002
PY 2012	<b>1.021</b>	1.015	1.004	1.015	1.009	1.000	1.003
PY 2013	<b>1.025</b>	1.018	1.006	1.018	1.011	1.000	1.005
CPY 2012_07	<b>1.025</b>	1.017	1.005	1.017	1.011	1.000	1.004
CPY 2013_07	<b>1.028</b>	1.021	1.007	1.021	1.014	1.000	1.006
CPY 2014_07	<b>1.033</b>	1.025	1.009	1.025	1.017	1.000	1.008
Prior Eff. Period	<b>1.030</b>	1.023	1.008	1.023	1.015	1.000	1.007
Prosp. Eff. Period	<b>1.041</b>	1.034	1.013	1.034	1.023	1.000	1.012
10/1/2013	<b>1.026</b>	1.019	1.006	1.019	1.012	1.000	1.005

Notes:

All time periods refer to Policy Years.

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



## IV 000026 STIP

Section IV - Benefit Change Adjustments  
 Subsection F - Effects of USL&HW Benefit Changes  
 7/1/2016

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)
10/1/2007	0.9%	0.5%	0.1%	0.5%	0.3%	0.0%	0.2%
10/1/2008	1.1%	0.6%	0.1%	0.6%	0.2%	0.0%	0.1%
10/1/2009	0.9%	0.5%	0.1%	0.5%	0.3%	0.0%	0.1%
10/1/2010	0.2%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%
10/1/2011	0.6%	0.5%	0.2%	0.5%	0.3%	0.0%	0.1%
10/1/2012	0.6%	0.4%	0.2%	0.4%	0.3%	0.0%	0.2%
10/1/2013	0.3%	0.3%	0.1%	0.3%	0.2%	0.0%	0.1%
10/1/2014	0.4%	0.4%	0.2%	0.4%	0.3%	0.0%	0.2%
10/1/2015	0.4%	0.4%	0.2%	0.4%	0.3%	0.0%	0.2%
10/1/2016	0.4%	0.4%	0.2%	0.4%	0.3%	0.0%	0.2%
10/1/2017	0.4%	0.4%	0.2%	0.4%	0.3%	0.0%	0.2%

**Notes:**

Values prior to 10/1/2014 are from NCCI's Annual Statistical Bulletin, 2015 Edition.

Values for 10/1/2014 are from NCCI CT-2013-04.

Changes for 10/1/2015 - 10/1/2017 are assumed to be the same as 10/1/2014.

**Trend Summary**

		Indemnity		Medical				SAWW
		Severity	Frequency	Lost Time Medical		Medical Only		
				Severity	Frequency	Severity	Frequency	
(1)	Massachusetts Trend	3.3%	-1.5%	4.5%	-1.5%	2.2%	-4.3%	2.4%
	5 Year	3.5%	-1.4%	4.9%	-1.4%	3.2%	-4.6%	2.4%
	6 Year	3.2%	-1.0%	5.7%	-1.0%	2.1%	-4.2%	2.7%
	7 Year	3.4%	-1.4%	4.8%	-1.4%	1.6%	-4.4%	2.4%
	8 Year	3.2%	-1.5%	4.0%	-1.5%	1.7%	-4.3%	2.1%
	9 Year	3.3%	-1.7%	4.1%	-1.7%	2.0%	-4.2%	2.2%
	10 Year	3.0%	-1.9%	3.7%	-1.9%	2.5%	-4.2%	2.3%
(2)	Complement of Credibility	-0.7%	-3.2%	1.7%	-3.2%	4.9%	-4.7%	2.7%
(3)	Credibility Weighted Trend	2.6%	-2.1%	3.1%	-2.1%	2.9%	-4.4%	2.4%
	5 Year	1.3%	-2.5%	2.8%	-2.5%	3.5%	-4.7%	2.4%
	6 Year	1.9%	-2.0%	3.7%	-2.0%	3.3%	-4.4%	2.7%
	7 Year	2.8%	-2.1%	3.3%	-2.1%	2.8%	-4.5%	2.4%
	8 Year	3.2%	-1.9%	2.8%	-1.9%	2.3%	-4.4%	2.1%
	9 Year	3.3%	-2.1%	3.1%	-2.1%	2.4%	-4.3%	2.2%
	10 Year	3.0%	-2.2%	3.0%	-2.2%	3.1%	-4.2%	2.3%
(4)	Selected Trend	2.6%	-2.1%	3.1%	-2.1%	2.9%	-4.4%	2.4%

	Lost Time Medical	Medical Only
(5) Medical Loss Trend	0.9%	-1.7%
(6) Fraction of Total Medical	86.5%	13.5%
(7) Total Medical Loss Trend	0.5%	

	Indemnity	Medical
(8) Total Loss Trend	0.4%	0.5%
(9) SAWW Trend	2.4%	2.4%
(10) Total Net Trend	-1.9%	-1.8%

Notes:

(1),(2),(3): Section V, Exhibit 2 Severity; Exhibit 3 Frequency and SAWW.

(4) = 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







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
2004	211.00											206.22	22.88
2005	204.82									200.22	21.13	202.27	6.48
2006	195.51							194.55	0.93	196.77	1.58	198.41	8.38
2007	194.84					191.12	13.85	191.66	10.12	193.38	2.15	194.61	0.05
2008	183.79			186.01	4.90	188.41	21.34	188.81	25.19	190.04	39.03	190.89	50.36
2009	180.09	185.85	33.25	184.08	15.96	185.75	32.03	186.01	35.07	186.76	44.59	187.24	51.18
2010	189.89	183.27	43.88	182.18	59.56	183.12	45.95	183.24	44.21	183.54	40.35	183.66	38.87
2011	183.07	180.72	5.52	180.29	7.74	180.52	6.50	180.52	6.50	180.38	7.27	180.15	8.56
2012	177.10	178.21	1.25	178.42	1.77	177.97	0.76	177.84	0.56	177.27	0.03	176.70	0.16
2013	173.88	175.73	3.45	176.58	7.29	175.45	2.46	175.20	1.75	174.21	0.11	173.32	0.31
(1)	<b>Massachusetts Trend</b>		<b>-1.4%</b>		<b>-1.0%</b>		<b>-1.4%</b>		<b>-1.5%</b>		<b>-1.7%</b>		<b>-1.9%</b>
(2)	n		5		6		7		8		9		10
(3)	s		5.40		4.93		4.96		4.55		4.72		4.84
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		5.50		6.00		6.50		7.00		7.50		8.00
(6)	$[1 + 1/n + 12 \times m^2/(n^3 - n)]^{.5}$		2.05		1.80		1.63		1.51		1.43		1.37
(7)	Confidence Interval		26.09		18.87		16.26		13.39		12.81		12.32
(8)	Projected Value Prospective Period		167.34		170.26		166.91		166.26		163.93		162.00
(9)	CI/Projected Frequency		0.16		0.11		0.10		0.08		0.08		0.08
(10)	<b>Credibility - MA Trend (Z)</b>		<b>38%</b>		<b>54%</b>		<b>62%</b>		<b>74%</b>		<b>77%</b>		<b>79%</b>
(11)	<b>Complement of Credibility</b>		<b>-3.2%</b>		<b>-3.2%</b>		<b>-3.2%</b>		<b>-3.2%</b>		<b>-3.2%</b>		<b>-3.2%</b>
(12)	<b>Credibility Weighted Frequency Trend</b>		<b>-2.5%</b>		<b>-2.0%</b>		<b>-2.1%</b>		<b>-1.9%</b>		<b>-2.1%</b>		<b>-2.2%</b>

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 Adjusted Claim Frequencies
- (12) = [ (1) x (10) ] + { (11) x [ 1.0 - (10) ] }

V 000024 STIP

Medical Only Frequency Trend Calculation

Policy Year	Adjusted MedOnly 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
2004	507.57											512.12	20.63
2005	491.38											490.73	0.42
2006	467.89							472.38	20.18	492.68	1.69	470.25	5.54
2007	459.98					454.67	28.13	452.20	60.53	451.73	68.04	450.61	87.71
2008	424.50			431.30	46.33	434.65	103.12	432.87	70.19	432.55	64.83	431.80	53.34
2009	407.93	418.56	113.03	413.27	28.50	415.51	57.48	414.38	41.59	414.18	39.11	413.77	34.15
2010	410.14	399.15	120.84	395.98	200.36	397.21	167.14	396.67	181.44	396.59	183.46	396.50	186.13
2011	387.56	380.63	48.00	379.42	66.22	379.72	61.53	379.72	61.53	379.75	60.97	379.94	58.07
2012	357.69	362.98	27.93	363.56	34.37	363.00	28.10	363.49	33.60	363.63	35.21	364.08	40.75
2013	344.48	346.14	2.76	348.35	14.99	347.01	6.39	347.96	12.08	348.19	13.73	348.88	19.32
(1)	<b>Massachusetts Trend</b>		<b>-4.6%</b>		<b>-4.2%</b>		<b>-4.4%</b>		<b>-4.3%</b>		<b>-4.2%</b>		<b>-4.2%</b>
(2)	n		5		6		7		8		9		10
(3)	s		10.21		9.88		9.51		8.95		8.30		7.95
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		5.50		6.00		6.50		7.00		7.50		8.00
(6)	$[1 + 1/n + 12 \times m^2 / (n^3 - n)]^{.5}$		2.05		1.80		1.63		1.51		1.43		1.37
(7)	Confidence Interval		49.36		37.84		31.19		26.34		22.50		20.26
(8)	Projected Value Prospective Period		293.17		300.03		296.44		298.70		299.18		300.57
(9)	CI/Projected Frequency		0.17		0.13		0.11		0.09		0.08		0.07
(10)	<b>Credibility - MA Trend (Z)</b>		<b>36%</b>		<b>48%</b>		<b>57%</b>		<b>68%</b>		<b>80%</b>		<b>89%</b>
(11)	<b>Complement of Credibility</b>		<b>-4.7%</b>		<b>-4.7%</b>		<b>-4.7%</b>		<b>-4.7%</b>		<b>-4.7%</b>		<b>-4.7%</b>
(12)	<b>Credibility Weighted Frequency Trend</b>		<b>-4.7%</b>		<b>-4.4%</b>		<b>-4.5%</b>		<b>-4.4%</b>		<b>-4.3%</b>		<b>-4.2%</b>

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 Adjusted Claim Frequencies
- (12) = [(1) x (10)] + [(11) x [1.0 - (10)]]

Statewide Average Weekly Wage Trend Calculation

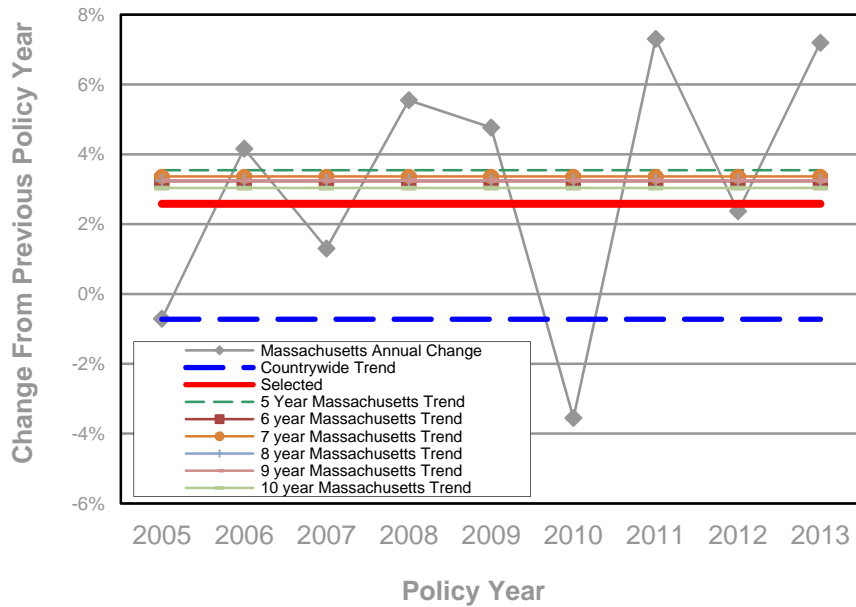
Data Period	Statewide Average Weekly Wage	5 Year		6 Year		7 Year		8 Year		9 Year		10 Year	
		Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared	Exponential Fit	Difference Squared
4/1/05 to 4/1/06	1,000.43											1,016.14	246.80
4/1/06 to 4/1/07	1,043.54											1,039.52	16.17
4/1/07 to 4/1/08	1,093.27											1,063.44	890.12
4/1/08 to 4/1/09	1,094.70											1,087.90	46.21
4/1/09 to 4/1/10	1,088.06											1,112.93	618.60
4/1/10 to 4/1/11	1,135.82	1,136.46	0.41	1,098.38	106.45	1,107.51	378.23	1,117.29	854.17	1,116.31	797.98	1,138.54	7.38
4/1/11 to 4/1/12	1,173.06	1,163.72	87.27	1,158.24	219.65	1,162.08	120.53	1,165.49	57.29	1,165.24	61.21	1,164.73	69.36
4/1/12 to 4/1/13	1,181.28	1,191.63	107.13	1,189.38	65.66	1,190.37	82.59	1,190.37	82.59	1,190.50	84.98	1,191.53	105.05
4/1/13 to 4/1/14	1,214.99	1,220.21	27.27	1,221.36	40.63	1,219.34	18.95	1,215.78	0.62	1,216.31	1.74	1,218.94	15.63
4/1/14 to 4/1/15	1,256.47	1,249.48	48.87	1,254.20	5.13	1,249.02	55.44	1,241.73	217.38	1,242.68	190.23	1,246.99	89.91
(1)	<b>Massachusetts Trend</b>		<b>2.4%</b>		<b>2.7%</b>		<b>2.4%</b>		<b>2.1%</b>		<b>2.2%</b>		<b>2.3%</b>
(2)	n		5		6		7		8		9		10
(3)	s		9.50		11.18		12.96		17.00		15.77		16.22
(4)	t		2.35		2.13		2.02		1.94		1.89		1.86
(5)	m		4.75		5.25		5.75		6.25		6.75		7.25
(6)	$[1 + 1/n + 12 \times m^2 / (n^3 - n)]^{.5}$		1.86		1.66		1.52		1.43		1.37		1.32
(7)	Confidence Interval		41.58		39.47		39.82		47.35		40.86		39.76
(8)	Projected Value Prospective Period		1,333.63		1,349.26		1,334.42		1,316.05		1,318.18		1,327.57
(9)	CI/Projected Wage		0.03		0.03		0.03		0.04		0.03		0.03
(10)	<b>Credibility - MA Trend (Z)</b>		<b>100%</b>		<b>100%</b>		<b>100%</b>		<b>100%</b>		<b>100%</b>		<b>100%</b>
(11)	<b>Complement of Credibility</b>		<b>2.7%</b>		<b>2.7%</b>		<b>2.7%</b>		<b>2.7%</b>		<b>2.7%</b>		<b>2.7%</b>
(12)	<b>Credibility Weighted Wage Trend</b>		<b>2.4%</b>		<b>2.7%</b>		<b>2.4%</b>		<b>2.1%</b>		<b>2.2%</b>		<b>2.3%</b>

- 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 wage:
  - (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
  - (12) = [(1) x (10)] + [(11) x [1.0 - (10)]]

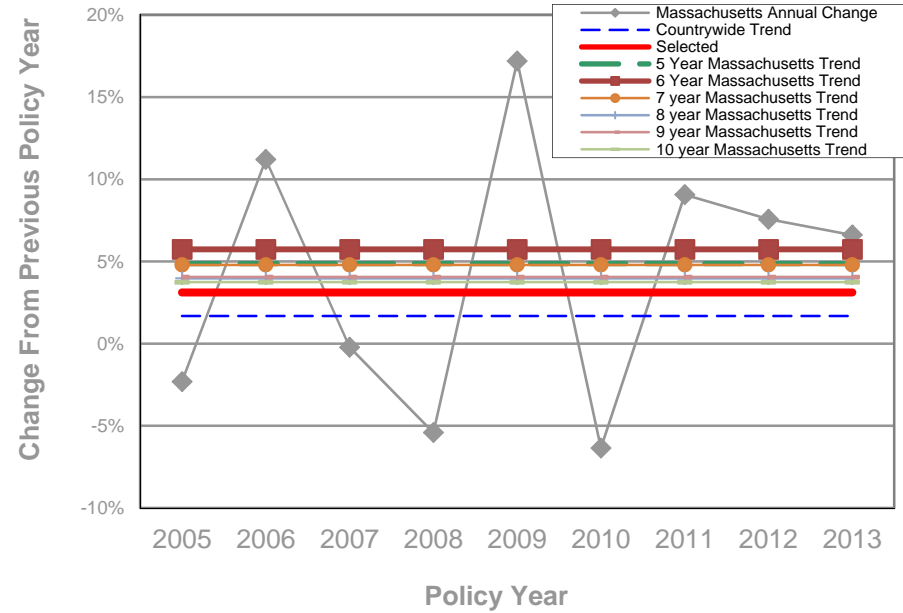
V 000026 STIP



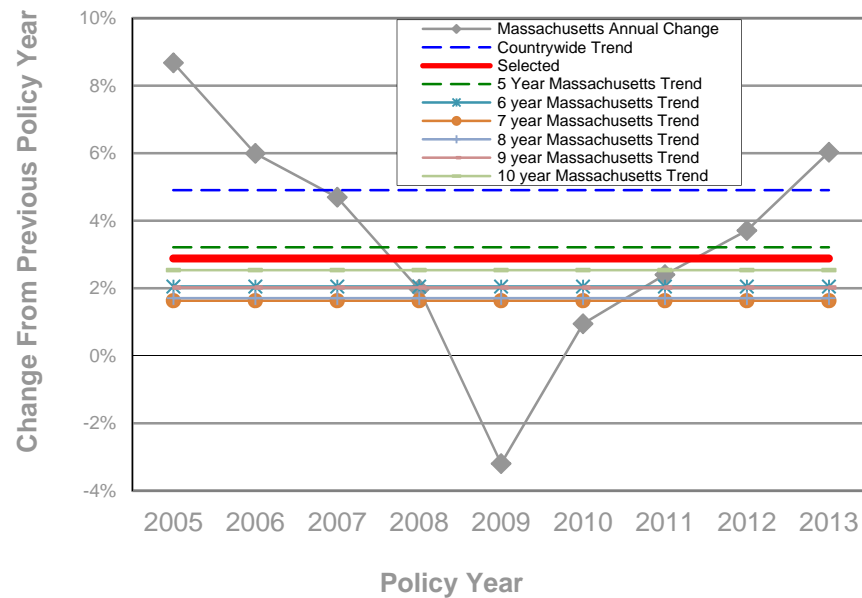
**Indemnity Severity Trend**



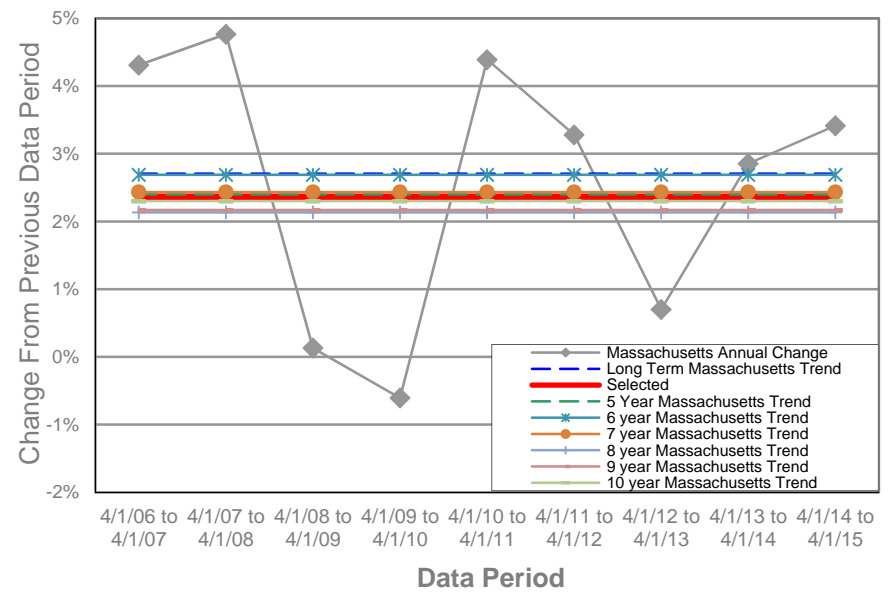
**Lost Time Medical Severity Trend**



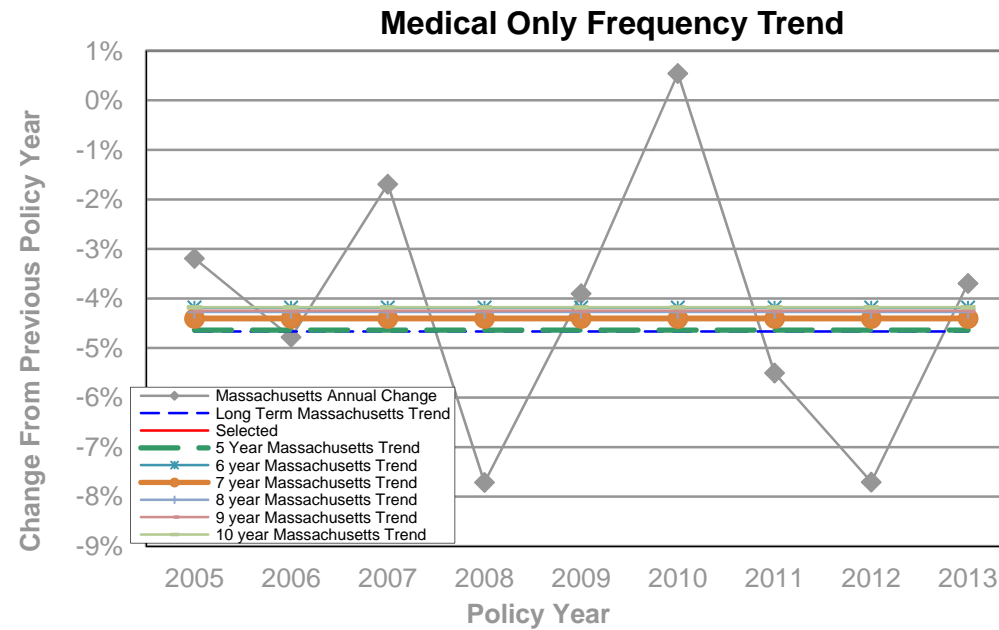
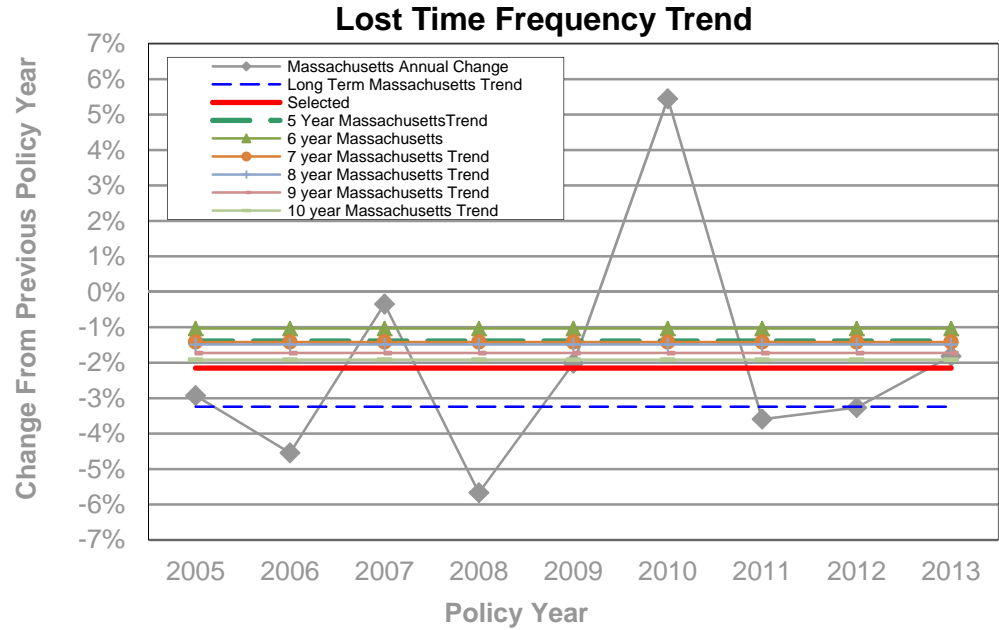
**Medical Only Severity Trend**



**SAWW Trend**



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Lost Time Reported Claim Counts - Industrywide

Policy Year (1)	Lost Time Reported Claim Counts										Developed to Tenth Report (3)	Estimated Million Worker-Weeks (4)	Unadjusted Claim Frequency = (3) / (4) (5)	Class Mix Adjustment (6)	Adjusted Claim Frequency = (5) x (6) (7)
	Age of Development														
	18	30	42	54	66	78	90	102	114	126					
	(2)														
1999_01	24,621	24,931	25,065	25,113	25,106	25,104	25,110	25,113	25,099	25,100	25,100	73.04	343.66	0.849	291.63
2000_01	23,667	24,162	24,302	24,328	24,325	24,327	24,333	24,329	24,339	24,340	24,340	77.60	313.67	0.870	272.79
2001_01	20,823	21,129	21,287	21,307	21,322	21,330	21,336	21,343	21,349	21,348	21,348	77.06	277.02	0.868	240.51
2002_01	20,156	20,511	20,564	20,603	20,615	20,622	20,630	20,629	20,640	20,638	20,638	77.14	267.55	0.856	229.03
2003_01	18,948	19,162	19,234	19,274	19,304	19,319	19,328	19,336	19,345	19,344	19,344	74.30	260.36	0.838	218.08
2004_01	17,495	17,733	17,781	17,836	17,865	17,872	17,882	17,886	17,880	17,882	17,882	71.62	249.68	0.845	211.00
2005_01	16,774	17,059	17,138	17,175	17,200	17,209	17,216	17,219	17,230		17,230	73.56	234.22	0.874	204.82
2006_01	15,485	15,763	15,861	15,910	15,922	15,937	15,938	15,938			15,941	75.64	210.75	0.928	195.51
2007_01	15,210	15,545	15,652	15,696	15,718	15,724	15,730				15,734	78.29	200.97	0.970	194.84
2008_01	13,909	14,176	14,265	14,314	14,353	14,365					14,372	78.56	182.94	1.005	183.79
2009_01	12,975	13,209	13,268	13,304	13,315						13,329	75.28	177.07	1.017	180.09
2010_01	14,380	14,657	14,725	14,771							14,814	79.82	185.60	1.023	189.89
2011_01	14,443	14,678	14,770								14,856	83.01	178.96	1.023	183.07
2012_01	14,211	14,465									14,629	83.70	174.77	1.013	177.10
2013_01	14,409										14,821	85.24	173.88	1.000	173.88
	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	1.017	1.005	1.003	1.002	1.001	1.000	1.000	1.000	1.000						
Selected	1.017	1.005	1.003	1.002	1.001	1.000	1.000	1.000	1.000						
Cumulative	1.029	1.011	1.006	1.003	1.001	1.000	1.000	1.000	1.000						
													15 Year Lost Time Frequency Trend		-3.2%

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

Medical Only Reported Claim Counts - Industrywide

Policy Year (1)	Medical Only Reported Claim Counts										Developed to Tenth Report (3)	Estimated Million Worker-Weeks (4)	Unadjusted Claim Frequency = (3) / (4) (5)	Class Mix Adjustment (6)	Adjusted Claim Frequency = (5) x (6) (7)
	Age of Development														
	18	30	42	54	66	78	90	102	114	126					
	(2)														
1999_01	58,243	60,502	61,100	61,252	61,311	61,321	61,325	61,326	61,267	61,269	61,269	73.04	838.87	0.849	711.86
2000_01	56,429	58,875	59,441	59,558	59,698	59,698	59,704	59,637	59,638	59,641	59,641	77.60	768.60	0.870	668.42
2001_01	51,365	52,970	53,409	53,522	53,556	53,549	53,580	53,589	53,586	53,590	53,590	77.06	695.41	0.868	603.75
2002_01	47,699	49,556	49,805	49,856	49,894	49,892	49,897	49,914	49,919	49,923	49,923	77.14	647.20	0.856	554.02
2003_01	44,219	45,421	45,641	45,676	45,693	45,698	45,701	45,704	45,701	45,707	45,707	74.30	615.20	0.838	515.29
2004_01	41,844	42,823	42,924	42,980	42,989	42,998	43,004	43,003	43,008	43,016	43,016	71.62	600.61	0.845	507.57
2005_01	40,392	41,183	41,301	41,315	41,320	41,323	41,320	41,328	41,331	41,338	41,338	73.56	561.92	0.874	491.38
2006_01	37,299	38,004	38,083	38,111	38,110	38,111	38,116	38,139		38,149	38,149	75.64	504.37	0.928	467.89
2007_01	36,545	37,073	37,121	37,120	37,127	37,118	37,121			37,145	37,145	78.29	474.44	0.970	459.98
2008_01	32,710	33,070	33,135	33,150	33,172	33,169				33,194	33,194	78.56	422.53	1.005	424.50
2009_01	29,836	30,125	30,160	30,171	30,176					30,193	30,193	75.28	401.09	1.017	407.93
2010_01	31,537	31,901	31,951	31,963						31,995	31,995	79.82	400.86	1.023	410.14
2011_01	30,922	31,360	31,407							31,450	31,450	83.01	378.85	1.023	387.56
2012_01	29,080	29,461								29,547	29,547	83.70	352.99	1.013	357.69
2013_01	28,883									29,362	29,362	85.24	344.48	1.000	344.48
	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	1.014	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000						
Selected	1.014	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000						
Cumulative	1.017	1.003	1.001	1.001	1.001	1.001	1.001	1.000	1.000						
													15 Year Medical Only Frequency Trend		-4.7%

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 + Case Losses (in 000's)

Policy Year (1)	Developed to Tenth Report (2)	Indemnity On-Level Factor (3)	On-Level Indemnity Losses (in 000's) Developed to Tenth Report = (2) x (3) (4)	Developed Claim Counts (5)	Severity = 1,000 x (4) / (5) (6)
2004_01	369,815	1.093	404,272	17,882	22,608
2005_01	357,483	1.082	386,771	17,230	22,447
2006_01	348,257	1.070	372,716	15,941	23,381
2007_01	352,050	1.059	372,678	15,734	23,686
2008_01	343,238	1.047	359,304	14,372	25,000
2009_01	334,888	1.043	349,127	13,329	26,192
2010_01	358,611	1.044	374,229	14,814	25,262
2011_01	388,406	1.037	402,718	14,856	27,108
2012_01	394,996	1.028	405,947	14,629	27,750
2013_01	430,769	1.023	440,875	14,821	29,747

Notes:

(2): (3) Exhibit 1, Page 2 + (3) Exhibit 1, Page 3.

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

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

Indemnity Paid + Case Losses (in 000's)  
 Remainder of Industry

Policy Year (1)	Age of Development										Developed to Tenth Report (3)
	18	30	42	54	66	78	90	102	114	126	
	(2)										
2002_01	183,641	228,802	244,865	260,043	266,047	269,933	269,969	269,599	270,931	272,197	
2003_01	160,660	203,367	220,068	228,785	235,681	236,923	239,716	240,886	242,019	243,264	
2004_01	152,544	201,434	219,967	230,840	235,133	238,539	240,804	241,677	243,255	242,610	242,610
2005_01	148,688	187,037	203,017	212,967	218,418	218,940	221,333	221,114	222,083		222,357
2006_01	137,018	187,001	207,360	217,599	221,852	224,057	226,964	228,294			229,834
2007_01	148,712	195,815	216,202	226,335	233,391	238,191	240,944				243,171
2008_01	149,500	199,765	218,825	234,434	242,801	243,651					248,914
2009_01	161,142	209,683	236,484	256,887	259,736						268,496
2010_01	157,509	211,925	245,726	261,175							276,146
2011_01	173,342	236,988	271,985								308,956
2012_01	187,122	263,270									344,888
2013_01	204,053										370,981

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	1.388	1.153	1.074	1.023	1.012	1.012	1.002	1.006	1.001
Selected	1.388	1.153	1.074	1.023	1.012	1.012	1.002	1.006	1.001
Cumulative	1.818	1.310	1.136	1.057	1.034	1.022	1.009	1.007	1.001

Notes:  
 Development factors are loss weighted average from latest two years.

Indemnity Paid + Case Losses (in 000's)  
 AIG

Policy Year (1)	Age of Development										Developed to Tenth Report (3)
	18	30	42	54	66	78	90	102	114	126	
	(2)										
2000_01	20,821	30,560	36,186	38,866	41,379	40,894	41,736	42,176	42,242	43,136	
2001_01	26,380	37,098	46,227	47,788	48,755	51,547	51,113	51,742	51,217	51,316	
2002_01	36,409	53,190	60,642	66,299	72,227	72,372	74,476	75,524	76,138	75,931	
2003_01	43,821	68,420	80,731	90,837	99,150	100,087	100,705	101,411	100,735	100,931	
2004_01	47,919	76,133	95,459	108,333	118,675	122,375	123,017	125,191	125,918	127,205	127,205
2005_01	54,630	87,563	108,123	125,074	133,586	133,942	133,272	134,299	134,356		135,126
2006_01	53,959	82,322	100,522	113,525	115,961	117,431	117,045	117,701			118,423
2007_01	48,495	77,849	90,867	101,632	105,764	107,013	107,119				108,879
2008_01	46,247	71,040	83,407	89,517	91,994	92,749					94,323
2009_01	31,501	50,358	61,311	63,804	64,428						66,393
2010_01	38,187	61,411	73,990	77,181							82,465
2011_01	36,370	56,011	68,425								79,450
2012_01	23,412	36,153									50,108
2013_01	27,566										59,788
Age-to-Age Development Factors											
	18 - 30	30 - 42	42 - 54	54 - 66	66 - 78	78 - 90	90 - 102	102 - 114	114 - 126		
5 Yr Weighted Average	1.565	1.194	1.087	1.037	1.013	1.001	1.010	1.000	1.006		
Selected	1.565	1.194	1.087	1.037	1.013	1.001	1.010	1.000	1.006		
Cumulative	2.169	1.386	1.161	1.068	1.031	1.017	1.016	1.006	1.006		

Notes:  
 Development factors are loss weighted average from latest five years.

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Lost Time Medical Paid + Case Losses (in 000's)

Policy Year (1)	Developed to Tenth Report (2)	Medical On-Level Factor (3)	On-Level Lost Time Medical Losses (in 000's) Developed to Tenth Report = (2) x (3) (4)	Developed Claim Counts (5)	Severity = 1,000 x (4) / (5) (6)
2004_01	185,181	1.036	191,850	17,882	10,729
2005_01	174,988	1.032	180,587	17,230	10,481
2006_01	180,029	1.032	185,790	15,941	11,655
2007_01	177,297	1.032	182,970	15,734	11,629
2008_01	154,321	1.024	158,081	14,372	10,999
2009_01	171,521	1.002	171,816	13,329	12,890
2010_01	178,826	1.000	178,826	14,814	12,072
2011_01	195,592	1.000	195,592	14,856	13,166
2012_01	207,176	1.000	207,176	14,629	14,162
2013_01	223,765	1.000	223,765	14,821	15,098

Notes:

(2): (3) Exhibit 1, Page 2 + (3) Exhibit 1, Page 3.

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

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



Lost Time Medical Paid + Case Losses (in 000's)  
 Remainder of Industry

Policy Year (1)	Age of Development										Developed to Tenth Report (3)
	18	30	42	54	66	78	90	102	114	126	
	(2)										
2002_01	108,794	115,108	120,369	130,814	131,726	135,743	138,612	140,416	140,096	141,803	
2003_01	103,828	108,632	114,867	121,143	124,259	124,048	124,163	126,252	124,572	125,166	
2004_01	106,767	112,777	121,463	121,354	122,571	123,857	124,388	125,967	125,461	125,910	125,910
2005_01	93,946	99,157	104,056	107,256	111,613	113,016	113,125	113,245	113,917		114,392
2006_01	95,731	104,151	109,459	111,575	113,646	115,842	117,241	116,675			117,242
2007_01	114,497	122,175	124,323	127,784	128,460	132,662	136,029				136,426
2008_01	104,010	111,866	115,702	118,249	117,812	115,744					118,308
2009_01	120,331	128,335	133,492	136,765	136,393						140,623
2010_01	126,400	136,557	144,025	144,260							148,263
2011_01	128,519	144,366	149,803								155,905
2012_01	155,435	172,272									187,526
2013_01	165,450										200,831

	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	1.115	1.046	1.013	0.997	1.009	1.019	0.998	1.001	1.004
Selected	1.115	1.046	1.013	0.997	1.009	1.019	0.998	1.001	1.004
Cumulative	1.214	1.089	1.041	1.028	1.031	1.022	1.003	1.005	1.004

Notes:  
 Development factors are loss weighted average from latest two years.

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Lost Time Medical Paid + Case Losses (in 000's)  
 AIG

Policy Year (1)	Age of Development										Developed to Tenth Report (3)
	18	30	42	54	66	78	90	102	114	126	
	(2)										
2000_01	10,481	12,528	18,920	19,099	14,003	14,282	14,375	14,410	14,903	14,641	
2001_01	16,267	16,468	16,490	17,933	17,871	18,170	18,452	18,279	18,257	18,880	
2002_01	23,634	26,109	28,763	31,026	33,040	33,414	30,977	31,742	30,830	30,487	
2003_01	31,184	35,047	39,176	42,506	44,773	43,925	42,026	39,541	39,628	39,725	
2004_01	35,081	43,887	48,865	57,885	60,525	60,098	57,589	59,569	59,481	59,271	59,271
2005_01	42,149	48,430	54,890	60,024	64,154	62,306	62,116	62,730	60,631		60,596
2006_01	44,771	49,509	54,209	57,446	57,265	57,023	56,735	63,736			62,787
2007_01	34,661	39,301	41,471	41,402	41,278	41,205	40,219				40,871
2008_01	31,534	36,123	36,877	36,707	36,172	36,244					36,013
2009_01	24,550	29,858	30,298	30,966	31,400						30,898
2010_01	25,593	28,728	30,615	30,558							30,563
2011_01	27,004	33,417	38,953								39,687
2012_01	15,853	18,119									19,650
2013_01	18,008										22,934
Age-to-Age Development Factors											
	18 - 30	30 - 42	42 - 54	54 - 66	66 - 78	78 - 90	90 - 102	102 - 114	114 - 126		
5 Yr Weighted Average	1.174	1.064	1.019	1.016	0.990	0.978	1.032	0.986	0.999		
Selected	1.174	1.064	1.019	1.016	0.990	0.978	1.032	0.986	0.999		
Cumulative	1.274	1.084	1.019	1.000	0.984	0.994	1.016	0.985	0.999		

Notes:  
 Development factors are loss weighted average from latest five years.

Medical Only Paid + Case Losses (in 000's)

Policy Year (1)	Developed to Tenth Report (2)	Medical On-Level Factor (3)	On-Level Medical Only Losses (in 000's) Developed to Tenth Report = (2) x (3) (4)	Developed Claim Counts (5)	Severity = 1,000 x (4) / (5) (6)
2004_01	27,545	1.036	28,537	43,016	663
2005_01	28,879	1.032	29,803	41,338	721
2006_01	28,248	1.032	29,152	38,149	764
2007_01	28,795	1.032	29,717	37,145	800
2008_01	26,435	1.024	27,079	33,194	816
2009_01	23,803	1.002	23,844	30,193	790
2010_01	25,506	1.000	25,506	31,995	797
2011_01	25,673	1.000	25,673	31,450	816
2012_01	25,014	1.000	25,014	29,547	847
2013_01	26,356	1.000	26,356	29,362	898

Notes:

(2): (3) Exhibit 2, Page 2 + (3) Exhibit 2, Page 3.

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

(5): Section V-B, Exhibit 2.

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Medical Only Paid + Case Losses (in 000's)  
 Remainder of Industry

Policy Year (1)	Age of Development										Developed to Tenth Report (3)
	18	30	42	54	66	78	90	102	114	126	
	(2)										
2002_01	21,238	22,497	22,767	22,484	22,454	22,377	22,389	22,417	22,407	22,421	
2003_01	20,809	21,924	22,521	22,758	22,690	22,661	22,626	22,630	22,627	22,644	
2004_01	19,423	20,020	20,162	20,152	20,260	20,319	20,300	20,276	20,194	20,206	20,206
2005_01	20,013	20,432	20,488	20,602	20,507	20,532	20,433	20,442	20,472		20,486
2006_01	20,324	20,613	20,650	20,579	20,595	20,599	20,426	20,520			20,508
2007_01	21,211	21,696	21,756	21,881	21,884	21,784	21,785				21,828
2008_01	20,740	20,804	20,914	20,875	20,908	21,033					20,988
2009_01	19,856	19,845	19,793	19,825	19,841						19,811
2010_01	21,208	21,098	21,032	21,024							21,018
2011_01	21,746	21,707	21,651								21,657
2012_01	22,482	22,324									22,267
2013_01	23,718										23,551
	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	0.996	0.997	1.001	1.001	1.001	0.996	1.003	0.999	1.001		
Selected	0.996	0.997	1.001	1.001	1.001	0.996	1.003	0.999	1.001		
Cumulative	0.993	0.997	1.000	1.000	0.998	0.998	1.002	0.999	1.001		

Notes:  
 Development factors are loss weighted average from latest two years.

Medical Only Paid + Case Losses (in 000's)  
 AIG

Policy Year (1)	Age of Development										Developed to Tenth Report (3)
	18	30	42	54	66	78	90	102	114	126	
	(2)										
2000_01	1,699	1,769	1,789	1,814	1,817	1,811	1,812	1,808	1,808	1,808	
2001_01	2,627	2,731	2,783	2,794	2,766	2,763	2,764	2,765	2,750	2,765	
2002_01	3,856	4,115	4,248	4,191	4,214	4,296	4,348	4,384	4,269	4,262	
2003_01	5,262	5,395	5,474	5,440	5,422	5,561	5,510	5,512	5,610	5,590	
2004_01	6,949	7,715	7,485	7,353	7,358	7,358	7,335	7,334	7,334	7,339	7,339
2005_01	8,176	8,428	8,421	8,483	8,487	8,462	8,403	8,397	8,395		8,392
2006_01	7,512	7,764	7,777	7,762	7,795	7,752	7,751	7,751			7,740
2007_01	6,845	6,920	6,945	6,946	6,946	6,940	6,971				6,967
2008_01	5,121	5,393	5,418	5,473	5,496	5,465					5,447
2009_01	3,752	3,942	3,956	3,999	4,018						3,992
2010_01	4,372	4,436	4,414	4,506							4,488
2011_01	3,804	3,932	4,007								4,016
2012_01	2,685	2,728									2,747
2013_01	2,690										2,804
	Age-to-Age Development Factors										
	18 - 30	30 - 42	42 - 54	54 - 66	66 - 78	78 - 90	90 - 102	102 - 114	114 - 126		
5 Yr Weighted Average	1.035	1.005	1.006	1.002	0.997	0.997	1.001	0.999	1.000		
Selected	1.035	1.005	1.006	1.002	0.997	0.997	1.001	0.999	1.000		
Cumulative	1.042	1.007	1.002	0.996	0.994	0.997	0.999	0.999	1.000		

Notes:  
 Development factors are loss weighted average from latest five years.

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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)												
1999_01										61,734	61,734	845.24	73.04
2000_01										68,806	68,806	886.71	77.60
2001_01										68,074	68,074	883.36	77.06
2002_01								68,945		68,965	68,965	894.05	77.14
2003_01								68,995	69,014	69,014	69,014	928.90	74.30
2004_01								69,415	69,421	69,408	69,408	969.11	71.62
2005_01						74,392		74,392	74,392	74,392	74,392	1,011.25	73.56
2006_01					79,895	79,895		79,893	79,893	79,885	79,885	1,056.18	75.64
2007_01				85,518	85,517	85,512		85,512		85,504	85,504	1,092.12	78.29
2008_01			85,845	85,859	85,857	85,858				85,849	85,849	1,092.79	78.56
2009_01		82,929	82,925	82,945	82,946					82,935	82,935	1,101.70	75.28
2010_01	92,511	91,412	91,437	91,385						91,373	91,373	1,144.80	79.82
2011_01	97,573	97,533	97,506							97,476	97,476	1,174.21	83.01
2012_01	99,353	99,683								99,650	99,650	1,190.50	83.70
2013_01	104,347									104,466	104,466	1,225.60	85.24

Age-to-Age Development Factors

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

Notes:  
 Development factors are payroll weighted average from latest two years.  
 (4): Section V-G, Exhibit 2.  
 For all policy years the following class codes are excluded from reported Schedule Z payrolls: 0059, 0065, 0066, 0067, 0088, 0770, 0773, 0774, 0775, 0776, 0779, 0799, 0908, 0909, 0912, 0913, 7445, 7453, and 9985.

# V 000041 STIP

Section V - Trend

Subsection F - Calculation of Class Mix Adjustment Factor

7/1/2016

Section V - F

Exhibit 1

## Class Mix Adjustment Factors

Policy Year (1)	Average Manual Rates Based on Rates Effective 4/1/14 (2)	Class Mix Adjustment Factor = 0.944 / (2) (3)
1999	1.112	0.849
2000	1.085	0.870
2001	1.087	0.868
2002	1.103	0.856
2003	1.127	0.838
2004	1.117	0.845
2005	1.079	0.874
2006	1.018	0.928
2007	0.974	0.970
2008	0.940	1.005
2009	0.928	1.017
2010	0.923	1.023
2011	0.923	1.023
2012	0.932	1.013
2013	0.944	1.000

**Notes:**

(2): Current rates (Effective 4/1/14) averaged over class payrolls (excluding large deductibles) by Policy Year.

(3): Adjustment to 2013 Policy Year level.

Periods from which NCCI Data is Taken

State	Annual Statistical Bulletin - Weights					Annual Statistical Bulletin - Policy Period Beginning Dates				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Alabama	1.7%	1.6%	1.9%	1.4%	1.7%	5/1/2007	5/1/2008	5/1/2009	5/1/2010	5/1/2011
Alaska	0.7%	0.7%	0.8%	0.8%	0.8%	4/1/2007	4/1/2008	4/1/2009	4/1/2010	4/1/2011
Arizona	2.6%	2.5%	2.2%	2.3%	2.3%	3/1/2007	3/1/2008	3/1/2009	3/1/2010	3/1/2011
Arkansas	0.7%	0.8%	0.8%	0.8%	0.8%	2/1/2008	2/1/2009	2/1/2010	2/1/2011	2/1/2012
Colorado	3.2%	3.3%	3.3%	3.6%	3.5%	3/1/2007	3/1/2008	3/1/2009	3/1/2010	3/1/2011
Connecticut	3.2%	3.3%	3.5%	3.5%	3.3%	8/1/2007	8/1/2008	8/1/2009	8/1/2010	8/1/2011
District Of Columbia	0.4%	0.3%	0.3%	0.3%	0.5%	2/1/2007	2/1/2008	2/1/2009	2/1/2010	2/1/2011
Florida	9.5%	9.2%	8.9%	8.8%	8.6%	1/1/2007	1/1/2008	1/1/2009	1/1/2010	1/1/2011
Georgia	5.4%	4.9%	4.7%	4.6%	4.9%	7/1/2007	7/1/2008	7/1/2009	7/1/2010	7/1/2011
Hawaii	0.7%	0.7%	0.7%	0.7%	0.7%	6/1/2007	6/1/2008	6/1/2009	6/1/2010	6/1/2011
Idaho	1.0%	1.1%	1.2%	1.1%	1.2%	7/1/2007	7/1/2008	7/1/2009	7/1/2010	7/1/2011
Illinois	12.3%	12.3%	12.0%	12.2%	11.1%	4/1/2007	4/1/2008	4/1/2009	4/1/2010	4/1/2011
Indiana	2.8%	2.8%	3.0%	3.1%	3.2%	7/1/2007	7/1/2008	7/1/2009	7/1/2010	7/1/2011
Iowa	2.4%	2.5%	2.9%	2.8%	2.8%	3/1/2007	3/1/2008	3/1/2009	3/1/2010	3/1/2011
Kansas	1.7%	1.7%	1.9%	2.0%	1.7%	7/1/2007	7/1/2008	7/1/2009	7/1/2010	7/1/2011
Kentucky	2.3%	2.1%	2.2%	2.1%	1.7%	5/1/2007	5/1/2008	5/1/2009	5/1/2010	5/1/2011
Louisiana	2.8%	2.7%	3.0%	3.0%	3.3%	9/1/2007	9/1/2008	9/1/2009	9/1/2010	9/1/2011
Maine	0.9%	0.8%	0.8%	0.7%	0.9%	6/1/2007	6/1/2008	6/1/2009	6/1/2010	6/1/2011
Maryland	2.8%	3.2%	3.2%	3.3%	3.4%	4/1/2007	4/1/2008	4/1/2009	4/1/2010	4/1/2011
Mississippi	1.1%	1.2%	1.4%	1.3%	1.3%	9/1/2007	9/1/2008	9/1/2009	9/1/2010	9/1/2011
Missouri	3.3%	2.9%	3.2%	3.5%	3.5%	7/1/2007	7/1/2008	7/1/2009	7/1/2010	7/1/2011
Montana	1.3%	1.5%	1.2%	0.9%	0.8%	1/1/2008	1/1/2009	1/1/2010	1/1/2011	1/1/2012
Nebraska	1.2%	1.1%	1.4%	1.2%	1.2%	8/1/2007	8/1/2008	8/1/2009	8/1/2010	8/1/2011
Nevada	1.6%	1.5%	1.3%	1.2%	1.2%	1/1/2007	1/1/2008	1/1/2009	1/1/2010	1/1/2011
New Hampshire	1.0%	1.1%	1.2%	1.0%	1.0%	4/1/2007	4/1/2008	4/1/2009	4/1/2010	4/1/2011
New Mexico	1.1%	1.1%	1.1%	1.1%	1.2%	7/1/2007	7/1/2008	7/1/2009	7/1/2010	7/1/2011
North Carolina	5.7%	6.0%	5.8%	5.6%	6.3%	1/1/2007	1/1/2008	1/1/2009	1/1/2010	1/1/2011
Oklahoma	3.6%	3.6%	3.7%	3.5%	3.4%	6/1/2007	6/1/2008	6/1/2009	6/1/2010	6/1/2011
Oregon	2.5%	2.5%	2.6%	2.5%	2.3%	1/1/2007	1/1/2008	1/1/2009	1/1/2010	1/1/2011
Rhode Island	0.7%	0.6%	0.8%	0.7%	0.7%	1/1/2007	1/1/2008	1/1/2009	1/1/2010	1/1/2011
South Carolina	2.8%	2.6%	2.7%	3.0%	2.8%	5/1/2007	5/1/2008	5/1/2009	5/1/2010	5/1/2011
South Dakota	0.6%	0.4%	0.5%	0.6%	0.5%	1/1/2008	1/1/2009	1/1/2010	1/1/2011	1/1/2012
Tennessee	3.8%	3.8%	3.6%	3.7%	3.6%	6/1/2007	6/1/2008	6/1/2009	6/1/2010	6/1/2011
Texas	7.5%	7.6%	6.8%	7.1%	7.9%	1/1/2007	1/1/2008	1/1/2009	1/1/2010	1/1/2011
Utah	1.5%	1.4%	1.2%	1.6%	1.5%	7/1/2007	7/1/2008	7/1/2009	7/1/2010	7/1/2011
Vermont	0.5%	0.6%	0.7%	0.6%	0.6%	7/1/2007	7/1/2008	7/1/2009	7/1/2010	7/1/2011
Virginia	3.4%	3.4%	3.5%	3.4%	3.7%	2/1/2007	2/1/2008	2/1/2009	2/1/2010	2/1/2011
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%					
				Policy Period Start Date	4/13/2007	4/13/2008	4/15/2009	4/15/2010	4/13/2011	
				Average Earned Date	4/13/2008	4/13/2009	4/15/2010	4/15/2011	4/13/2012	
				Years	1.00	2.00	3.00	4.00	5.00	

Notes:  
 Weights are derived from data obtained from NCCI that underlies the NCCI Annual Statistical Bulletins



# V 000043 STIP

Section V - Trend  
 Subsection G - External Data  
 7/1/2016

Section V - G  
 Exhibit 2

## Summary of Statewide Average Weekly Wage (SAWW) Data

Date Promulgated by DUA (1)	Period of Data Used by DUA (2)	SAWW (3)
10/1/97	4/1/96 to 4/1/97	665.55
10/1/98	4/1/97 to 4/1/98	699.91
10/1/99	4/1/98 to 4/1/99	749.69
10/1/00	4/1/99 to 4/1/00	830.89
10/1/01	4/1/00 to 4/1/01	890.94
10/1/02	4/1/01 to 4/1/02	882.57
10/1/03	4/1/02 to 4/1/03	884.46
10/1/04	4/1/03 to 4/1/04	918.78
10/1/05	4/1/04 to 4/1/05	958.58
10/1/06	4/1/05 to 4/1/06	1,000.43
10/1/07	4/1/06 to 4/1/07	1,043.54
10/1/08	4/1/07 to 4/1/08	1,093.27
10/1/09	4/1/08 to 4/1/09	1,094.70
10/1/10	4/1/09 to 4/1/10	1,088.06
10/1/11	4/1/10 to 4/1/11	1,135.82
10/1/12	4/1/11 to 4/1/12	1,173.06
10/1/13	4/1/12 to 4/1/13	1,181.28
10/1/14	4/1/13 to 4/1/14	1,214.99
10/1/15	4/1/14 to 4/1/15	1,256.47
<b>15 Year Exponential Fit, Trend =</b>		<b>2.7%</b>

Policy Year (4)	SAWW (5)
1999_01	845.24
2000_01	886.71
2001_01	883.36
2002_01	894.05
2003_01	928.90
2004_01	969.11
2005_01	1,011.25
2006_01	1,056.18
2007_01	1,092.12
2008_01	1,092.79
2009_01	1,101.70
2010_01	1,144.80
2011_01	1,174.21
2012_01	1,190.50
2013_01	1,225.60

Notes:

(5): SAWW for Policy Year  $i = [ 0.03125 \times \text{SAWW during period } 4/1/(i-1) \text{ to } 4/1/i ] + [ 0.6875 \times \text{SAWW during period } 4/1/i \text{ to } 4/1/(i+1) ] + [ 0.28125 \times \text{SAWW during period } 4/1/(i+1) \text{ to } 4/1/(i+2) ]$

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

# V 000044 STIP

Section V - Trend  
 Subsection H - Expense Trends  
 7/1/2016

Section V - H  
 Exhibit 1

## Calculation of Expense Trend Index

Time Interval (1)	Time Index (2)	Expense Trend Index (3)	Expense Trend Factors		
			PY2012 (4)	PY2013 (5)	7/1/2016 (6)
CY2000	7/1/2000	60.81			
CY2001	7/1/2001	63.06			
CY2002	7/1/2002	64.04			
CY2003	7/1/2003	67.97			
CY2004	7/1/2004	73.97			
CY2005	7/1/2005	82.47			
CY2006	7/1/2006	80.58			
CY2007	7/1/2007	88.70			
CY2008	7/1/2008	94.45			
CY2009	7/1/2009	94.97			
CY2010	7/1/2010	97.47			
CY2011	7/1/2011	93.83			
CY2012	7/1/2012	94.07	1.029	1.061	1.101
CY2013	7/1/2013	99.60	0.972	1.002	1.040
CY2014	7/1/2014	100.00	0.968	0.998	1.036

**15 Year Exponential Fit, Trend:** 3.9%

PY2012	1/1/2013	96.83			1.070
PY2013	1/1/2014	99.80			1.038
7/1/2015	7/1/2016	102.39			1.012
7/1/2016	7/1/2017	103.61			

**Notes:**

- (1): 7/1/15 and 7/1/16 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 1.2%.
- (3): Calendar Years: Exhibit 2, Page 2 - Average of (10) through (16) weighted by (18) through (24)  
 PY2012 - Average of indices for CY2012 and CY2013.  
 PY2013 - Average of indices for CY2013 and CY2014.  
 The exponential trend rate derived from an exponential regression of the Expense Trend Index for CY2008 - CY2014 is applied to the CY2014 Expense Trend Index value to derive the Expense Trend Index values for 7/1/2015 and 7/1/2016
- (4) = [ (3) for PY2012 ] / (3)
- (5) = [ (3) for PY2013 ] / (3)
- (6) = [ (3) for 7/1/2016 ] / (3)

# V 000045 STIP

Section V - Trend  
 Subsection H - Expense Trends  
 7/1/2016

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)
2008	94.45	93.95	0.24
2009	94.97	94.73	0.06
2010	97.47	95.52	3.79
2011	93.83	96.31	6.14
2012	94.07	97.11	9.25
2013	99.60	97.91	2.85
2014	100.00	98.72	1.63

(5)	7 Year Expense Index Trend	0.8%
(6)	n	7
(7)	s	2.19
(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	6.88
(12)	Projected Value Prospective Period	101.20
(13)	CI/Projected Expense Index	0.07
(14)	<b>Credibility - 7 Year Expense Index Trend (Z)</b>	<b>88%</b>
(15)	<b>Complement of Credibility - 15 year</b>	<b>3.9%</b>
(16)	<b>Credibility Weighted Expense Trend</b>	<b>1.2%</b>

**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 000046 STIP

Section V - Trend  
 Subsection H - Expense Trends  
 7/1/2016

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)
2000	1,075.00	169.00	150.10	98.70	165.60	112.70	149.80
2001	1,133.00	173.80	150.80	99.40	172.10	112.70	150.60
2002	1,166.00	178.20	149.00	99.90	182.60	112.50	144.70
2003	1,265.00	182.00	153.50	98.50	191.70	112.30	146.10
2004	1,406.00	187.40	158.80	96.00	191.70	113.20	149.40
2005	1,609.00	193.30	170.30	95.00	191.70	115.10	159.60
2006	1,559.00	199.10	177.50	95.90	201.90	114.70	167.40
2007	1,752.00	206.41	181.50	98.37	206.88	114.60	169.30
2008	1,865.00	215.61	192.49	100.50	213.86	122.10	184.30
2009	1,873.00	223.38	173.49	102.34	224.22	123.50	179.60
2010	1,940.00	226.20	189.26	102.09	230.14	121.00	182.10
2011	1,842.00	231.50	209.94	100.63	239.40	122.20	191.20
2012	1,846.00	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

Economic Indices, Normalized to Calendar Year 2014 Index of 100							
Calendar Year (9)	Average Weekly Earnings (10)	Food (11)	Private Transportation (12)	Phone (13)	Postage (14)	Machines & Equipment (15)	Paper (16)
2000	54.02	67.87	70.55	98.77	60.42	94.87	77.74
2001	56.93	69.80	70.87	99.47	62.79	94.87	78.15
2002	58.59	71.57	70.03	99.97	66.62	94.70	75.09
2003	63.57	73.09	72.14	98.57	69.94	94.53	75.82
2004	70.65	75.26	74.63	96.07	69.94	95.29	77.53
2005	80.85	77.63	80.04	95.07	69.94	96.89	82.82
2006	78.34	79.96	83.42	95.97	73.67	96.55	86.87
2007	88.04	82.90	85.30	98.44	75.48	96.46	87.86
2008	93.72	86.59	90.47	100.57	78.03	102.78	95.64
2009	94.12	89.71	81.54	102.41	81.81	103.96	93.20
2010	97.49	90.85	88.95	102.16	83.97	101.85	94.50
2011	92.56	92.97	98.67	100.70	87.35	102.86	99.22
2012	92.76	95.66	101.26	101.03	90.42	102.02	99.43
2013	99.75	97.64	100.91	100.71	96.09	98.99	99.01
2014	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Weights							
Calendar Year (17)	Average Weekly Earnings (18)	Food (19)	Private Transportation (20)	Phone (21)	Postage (22)	Machines & Equipment (23)	Paper (24)
2000	77.1%	2.7%	2.7%	2.5%	2.5%	10.1%	2.4%
2001	78.0%	2.3%	2.3%	2.5%	2.5%	10.0%	2.3%
2002	79.5%	2.2%	2.2%	2.4%	2.4%	9.5%	1.9%
2003	80.2%	2.1%	2.1%	2.1%	2.1%	9.4%	1.9%
2004	79.9%	2.1%	2.1%	1.8%	1.8%	10.4%	1.8%
2005	79.8%	2.1%	2.1%	2.0%	2.0%	10.0%	2.0%
2006	80.9%	2.1%	2.1%	1.8%	1.8%	9.3%	1.8%
2007	79.9%	2.1%	2.1%	1.8%	1.8%	10.4%	1.8%
2008	78.3%	2.1%	2.1%	1.9%	1.9%	11.9%	1.8%
2009	79.5%	1.6%	1.6%	1.8%	1.8%	12.3%	1.4%
2010	80.3%	1.8%	1.8%	2.0%	2.0%	10.7%	1.4%
2011	81.8%	1.8%	1.8%	1.7%	1.7%	9.9%	1.1%
2012	82.0%	1.8%	1.8%	1.6%	1.6%	10.0%	1.1%
2013	81.2%	1.9%	1.9%	1.5%	1.5%	11.0%	0.9%
2014	80.9%	2.1%	2.1%	1.5%	1.5%	10.9%	0.9%

Notes:

- (2): Average Weekly Earnings, Covered Employment and Wages, Private Fire, Marine, and Casualty Insurers - Massachusetts Unadjusted for Seasonality  
 Years CY2008 - CY2014: 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.
- (18)-(24): Section V-H, Exhibit 2, for Calendar Year 2013-2014. Prior Filings for all other years.

# V 000047 STIP

Section V - Trend  
 Subsection H - Expense Trends  
 7/1/2016

Section V - H  
 Exhibit 2  
 Page 3

## Calendar Year 2013 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	7.32%	62.1%	Average Weekly Earnings Covered Employment and Wages; Private Fire, Marine, Casualty Massachusetts	
Payroll Taxes	0.51%	4.3%		81.2%
Employee Relations	1.74%	14.8%		
<hr/>				
Travel & Travel Items	0.45%	3.8%	Food Away From Home-CPI-US	1.9%
			Private Transportation-CPI-US	1.9%
<hr/>				
Postage & Telephone	0.35%	3.0%	Postage-CPI-US	1.5%
			Telephone-CPI-US	1.5%
<hr/>				
Equipment	1.30%	11.0%	Office & Stores Machines & Equipment-PPI	11.0%
<hr/>				
Printing & Stationery	0.11%	0.9%	Paper-PPI	0.9%
<hr/>				
<b>Total</b>	<b>11.78%</b>	<b>100.0%</b>		<b>100.0%</b>

**Notes:**

(2): 2015 Best's Aggregates and Averages, Property-Casualty, Totals for Predominately Commercial Casualty Companies with Written Premium Net of Reinsurance Ceded over \$15 million.

(5) = Based on (3)

# V 000048 STIP

Section V - Trend  
 Subsection H - Expense Trends  
 7/1/2016

Section V - H  
 Exhibit 2  
 Page 4

## Calendar Year 2014 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	7.38%	63.0%	Average Weekly Earnings Covered Employment and Wages; Private Fire, Marine, Casualty Massachusetts	80.9%
Payroll Taxes	0.53%	4.5%		
Employee Relations	1.56%	13.3%		
Travel & Travel Items	0.50%	4.3%	Food Away From Home-CPI-US	2.1%
			Private Transportation-CPI-US	2.1%
Postage & Telephone	0.36%	3.1%	Postage-CPI-US	1.5%
			Telephone-CPI-US	1.5%
Equipment	1.28%	10.9%	Office & Stores Machines & Equipment-PPI	10.9%
Printing & Stationery	0.10%	0.9%	Paper-PPI	0.9%
<b>Total</b>	<b>11.71%</b>	<b>100.0%</b>		<b>100.0%</b>

**Notes:**

(2): 2015 Best's Aggregates and Averages, Property-Casualty, Totals for Predominately Commercial Casualty Companies with Written Premium Net of Reinsurance Ceded over \$15 million.

(5) = Based on (3)

# V 000049 STIP

Section V - Trend  
 Subsection H - Expense Trends  
 7/1/2016

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)
1999	73.04		
2000	77.60		
2001	77.06		
2002	77.14		
2003	74.30		
2004	71.62		
2005	73.56		
2006	75.64		
2007	78.29		
2008	78.56		
2009	75.28	76.66	1.89
2010	79.82	78.96	0.73
2011	83.01	81.33	2.83
2012	83.70	83.77	0.00
2013	85.24	86.29	1.11

15 Year Million Worker-Weeks Trend

**0.8%**

(5)	<b>5 Year MA Trend</b>	<b>3.0%</b>
(6)	n	5
(7)	s	1.48
(8)	t	2.35
(9)	m	5.50
(10)	$[1 + 1/n + 12 \times m^2 / (n^3 - n)]^{.5}$	2.05
(11)	Confidence Interval	7.16
(12)	Projected	95.70
(13)	CI / Projected	0.07
(14)	<b>Credibility - 5 Year MA Trend (Z)</b>	<b>80%</b>
(15)	<b>Complement of Credibility</b>	<b>0.8%</b>
(16)	<b>Credibility-Weighted Overall Exposure Growth</b>	<b>2.6%</b>

**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 000011 STIP

Section VI - Expenses  
Subsection A - Summary  
7/1/2016

Section VI - A  
Exhibit 1

## Summary of Expense Ratios

(1)	Commission and Other Acquisition Expense Ratio	10.9%
(2)	Average Premium Discount as a % of Standard Premium + ARAP	5.0%
(3)	Premium Tax Ratio = 2.28% x [ 1.0 - (2) ]	2.2%
(4)	Variable Expense Ratio = (1) + (2) + (3)	18.0%
(5)	Fixed Expense Ratio	5.0%
(6)	Total Loss Adjustment Expense Ratio (LAE / Loss)	20.0%

### Notes:

- (1): Section VI-G, Exhibit 1.
- (2): Section VI-E, Exhibit 1.
- (3): 2.28% from Section VI-B, Exhibit 3.
- (5): Section VI-B, Exhibit 1.
- (6): Section VI-H, Exhibit 1.



Calculation of Fixed Expenses

Calendar Year (1)	General Expense Exclusive of Expense Constant Premium (2)	Total Pool Expenses for non-Large Deductible (3)	Total General Expense = (2) + (3) (4)	Projected to PY 2012			Projected to PY 2013		
				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)
2012	37,881,543	1,890,224	39,771,768	1.029	1.013	41,465,410	1.061	1.039	43,836,281
2013	37,913,437	1,671,880	39,585,317	0.972	0.987	37,999,495	1.002	1.013	40,172,195
2014	36,851,673	1,919,862	38,771,535	0.968	0.963	36,138,953	0.998	0.987	38,205,273
Average			39,376,207			38,534,619			40,737,916

Policy Year (11)	Three Year Average Projected General Expense (12)	Provision for Other Taxes (13)	Provision for Fixed Expenses = (12) + (13) (14)	Expense Trends from PYs to 7/1/2017 (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)
2012	38,534,619	3,329,959	41,864,578	1.070	44,792,623	888,644,399	5.0%
2013	40,737,916	3,520,356	44,258,272	1.038	45,945,934	909,362,563	5.1%
Average							5.0%

- Notes:
- (2): Exhibit 2, Page 1.
  - (3): Exhibit 2, Page 3.
  - (5): Section V-H, Exhibit 1.
  - (6): 2.6% annual growth in worker-weeks, from Section V-H, Exhibit 3; 0.5 years from CY 2012 to PY 2012, -0.5 years from CY 2013 to PY 2012, -1.5 years from CY 2014 to PY 2012.
  - (8): Section V-H, Exhibit 1.
  - (9): 2.6% annual growth in worker-weeks, from Section V-H, Exhibit 3; 1.5 years from CY 2012 to PY 2013, 0.5 years from CY 2013 to PY 2013, -0.5 years from CY 2014 to PY 2013.
  - (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 a company group 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 000012 STIP

# VI 000013 STIP

Section VI - Expenses  
 Subsection B - Fixed Expenses  
 7/1/2016

Section VI - B  
 Exhibit 2  
 Page 1

## General Expense Exclusive of Proposed Expense Constant

	Calendar Year		
	2012	2013	2014
(1) Standard Earned Premium Including Expense Constant Premium	787,399,736	810,872,845	851,918,220
(2) ARAP Premium at Company Level	39,961,985	40,629,436	39,360,485
(3) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.055	1.050	1.047
(4) Standard Earned Premium plus Adjusted ARAP = (1) + [ (2) x (3) ]	829,550,386	853,522,088	893,133,260
(5) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	0.996	1.008	1.011
(6) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	1.000	1.000	0.999
(7) Adjusted Standard Earned Premium plus ARAP = (4) x (5) x (6)	826,200,860	860,515,727	902,587,547
(8) Ratio of Adjusted General Expense to Adjusted Standard Earned Premium plus ARAP	6.6%	6.5%	6.1%
(9) General Expenses = (7) x (8)	54,502,349	55,964,890	54,975,579
(10) Expense Constant Premium	34,377,855	35,215,830	35,380,091
(11) General Expense Portion of Expense Constant	51.0%	51.0%	51.0%
(12) Average Expense Constant in Effect	236.06	235.75	236.85
(13) Proposed Average Expense Constant	246.61	246.61	246.61
(14) Expense Trend Factor - Calendar Year XXXX to 7/1/17, the midpoint of the Prospective Effective Period	1.101	1.040	1.036
(15) Trend Factor to Adjust Proposed Average Expense Constant to Calendar Year XXXX = 1.0 / (14)	0.908	0.961	0.965
(16) Detrended Proposed Average Expense Constant = (13) x (15)	223.90	237.08	238.03
(17) Adjusted General Expenses Generated by the Expense Constant = [ (10) x (11) ] x [ (16) / (12) ]	16,620,806	18,051,453	18,123,906
(18) General Expenses Exclusive of Expense Constant Premium = (9) - (17)	37,881,543	37,913,437	36,851,673

**Notes:**

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

# VI 000014 STIP

Section VI - Expenses  
 Subsection B - Fixed Expenses  
 7/1/2016

Section VI - B  
 Exhibit 2  
 Page 2

## Calculation of General Expense

	Calendar Year		
	2012	2013	2014
(1) Standard Earned Premium Including Expense Constant Premium	914,877,733	942,139,873	971,746,716
(2) ARAP Premium at Company Level	43,796,098	45,776,607	43,631,199
(3) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.055	1.050	1.047
(4) Standard Earned Premium plus Adjusted ARAP = (1) + [ (2) x (3) ]	961,072,486	990,192,168	1,017,433,694
(5) Adjustment for Experience, Merit, ARAP and CCPAP Off-Balance	0.996	1.008	1.011
(6) Adjustment for Insolvency Fund Recoupment	1.000	1.000	0.999
(7) Adjusted Standard Earned Premium plus ARAP = (4) x (5) x (6)	957,191,904	998,305,662	1,028,203,766
(8) Actual WCRIBMA Expenses	11,224,379	10,816,994	10,431,118
(9) General Expenses (excluding Boards & Bureaus Expenses)	51,919,113	54,109,265	52,195,602
(10) Adjusted General Expense = (8) + (9)	63,143,492	64,926,259	62,626,720
(11) Ratio of Adjusted General Expense to Adjusted Standard Earned Premium plus ARAP (including expense constants) = (10) / (7)	6.6%	6.5%	6.1%

**Notes:**

- (1),(2): Aggregate Financial Reconciliation Report Calls, Calendar Years 2012 - 2014, 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 2012 - 2014.

# VI 000015 STIP

Section VI - Expenses  
 Subsection B - Fixed Expenses  
 7/1/2016

Section VI - B  
 Exhibit 2  
 Page 3

## Calculation of Pool Expense

	Calendar Year		
	2012	2013	2014
(1) Administrative Expenses	549,347	457,463	498,571
(2) Other Expense Allowances	-	-	-
(3) Workers' Compensation Bureau Pool Expenses	2,084,963	2,080,405	2,306,965
(4) Total Pool Expenses = (1) + (2) + (3)	2,634,310	2,537,868	2,805,536
(5) Target Pool Expenses for Excluded Companies	248,259	427,435	382,073
(6) Total Pool Expenses, excluding 2 company(ies) = (4) - (5)	2,386,051	2,110,432	2,423,463
(7) Proportion of Voluntary Assessable Premium Not from Large Deductibles " u "	0.792	0.792	0.792
(8) Total Pool Expenses for Non-Large Deductibles = (6) x (7)	1,890,224	1,671,880	1,919,862

**Notes:**

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

# VI 000016 STIP

Section VI - Expenses  
Subsection B - Fixed Expenses  
7/1/2016

Section VI - B  
Exhibit 3

## Expense Constant Components

(1)	Portion of Expense Constant for General Expenses Loaded for Premium Taxes	52.16%
(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, 2012 Form 63-23P.

2.28% is Premium Tax as % of Net Premium.

# VI 000017 STIP

Section VI - Expenses  
 Subsection C - Other Taxes  
 7/1/2016

Section VI - C  
 Exhibit 1

## Calculation of Other Taxes

(1)	Calendar Year 2014 Standard Earned Premium Including Expense Constant Premium	851,918,220	
(2)	Calendar Year 2014 ARAP Premium at Company Level	39,360,485	
(3)	Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.047	
(4)	Calendar Year 2014 Standard Earned Premium plus Adjusted ARAP = (1) + [ (2) x (3) ]	893,133,260	
(5)	Calendar Year 2014 Other Tax Allowance	0.40%	
(6)	Calendar Year 2014 Other Taxes = (4) x (5)	3,572,533	
		<u>PY2012</u>	<u>PY2013</u>
(7)	Other Tax Trend Factor from CY 2014 to PY XXXX	0.968	0.998
(8)	Annual Exposure Growth	2.6%	2.6%
(9)	Trend Length	-1.5	-0.5
(10)	Provision for Other Taxes = (6) x (7) x { [ 1.0 + (8) ] ^ (9) }	3,329,959	3,520,356

**Notes:**

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

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

(5): 2015 Best's Aggregates and Averages. Page 657.

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

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

(9): -1.5 years from CY 2014 to PY 2012, -0.5 years from CY 2014 to PY 2013.

# VI 000018 STIP

Section VI - Expenses  
 Subsection D - Expense Constant  
 7/1/2016

Section VI - D  
 Exhibit 1

## Calculation of Expense Constant

Standard Premium Ranges		PY 2013 Adjusted Policy Count	Adjusted Policy Distribution	Current Expense Constant	Trend Factor from 7/1/16 to 7/1/17	Selected Trend Factor	Calculated Expense Constant = (5) x (7) (8)
Unadjusted	Adjusted						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Less than \$200	Less Than \$163	61,479	41%	\$159.00	1.012	1.000	\$159.00
\$200 to \$1,000	\$163 to \$813	31,536	21%	\$250.00	1.012	1.000	\$250.00
\$1,000 or more	\$813 or more	57,767	38%	\$338.00	1.012	1.000	\$338.00
Total		150,782	100%	\$246.61			\$246.61

**Notes:**

Unit Statistical Plan Data PY 2013 (excluding Large Deductible policies).

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

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

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

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

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

# VI 000019 STIP

Section VI - Expenses  
Subsection E - Expenses Net of Premium Discount  
7/1/2016

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	7.5%	4.3%
(2) Percentage of Voluntary Written Premium by Discount Type	71.6%	28.4%
(3) Weighted Average Premium Discount as a % of Standard Premium in Voluntary Market = (1) weighted by (2)	<hr/>	
	6.6%	
(4) Voluntary Market Share	80.1%	
(5) Average Premium Discount in Total Market = (3) x (4)	5.3%	
(6) Average ARAP Surcharge for Prospective Effective Period as a % of Standard Premium	5.2%	
(7) Average Premium Discount as a % of Standard Premium + ARAP = (5) / [ 1.0 + (6) ]	<b>5.0%</b>	

### Notes:

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

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

(2): Exhibit 4.

(4): Special Bulletin 10/21/15. Market Share is estimated using Standard Premium plus ARAP.

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



# VI 000020 STIP

Section VI - Expenses  
 Subsection E - Expenses Net of Premium Discount  
 7/1/2016

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 2013				Total = [ Sum of (2) ] (3)
	0 - 10,000	10,000 - 200,000	200,000 - 1,750,000	1,750,000 & Over	
0 - 10,000	99,790,112	70,700,000	2,380,000	20,000	172,890,112
10,000 - 200,000		163,249,867	45,220,000	380,000	208,849,867
200,000 - 1,750,000			50,119,803	3,100,000	53,219,803
1,750,000 - & Over				4,452,324	4,452,324
Total	99,790,112	233,949,867	97,719,803	7,952,324	439,412,106

Interstate Intervals					
Layer of Standard Premium (4)	Standard Premium Ranges - PY 2013				Total Premium in Layer (6)
	0 - 10,000	10,000 - 200,000	200,000 - 1,750,000	1,750,000 & Over	
0 - 10,000	72,356	2,866,496	1,368,792	208,348	4,515,992
10,000 - 200,000		19,628,073	26,007,035	3,958,616	49,593,724
200,000 - 1,750,000			49,169,444	32,293,973	81,463,417
1,750,000 - & Over				77,791,638	77,791,638
Total	72,356	22,494,569	76,545,271	114,252,575	213,364,771

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	177,406,104	27.2%	0.0%
10,000 - 200,000	258,443,591	39.6%	9.1%
200,000 - 1,750,000	134,683,220	20.6%	11.3%
1,750,000 - & Over	82,243,962	12.6%	12.3%
Total	652,776,877	100.0%	<b>7.5%</b>

**Notes:**

Unit Statistical Plan Data.

Layers correspond to the Premium Discount layers.

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

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

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

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

Intrastate Intervals					
Layer of Standard Premium (1)	Standard Premium Ranges - PY 2013				Total = [ Sum of (2) ] (3)
	0 - 10,000	10,000 - 200,000	200,000 - 1,750,000	1,750,000 & Over	
0 - 10,000	56,250,688	30,050,000	590,000	30,000	86,920,688
10,000 - 200,000		52,498,064	11,210,000	570,000	64,278,064
200,000 - 1,750,000			14,769,273	4,650,000	19,419,273
1,750,000 - & Over				5,650,181	5,650,181
Total	56,250,688	82,548,064	26,569,273	10,900,181	176,268,206

Interstate Intervals					
Layer of Standard Premium (4)	Standard Premium Ranges - PY 2013				Total Premium in Layer (6)
	0 - 10,000	10,000 - 200,000	200,000 - 1,750,000	1,750,000 & Over	
0 - 10,000	47,798	1,215,052	447,505	91,892	1,802,247
10,000 - 200,000		7,505,377	8,502,593	1,745,954	17,753,924
200,000 - 1,750,000			15,097,157	14,243,310	29,340,467
1,750,000 - & Over				56,123,473	56,123,473
Total	47,798	8,720,429	24,047,255	72,204,629	105,020,111

Layer of Standard Premium (7)	Total = (3) + (6) (8)	Proportion of Premium in Layer (9)	% Premium Discount Type B Company (10)
0 - 10,000	88,722,935	31.5%	0.0%
10,000 - 200,000	82,031,988	29.2%	5.1%
200,000 - 1,750,000	48,759,740	17.3%	6.5%
1,750,000 - & Over	61,773,654	22.0%	7.5%
Total	281,288,317	100.0%	<b>4.3%</b>

**Notes:**

Unit Statistical Plan Data.

Layers correspond to the Premium Discount layers.

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

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

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

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Calendar Year 2014 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)
33758	ASSOCIATED INDUSTRIES OF MASS. MUTUAL INS. CO.	A	93,125,299	53,531,836	39,593,463	39,593,463	0
23841	NEW HAMPSHIRE INSURANCE COMPANY	B	58,017,161	0	58,017,161	0	58,017,161
22667	ACE AMERICAN INSURANCE COMPANY	A	40,123,466	15,973,030	24,150,436	24,150,436	0
25658	TRAVELERS INDEMNITY COMPANY	A	38,769,861	-247,175	39,017,036	39,017,036	0
25666	TRAVELERS INDEMNITY COMPANY OF AMERICA	A	37,273,566	32,077,524	5,196,042	5,196,042	0
44326	ATLANTIC CHARTER INSURANCE COMPANY	A	32,938,235	12,158,083	20,780,152	20,780,152	0
16535	ZURICH AMERICAN INSURANCE COMPANY	A	29,786,728	0	29,786,728	29,786,728	0
33600	LM INSURANCE CORPORATION	A	28,744,806	27,903,572	841,234	841,234	0
29459	TWIN CITY FIRE INSURANCE COMPANY	B	28,351,809	0	28,351,809	0	28,351,809
23035	LIBERTY MUTUAL FIRE INSURANCE COMPANY	A	27,873,035	-69,515	27,942,550	27,942,550	0
25682	TRAVELERS INDEMNITY COMPANY OF CONNECTICUT	A	27,208,282	0	27,208,282	27,208,282	0
25674	TRAVELERS PROPERTY CASUALTY COMPANY OF AMERICA	A	25,421,489	21,774,058	3,647,431	3,647,431	0
11104	ASSOCIATED EMPLOYERS INSURANCE COMPANY	B	24,952,707	0	24,952,707	0	24,952,707
30104	HARTFORD UNDERWRITERS INSURANCE COMPANY	A	24,108,514	17,088,523	7,019,991	7,019,991	0
42390	AMGUARD INSURANCE COMPANY	A	22,449,288	11,584,338	10,864,950	10,864,950	0
31325	ACADIA INSURANCE COMPANY	B	21,904,108	8,668,767	13,235,341	0	13,235,341
40142	AMERICAN ZURICH INSURANCE COMPANY	A	20,777,628	10,670,061	10,107,567	10,107,567	0
11984	INDEPENDENCE CASUALTY INSURANCE COMPANY	A	19,641,492	0	19,641,492	19,641,492	0
25011	WESCO INSURANCE COMPANY	A	18,809,947	0	18,809,947	18,809,947	0
31470	NORGUARD INSURANCE COMPANY	A	15,922,062	0	15,922,062	15,922,062	0
42404	LIBERTY INSURANCE CORPORATION	A	15,427,172	0	15,427,172	15,427,172	0
19445	NATIONAL UNION FIRE INS. CO. OF PITTSBURGH PA	B	15,049,328	0	15,049,328	0	15,049,328
19682	HARTFORD FIRE INSURANCE COMPANY	B	14,064,183	0	14,064,183	0	14,064,183
13083	NEW HAMPSHIRE EMPLOYERS INSURANCE COMPANY	A	13,917,043	0	13,917,043	13,917,043	0
19429	INSURANCE COMPANY OF THE STATE OF PENNSYLVANIA	A	13,890,355	0	13,890,355	13,890,355	0
19038	TRAVELERS CASUALTY AND SURETY COMPANY	A	13,276,414	0	13,276,414	13,276,414	0
12886	MASSACHUSETTS EMPLOYERS INSURANCE COMPANY	A	12,473,736	0	12,473,736	12,473,736	0
28258	CONTINENTAL INDEMNITY COMPANY	B	11,285,146	0	11,285,146	0	11,285,146
29424	HARTFORD CASUALTY INSURANCE COMPANY	B	11,026,833	0	11,026,833	0	11,026,833
20281	FEDERAL INSURANCE COMPANY	A	10,455,355	0	10,455,355	10,455,355	0
37478	HARTFORD INSURANCE COMPANY OF THE MIDWEST	B	10,132,861	0	10,132,861	0	10,132,861
42376	TECHNOLOGY INSURANCE COMPANY INC.	A	10,102,694	0	10,102,694	10,102,694	0
41360	ARBELLA PROTECTION INSURANCE COMPANY, INC.	A	10,062,242	0	10,062,242	10,062,242	0
23809	GRANITE STATE INSURANCE COMPANY	B	9,099,708	-55,119	9,154,827	0	9,154,827
24198	PEERLESS INSURANCE COMPANY	A	9,082,276	0	9,082,276	9,082,276	0
24139	OLD REPUBLIC GENERAL INSURANCE CORPORATION	A	8,967,304	0	8,967,304	8,967,304	0
18023	STAR INSURANCE COMPANY	A	8,901,526	0	8,901,526	8,901,526	0
12262	PENNSYLVANIA MANUFACTURERS' ASSOCIATION INS. CO.	A	8,383,334	0	8,383,334	8,383,334	0
22357	HARTFORD ACCIDENT AND INDEMNITY COMPANY	A	7,849,647	0	7,849,647	7,849,647	0
20443	CONTINENTAL CASUALTY COMPANY	B	6,531,635	3,510,853	3,020,782	0	3,020,782
23817	ILLINOIS NATIONAL INSURANCE COMPANY	B	6,212,691	0	6,212,691	0	6,212,691
21113	UNITED STATES FIRE INSURANCE COMPANY	A	5,805,883	0	5,805,883	5,805,883	0
21458	EMPLOYERS INSURANCE COMPANY OF WAUSAU	B	5,792,809	0	5,792,809	0	5,792,809
13803	FARM FAMILY CASUALTY INSURANCE COMPANY	A	5,677,073	0	5,677,073	5,677,073	0
13374	ARROW MUTUAL LIABILITY INSURANCE COMPANY	B	5,414,191	0	5,414,191	0	5,414,191
14788	NGM INSURANCE COMPANY	A	5,411,679	0	5,411,679	5,411,679	0
11150	ARCH INSURANCE COMPANY	A	5,364,001	0	5,364,001	5,364,001	0
23965	NORFOLK & DEDHAM MUTUAL FIRE INSURANCE COMPANY	A	5,348,869	0	5,348,869	5,348,869	0
11030	MEMIC INDEMNITY COMPANY	B	5,329,404	0	5,329,404	0	5,329,404
41343	HDI-GERLING AMERICA INSURANCE COMPANY	A	5,299,903	0	5,299,903	5,299,903	0
22292	HANOVER INSURANCE COMPANY (THE)	A	5,144,945	0	5,144,945	5,144,945	0
12777	CHUBB INDEMNITY INSURANCE COMPANY	A	4,956,442	0	4,956,442	4,956,442	0
25976	UTICA MUTUAL INSURANCE COMPANY	A	4,850,112	0	4,850,112	4,850,112	0
10664	ENDEAVOUR INSURANCE COMPANY	B	4,769,190	0	4,769,190	0	4,769,190

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Calendar Year 2014 Direct Written Premiums by Premium Discount Election - Type "A" or Type "B"

NAIC Company Number (1)	Company Name (2)	Elected Discount Schedule (3)	Direct Written Premium (4)	Residual Market Written Premium (5)	Adjusted Voluntary Written Premium		
					Total Written Premium (6)	Type A Written Premium (7)	Type B Written Premium (8)
25623	PHOENIX INSURANCE COMPANY, (THE)	A	4,597,807	0	4,597,807	4,597,807	0
39926	SELECTIVE INSURANCE COMPANY OF THE SOUTHEAST	A	4,282,598	0	4,282,598	4,282,598	0
21784	FIREMEN'S INSURANCE COMPANY OF WASHINGTON, D.C.	B	4,217,394	0	4,217,394	0	4,217,394
25615	CHARTER OAK FIRE INSURANCE COMPANY, (THE)	A	3,904,457	0	3,904,457	3,904,457	0
21261	ELECTRIC INSURANCE COMPANY	A	3,850,026	0	3,850,026	3,850,026	0
24147	OLD REPUBLIC INSURANCE COMPANY	A	3,827,571	0	3,827,571	3,827,571	0
25224	GREAT DIVIDE INSURANCE COMPANY	A	3,522,629	0	3,522,629	3,522,629	0
24988	SENTRY INSURANCE A MUTUAL COMPANY	A	3,336,220	0	3,336,220	3,336,220	0
10017	ARBELLA INDEMNITY INSURANCE COMPANY, INC.	A	3,326,420	0	3,326,420	3,326,420	0
19801	ARGONAUT INSURANCE COMPANY	A	3,124,860	0	3,124,860	3,124,860	0
31534	CITIZENS INSURANCE COMPANY OF AMERICA	A	3,090,380	0	3,090,380	3,090,380	0
20303	GREAT NORTHERN INSURANCE COMPANY	A	3,027,112	0	3,027,112	3,027,112	0
15059	PUBLIC SERVICE INSURANCE COMPANY	A	2,962,011	0	2,962,011	2,962,011	0
38318	STARR INDEMNITY & LIABILITY COMPANY	A	2,914,101	0	2,914,101	2,914,101	0
19410	COMMERCE AND INDUSTRY INSURANCE COMPANY	B	2,901,607	0	2,901,607	0	2,901,607
13935	FEDERATED MUTUAL INSURANCE COMPANY	A	2,689,068	0	2,689,068	2,689,068	0
14702	EASTGUARD INSURANCE COMPANY	A	2,423,420	0	2,423,420	2,423,420	0
20494	TRANSPORTATION INSURANCE COMPANY	B	2,391,985	0	2,391,985	0	2,391,985
40177	PARAMOUNT INSURANCE COMPANY	A	2,390,043	0	2,390,043	2,390,043	0
20346	PACIFIC INDEMNITY COMPANY	A	2,304,080	0	2,304,080	2,304,080	0
37257	PRAETORIAN INSURANCE COMPANY	A	2,170,700	0	2,170,700	2,170,700	0
12416	PROTECTIVE INSURANCE COMPANY	A	2,074,305	0	2,074,305	2,074,305	0
15105	SAFETY NATIONAL CASUALTY CORPORATION	A	2,064,010	0	2,064,010	2,064,010	0
20508	VALLEY FORGE INSURANCE COMPANY	A	2,037,212	0	2,037,212	2,037,212	0
20427	AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA	A	2,025,473	0	2,025,473	2,025,473	0
20478	NATIONAL FIRE INSURANCE COMPANY OF HARTFORD	A	2,001,947	0	2,001,947	2,001,947	0
13706	DORCHESTER MUTUAL INSURANCE COMPANY	A	1,974,250	0	1,974,250	1,974,250	0
20362	MITSUI SUMITOMO INSURANCE COMPANY OF AMERICA	A	1,628,073	0	1,628,073	1,628,073	0
26247	AMERICAN GUARANTEE AND LIABILITY INSURANCE COMPANY	A	1,584,670	0	1,584,670	1,584,670	0
12475	REPUBLIC FRANKLIN INSURANCE COMPANY	A	1,570,031	0	1,570,031	1,570,031	0
10804	CONTINENTAL WESTERN INSURANCE COMPANY	B	1,560,102	0	1,560,102	0	1,560,102
33588	FIRST LIBERTY INSURANCE CORPORATION (THE)	A	1,536,608	0	1,536,608	1,536,608	0
36064	HANOVER AMERICAN INSURANCE COMPANY (THE)	A	1,531,487	0	1,531,487	1,531,487	0
25984	GRAPHIC ARTS MUTUAL INSURANCE COMPANY	A	1,504,312	0	1,504,312	1,504,312	0
27855	ZURICH AMERICAN INSURANCE COMPANY OF ILLINOIS	A	1,477,384	0	1,477,384	1,477,384	0
23043	LIBERTY MUTUAL INSURANCE COMPANY	B	1,425,732	19,821,006	0	0	0
27154	ATLANTIC SPECIALTY INSURANCE COMPANY	A	1,414,886	0	1,414,886	1,414,886	0
26182	HARLEYSVILLE WORCESTER INSURANCE COMPANY	A	1,414,183	0	1,414,183	1,414,183	0
22306	MASSACHUSETTS BAY INSURANCE COMPANY	A	1,357,013	0	1,357,013	1,357,013	0
20222	ALL AMERICA INSURANCE COMPANY	A	1,349,447	0	1,349,447	1,349,447	0
21172	VANLINER INSURANCE COMPANY	A	1,333,217	0	1,333,217	1,333,217	0
23329	MERCHANTS MUTUAL INSURANCE COMPANY	A	1,281,293	0	1,281,293	1,281,293	0
24082	OHIO SECURITY INSURANCE COMPANY	A	1,218,598	0	1,218,598	1,218,598	0
32620	NATIONAL INTERSTATE INSURANCE COMPANY	A	1,213,319	0	1,213,319	1,213,319	0
11185	FOREMOST INSURANCE COMPANY GRAND RAPIDS, MICHIGAN	A	1,188,963	0	1,188,963	1,188,963	0
20397	VIGILANT INSURANCE COMPANY	A	1,151,879	0	1,151,879	1,151,879	0
11149	MAINE EMPLOYERS' MUTUAL INSURANCE COMPANY	B	1,140,369	0	1,140,369	0	1,140,369
11800	FOREMOST PROPERTY AND CASUALTY INSURANCE COMPANY	A	1,135,764	0	1,135,764	1,135,764	0
19879	SECURITY NATIONAL INSURANCE COMPANY	A	1,118,211	0	1,118,211	1,118,211	0
21105	NORTH RIVER INSURANCE COMPANY	A	1,102,678	0	1,102,678	1,102,678	0
28460	SENTRY CASUALTY COMPANY	A	1,095,212	0	1,095,212	1,095,212	0
21415	EMPLOYERS MUTUAL CASUALTY COMPANY	A	1,057,710	0	1,057,710	1,057,710	0
41840	ALLMERICA FINANCIAL BENEFIT INSURANCE COMPANY	A	1,025,797	0	1,025,797	1,025,797	0
28223	NATIONWIDE AGRIBUSINESS INSURANCE COMPANY	B	994,227	0	994,227	0	994,227

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Calendar Year 2014 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)
41513	FOREMOST SIGNATURE INSURANCE COMPANY	A	974,661	0	974,661	974,661	0
19259	SELECTIVE INSURANCE COMPANY OF SOUTH CAROLINA	A	942,695	0	942,695	942,695	0
25844	UNION INSURANCE COMPANY	B	932,230	0	932,230	0	932,230
18767	CHURCH MUTUAL INSURANCE COMPANY	B	924,961	0	924,961	0	924,961
37885	XL SPECIALTY INSURANCE COMPANY	A	918,340	0	918,340	918,340	0
13978	FLORISTS' MUTUAL INSURANCE COMPANY	A	897,680	0	897,680	897,680	0
16551	SAVERS PROPERTY AND CASUALTY INSURANCE COMPANY	A	885,886	-1,832	887,718	887,718	0
35289	CONTINENTAL INSURANCE COMPANY, (THE)	A	869,437	0	869,437	869,437	0
23108	LUMBERMEN'S UNDERWRITING ALLIANCE	A	836,075	0	836,075	836,075	0
10120	EVEREST NATIONAL INSURANCE COMPANY	B	798,994	0	798,994	0	798,994
11045	EXCELSIOR INSURANCE COMPANY	A	796,781	0	796,781	796,781	0
43478	UTICA NATIONAL INSURANCE COMPANY OF TEXAS	A	795,524	0	795,524	795,524	0
42552	NOVA CASUALTY COMPANY	A	795,174	0	795,174	795,174	0
19380	AMERICAN HOME ASSURANCE COMPANY	B	788,504	0	788,504	0	788,504
15067	QUINCY MUTUAL FIRE INSURANCE COMPANY	A	769,623	0	769,623	769,623	0
21180	SENTRY SELECT INSURANCE COMPANY	A	762,861	0	762,861	762,861	0
20044	BERKSHIRE HATHAWAY HOMESTATE INSURANCE COMPANY	A	749,063	0	749,063	749,063	0
16608	NEW YORK MARINE AND GENERAL INSURANCE COMPANY	A	729,689	0	729,689	729,689	0
31348	CRUM & FORSTER INDEMNITY COMPANY	B	670,029	0	670,029	0	670,029
38911	BERKLEY NATIONAL INSURANCE COMPANY	A	666,213	0	666,213	666,213	0
12901	MERCHANTS PREFERRED INSURANCE COMPANY	A	665,164	0	665,164	665,164	0
20230	CENTRAL MUTUAL INSURANCE COMPANY	B	656,812	0	656,812	0	656,812
19720	AMERICAN ALTERNATIVE INSURANCE CORPORATION	A	654,668	0	654,668	654,668	0
22136	GREAT AMERICAN INSURANCE COMPANY OF NEW YORK	A	623,173	0	623,173	623,173	0
15954	AMTRUST INSURANCE COMPANY OF KANSAS, INC.	A	616,786	0	616,786	616,786	0
11126	SOMPO JAPAN INSURANCE COMPANY OF AMERICA	A	578,849	0	578,849	578,849	0
23442	PATRIOT GENERAL INSURANCE COMPANY	A	550,080	0	550,080	550,080	0
23434	MIDDLESEX INSURANCE COMPANY	A	524,129	0	524,129	524,129	0
10687	UTICA NATIONAL ASSURANCE COMPANY	A	518,550	0	518,550	518,550	0
24414	GENERAL CASUALTY COMPANY OF WISCONSIN	A	504,794	0	504,794	504,794	0
10945	TOKIO MARINE AMERICA INSURANCE COMPANY	A	497,459	0	497,459	497,459	0
23582	HARLEYSVILLE INSURANCE COMPANY	A	462,584	0	462,584	462,584	0
20613	SPARTA INSURANCE COMPANY	A	447,816	0	447,816	447,816	0
24074	OHIO CASUALTY INSURANCE COMPANY (THE)	A	443,962	0	443,962	443,962	0
29939	MAIN STREET AMERICA ASSURANCE COMPANY	A	442,957	0	442,957	442,957	0
12831	STATE NATIONAL INSURANCE COMPANY INC.	A	427,848	0	427,848	427,848	0
13714	PHARMACISTS MUTUAL INSURANCE COMPANY	A	409,317	0	409,317	409,317	0
20052	NATIONAL LIABILITY & FIRE INSURANCE COMPANY	A	396,784	0	396,784	396,784	0
28304	FEDERATED SERVICE INSURANCE COMPANY	A	381,944	0	381,944	381,944	0
25879	FIDELITY & GUARANTY INSURANCE UNDERWRITERS, INC.	A	368,128	0	368,128	368,128	0
23396	AMERISURE MUTUAL INSURANCE COMPANY	B	345,893	0	345,893	0	345,893
28886	TRANSGUARD INSURANCE COMPANY OF AMERICA, INC.	A	334,897	0	334,897	334,897	0
24554	XL INSURANCE AMERICA, INC.	A	332,650	0	332,650	332,650	0
11991	NATIONAL CASUALTY COMPANY	B	327,922	0	327,922	0	327,922
10665	AMERITRUST INSURANCE CORPORATION	A	325,441	0	325,441	325,441	0
24171	NETHERLANDS INSURANCE COMPANY (THE)	A	322,897	0	322,897	322,897	0
10800	PREMIER GROUP INSURANCE COMPANY	B	317,306	0	317,306	0	317,306
10677	CINCINNATI INSURANCE COMPANY	A	313,070	0	313,070	313,070	0
10052	CHUBB NATIONAL INSURANCE COMPANY	A	294,270	0	294,270	294,270	0
26832	GREAT AMERICAN ALLIANCE INSURANCE COMPANY	A	288,963	0	288,963	288,963	0
13269	ZENITH INSURANCE COMPANY	A	229,891	0	229,891	229,891	0
26662	MILWAUKEE CASUALTY INSURANCE CO.	A	226,540	0	226,540	226,540	0
18333	PEERLESS INDEMNITY INSURANCE COMPANY	A	225,926	0	225,926	225,926	0
44300	TOWER INSURANCE COMPANY OF NEW YORK	A	225,885	0	225,885	225,885	0

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 Exhibit 4

Calendar Year 2014 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)
14190	OBI NATIONAL INSURANCE COMPANY	A	217,065	0	217,065	217,065	0
21865	ASSOCIATED INDEMNITY CORPORATION	B	202,643	0	202,643	0	202,643
19488	AMERISURE INSURANCE COMPANY	B	199,675	0	199,675	0	199,675
10340	STONINGTON INSURANCE COMPANY	B	187,073	0	187,073	0	187,073
11371	GREAT WEST CASUALTY COMPANY	A	185,919	0	185,919	185,919	0
19704	AMERICAN STATES INSURANCE COMPANY	A	178,954	0	178,954	178,954	0
40045	STARNET INSURANCE COMPANY	A	165,237	0	165,237	165,237	0
43702	TOWER NATIONAL INSURANCE COMPANY	A	162,273	0	162,273	162,273	0
25135	STATE AUTOMOBILE MUTUAL INSURANCE COMPANY	A	154,330	0	154,330	154,330	0
36234	PREFERRED PROFESSIONALS INSURANCE COMPANY	A	151,500	0	151,500	151,500	0
21857	AMERICAN INSURANCE COMPANY, (THE)	A	146,003	0	146,003	146,003	0
27120	TRUMBULL INSURANCE COMPANY	A	144,419	0	144,419	144,419	0
25887	UNITED STATES FIDELITY AND GUARANTY COMPANY	A	123,620	0	123,620	123,620	0
25127	STATE AUTO PROPERTY & CASUALTY INSURANCE COMPANY	A	118,564	0	118,564	118,564	0
44393	WEST AMERICAN INSURANCE COMPANY	A	114,589	0	114,589	114,589	0
24678	ARROWOOD INDEMNITY COMPANY	A	108,898	0	108,898	108,898	0
12866	T.H.E INSURANCE COMPANY	B	108,726	0	108,726	0	108,726
41238	TRANS PACIFIC INSURANCE COMPANY	A	92,946	0	92,946	92,946	0
19690	AMERICAN ECONOMY INSURANCE COMPANY	A	91,855	0	91,855	91,855	0
20699	ACE PROPERTY AND CASUALTY INSURANCE COMPANY	A	84,497	0	84,497	84,497	0
10166	ACCIDENT FUND INSURANCE COMPANY OF AMERICA	A	81,956	0	81,956	81,956	0
10642	CHEROKEE INSURANCE COMPANY	A	78,288	0	78,288	78,288	0
27740	NORTH POINTE INSURANCE COMPANY	A	76,855	0	76,855	76,855	0
24767	ST. PAUL FIRE & MARINE INSURANCE COMPANY	A	76,260	0	76,260	76,260	0
19070	STANDARD FIRE INSURANCE COMPANY	A	74,259	0	74,259	74,259	0
26069	WAUSAU BUSINESS INSURANCE COMPANY	A	74,056	0	74,056	74,056	0
15911	AMERICAN MINING INSURANCE COMPANY	B	70,103	0	70,103	0	70,103
29580	BERKLEY REGIONAL INSURANCE COMPANY	A	65,830	0	65,830	65,830	0
35408	IMPERIUM INSURANCE COMPANY	B	61,832	0	61,832	0	61,832
15032	GUIDEONE MUTUAL INSURANCE COMPANY	A	58,947	0	58,947	58,947	0
21970	BEDIVERE INSURANCE COMPANY	A	53,932	0	53,932	53,932	0
21873	FIREMAN'S FUND INSURANCE COMPANY	A	51,895	0	51,895	51,895	0
24449	REGENT INSURANCE COMPANY	A	50,101	0	50,101	50,101	0
31895	AMERICAN INTERSTATE INSURANCE COMPANY	A	49,704	0	49,704	49,704	0
10510	CAROLINA CASUALTY INSURANCE COMPANY	B	48,914	0	48,914	0	48,914
14923	PATRONS MUTUAL INSURANCE COMPANY OF CONNECTICUT	A	47,694	0	47,694	47,694	0
13056	RLI INSURANCE COMPANY	A	45,298	0	45,298	45,298	0
23469	AMERICAN MODERN HOME INSURANCE COMPANY	A	42,876	0	42,876	42,876	0
21849	AMERICAN AUTOMOBILE INSURANCE COMPANY	A	40,520	0	40,520	40,520	0
21423	UNION INSURANCE COMPANY OF PROVIDENCE	A	37,689	0	37,689	37,689	0
11123	SAFETY FIRST INSURANCE COMPANY	A	31,254	0	31,254	31,254	0
31003	TRI-STATE INSURANCE COMPANY OF MINNESOTA	A	25,566	0	25,566	25,566	0
19402	AIG PROPERTY CASUALTY COMPANY	B	24,340	0	24,340	0	24,340
35696	HARLEYSVILLE PREFERRED INSURANCE COMPANY	A	23,080	0	23,080	23,080	0
16691	GREAT AMERICAN INSURANCE COMPANY	A	19,167	0	19,167	19,167	0
24066	AMERICAN FIRE AND CASUALTY COMPANY	A	18,958	0	18,958	18,958	0
25143	STATE FARM FIRE AND CASUALTY COMPANY	A	18,721	0	18,721	18,721	0
40517	ADVANTAGE WORKERS COMPENSATION INSURANCE COMPANY	A	18,425	0	18,425	18,425	0
38300	SAMSUNG FIRE & MARINE INSURANCE CO. LTD (U.S. BRANCH)	A	17,458	0	17,458	17,458	0
29157	UNITED WISCONSIN INSURANCE COMPANY	A	16,501	0	16,501	16,501	0
26344	GREAT AMERICAN ASSURANCE COMPANY	A	15,630	0	15,630	15,630	0
21881	NATIONAL SURETY CORPORATION	A	15,539	0	15,539	15,539	0
21709	TRUCK INSURANCE EXCHANGE	A	10,745	0	10,745	10,745	0
12305	ACCIDENT FUND NATIONAL INSURANCE COMPANY	A	9,872	0	9,872	9,872	0

# VI 000026 STIP

Section VI - Expenses  
 Subsection E - Expenses Net of Premium Discount  
 7/1/2016

Section VI - E  
 Exhibit 4

Calendar Year 2014 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)
36463	DISCOVER PROPERTY & CASUALTY INSURANCE COMPANY	A	9,047	0	9,047	9,047	0
14982	PENN MILLERS INSURANCE COMPANY	A	8,650	0	8,650	8,650	0
24732	GENERAL INSURANCE COMPANY OF AMERICA	A	8,636	0	8,636	8,636	0
20702	ACE FIRE UNDERWRITERS INSURANCE COMPANY	A	6,804	0	6,804	6,804	0
20648	EMPLOYERS' FIRE INSURANCE CO	A	6,675	0	6,675	6,675	0
18279	BANKERS STANDARD INSURANCE COMPANY	A	5,928	0	5,928	5,928	0
23612	MIDWEST EMPLOYERS CASUALTY COMPANY	A	5,746	0	5,746	5,746	0
11050	AMERISURE PARTNERS INSURANCE COMPANY	B	4,210	0	4,210	0	4,210
12297	PETROLEUM CASUALTY COMPANY	A	3,020	0	3,020	3,020	0
12304	ACCIDENT FUND GENERAL INSURANCE COMPANY	A	2,833	0	2,833	2,833	0
14990	PENNSYLVANIA NATIONAL MUTUAL CASUALTY INS. CO.	B	2,601	0	2,601	0	2,601
27847	INSURANCE COMPANY OF THE WEST	A	2,218	0	2,218	2,218	0
20095	BITCO GENERAL INSURANCE CORPORATION	A	1,921	0	1,921	1,921	0
11000	SENTINEL INSURANCE COMPANY, LTD.	A	1,543	0	1,543	1,543	0
19860	ARGONAUT GREAT CENTRAL INSURANCE COMPANY	A	1,188	0	1,188	1,188	0
13331	MOTORISTS COMMERCIAL MUTUAL INSURANCE COMPANY	A	91	0	91	91	0
26425	WAUSAU GENERAL INSURANCE COMPANY	A	13	0	13	13	0
34690	PROPERTY AND CASUALTY INSURANCE CO. OF HARTFORD	A	12	0	12	12	0

Total	1,081,648,280	234,388,010	865,655,544	619,967,829	245,687,715
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Percentage of Voluntary written premium electing Type A Discount: 71.6%

Percentage of Voluntary written premium electing Type B Discount: 28.4%

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 000027 STIP

Section VI - Expenses  
Subsection F - Expense Constant Offset  
7/1/2016

Section VI - F  
Exhibit 1

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

(1) Expense Constant Offset for Policy Year 2013	0.957
(2) Expense Constant as Percent of Premium for Policy Year 2013 = 1.0 - (1)	4.3%
(3) Calculated Expense Constant for Policy Year 2013	\$235.80
(4) Factor to Bring Policy Year 2013 Premium to Premium Level of Prospective Effective Period	1.23
(5) Estimated Expense Constant for Prospective Effective Period	\$246.61
(6) Expense Constant as Percent of Premium for Prospective Effective Period = { (2) x [ (5) / (3) ] } / { [ (1) x (4) ] + [ (2) x ( (5) / (3) ) ] }	3.7%

### Notes:

- (1): Exhibit 2.
- (3): Based on Unit Statistical Plan Data
- (4): Section III-E, Exhibit 1.
- (5): Section D, Exhibit 1.



# VI 000028 STIP

Section VI - Expenses  
 Subsection F - Expense Constant Offset  
 7/1/2016

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)
2012	894,488,930	47,699,238	1.052	43,088,206	0.956
2013	939,037,037	48,772,769	1.047	44,481,450	0.957

### 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)
2013	790,192,490	39,759,704	1.047	37,079,033	0.957

**Notes:**

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

(4) Section III-B, Exhibit 2.

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

(10) Section III-B, Exhibit 2.

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

The Standard Premium excluding Expense Constant values for Policy Year 2013 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 000029 STIP

Section VI - Expenses  
Subsection G - Acquisition Expenses  
7/1/2016

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	3.6%
(2)	Selected Average Commission Ratio, Excluding Expense Constants	6.3%
(3)	Selected Frictional Reinsurance Expenses Ratio (relative to Standard plus ARAP premiums, excluding expense constants)	1.0%
(4)	Selected Effect of Incidental Income and EBUP Expense, Excluding of Expense Constants	0.0%
(5)	Commission and Other Acquisition Expense Ratio = (1) + (2) + (3) + (4)	10.9%

### Notes:

(1): Exhibit 2.

(2): Exhibit 3.

(3): Exhibit 4, Page 1.

(4): Exhibit 5.

# VI 000030 STIP

Section VI - Expenses  
 Subsection G - Acquisition Expenses  
 7/1/2016

Section VI - G  
 Exhibit 2

## Calculation of Other Acquisition Expense

	Calendar Year		
	2012	2013	2014
(1) Standard Earned Premium Including Expense Constant Premium	914,877,733	942,139,873	971,746,716
(2) ARAP Premium at Company Level	43,796,098	45,776,607	43,631,199
(3) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.055	1.050	1.047
(4) Standard Earned Premium plus Adjusted ARAP = (1) + [ (2) x (3) ]	961,072,486	990,192,168	1,017,433,694
(5) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	0.996	1.008	1.011
(6) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	1.000	1.000	0.999
(7) Adjusted Standard Earned Premium plus ARAP = (4) x (5) x (6)	957,191,904	998,305,662	1,028,203,766
(8) Other Acquisition, Field Supervision, Collection Expenses for Home Office and Branch Office, excluding Commissions	45,337,690	54,699,120	54,594,541
(9) Other Acquisition Expense Ratio = (8) / (7)	4.7%	5.5%	5.3%
(10) Three Year Average		5.2%	
(11) Expense Constant as Percent of Premium for Prospective Effective Period		3.7%	
(12) Other Acquisition Portion of Expense Constant		46.7%	
(13) Percent of Premium due to Portion of Expense Constant for Other Acquisition Expense = (11) x (12)		1.7%	
(14) Other Acquisition and Field Supervision Expense Ratio, Excluding Expense Constants = [ (10) - (13) ] / [ 1.0 - (11) ]		<b>3.6%</b>	

**Notes:**

- (1), (2): Aggregate Financial Reconciliation Report Calls, Calendar Years 2012 - 2014.  
 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 2012 - 2014.
- (11): Section VI-F, Exhibit 1.
- (12): Section VI-B, Exhibit 3.

# VI 000031 STIP

Section VI - Expenses  
Subsection G - Acquisition Expenses  
7/1/2016

Section VI - G  
Exhibit 3

## Calculation of Average Commission Rate

	Calendar Year		
	2012	2013	2014
(1) Direct Written Premium	810,381,461	849,968,386	890,017,216
(2) Total Commissions for Agents and Brokers	61,332,749	63,038,761	70,118,395
(3) Average Commission Rate = (2) / (1)	7.6%	7.4%	7.9%
(4) Three Year Average		7.6%	
(5) Expense Constant as Percent of Premium for Prospective Effective Period		3.7%	
(6) Average Commission Ratio, Excluding Expense Constants = (5) / [ 1.0 - (4) ]		7.9%	
(7) Selected Average Commission Ratio, Excluding Expense Constants			<b>6.27%</b>

### Notes:

(1): Annual Statement Exhibit of Premium and Losses, Calendar Years 2012 - 2014.

(2): Aggregate Financial Expense Calls, Calendar Years 2012 - 2014.

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

# VI 000032 STIP

## 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)
2000	19.3%	3.3%	2.4%	0.8%	25.8%
2001	18.2%	3.8%	2.5%	0.3%	24.8%
2002	20.3%	3.7%	2.7%	0.4%	27.0%
2003	18.7%	4.2%	2.7%	0.6%	26.2%
2004	18.0%	4.0%	2.9%	0.5%	25.4%
2005	26.2%	8.0%	6.4%	0.7%	41.3%
2006	13.3%	4.6%	4.4%	0.5%	22.8%
2007	14.0%	4.9%	4.2%	0.5%	23.6%
2008	18.4%	4.3%	3.9%	0.6%	27.2%
2009	19.8%	2.9%	3.4%	0.2%	26.3%
2010	17.7%	3.2%	3.8%	0.2%	24.9%
2011	19.2%	3.0%	2.8%	0.2%	25.2%
2012	19.1%	3.1%	2.7%	0.3%	25.2%
2013	17.4%	3.6%	3.5%	0.3%	24.8%
2014	18.1%	3.5%	5.3%	0.4%	27.3%
(7) Average	18.5%	4.0%	3.6%	0.4%	26.5%
(8) Estimated Ceding Commission & Brokerage Rate for Workers' Compensation Non-Proportional Reinsurance	16.3%				
(9) Adjusted Average = (7) - (8)	2.2%	4.0%	3.6%	0.4%	10.2%

- (10) Estimated % of Direct Premium Ceded for Workers' Compensation Non-Proportional Reinsurance 13.6%
- (11) Implied Frictional Reinsurance Expenses Relative to Direct Premiums (as a %)  
= Total (9) x (10) 1.39%
- (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 2001 - 2015.

(8): Page 2, (10).

(10): Page 2, (11).

# VI 00033 STIP

Section VI - Expenses  
 Subsection G - Acquisition Expenses  
 7/1/2016

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)
2000	32,780,086	28,240,208	4,539,878	0.082	0.068	2,687,967	1,920,334	767,633
2001	37,333,721	31,520,736	5,812,985	0.084	0.066	3,136,033	2,080,369	1,055,664
2002	43,950,839	38,137,991	5,812,848	0.077	0.066	3,384,215	2,517,107	867,107
2003	50,031,977	43,333,685	6,698,292	0.072	0.063	3,602,302	2,730,022	872,280
2004	51,988,628	45,667,027	6,321,601	0.074	0.063	3,847,158	2,877,023	970,136
2005	53,139,231	46,633,441	6,505,790	0.068	0.056	3,613,468	2,611,473	1,001,995
2006	50,942,134	45,033,012	5,909,122	0.072	0.069	3,667,834	3,107,278	560,556
2007	50,367,861	44,207,021	6,160,840	0.071	0.061	3,576,118	2,696,628	879,490
2008	42,686,615	37,535,546	5,151,069	0.077	0.060	3,286,869	2,252,133	1,034,737
2009	37,879,014	32,642,883	5,236,131	0.079	0.060	2,992,442	1,958,573	1,033,869
2010	37,180,836	32,184,623	4,996,213	0.079	0.060	2,937,286	1,931,077	1,006,209
2011	41,651,380	35,751,070	5,900,310	0.084	0.068	3,498,716	2,431,073	1,067,643
2012	44,555,061	37,992,643	6,562,418	0.084	0.070	3,742,625	2,659,485	1,083,140
2013	49,384,867	41,250,232	8,134,635	0.084	0.068	4,148,329	2,805,016	1,343,313
2014	52,613,735	44,053,515	8,560,220	0.084	0.066	4,419,554	2,907,532	1,512,022
<b>Total</b>	<b>676,485,985</b>	<b>584,183,633</b>	<b>92,302,352</b>	<b>0.078</b>	<b>0.064</b>	<b>52,540,916</b>	<b>37,485,122</b>	<b>15,055,793</b>

(10) Estimated Ceding Commission & Brokerage Rate for Workers' Compensation Non-Proportional Reinsurance = Total (9) / Total (4) 16.3%

(11) Estimated % of Direct Premium Ceded for Workers' Compensation Non-Proportional Reinsurance = Total (4) / Total (2) 13.6%

**Notes:**

(2), (3), (5), (6): Insurance Expense Exhibit database - By Line Underwriting Experience from Best's Aggregates & Averages for Workers' Comp Editions 2001 - 2015.

# VI 000034 STIP

Section VI - Expenses  
 Subsection G - Acquisition Expenses  
 7/1/2016

Section VI - G  
 Exhibit 5

## Effect of Incidental Income and Earned but Uncollected Premium

	Calendar Year		
	2012	2013	2014
(1) Standard Earned Premium Including Expense Constant Premium	914,877,733	942,139,873	971,746,716
(2) ARAP Premium at Company Level	43,796,098	45,776,607	43,631,199
(3) Adjustment Factor to Adjust from Company Level to DSR Level Premium	1.055	1.050	1.047
(4) Standard Earned Premium plus Adjusted ARAP = (1) + [ (2) x (3) ]	961,072,486	990,192,168	1,017,433,694
(5) Adjustment for Experience and Merit Rating, ARAP, and Construction Credit Off-balance	0.996	1.008	1.011
(6) Adjustment Factor to Remove the Impact of Loading for Recoupment of Insolvency Fund Assessments	1.000	1.000	0.999
(7) Adjusted Standard Earned Premium plus ARAP = (4) x (5) x (6)	957,191,904	998,305,662	1,028,203,766
(8) Earned But Uncollected Premium ("EBUP")	11,788,004	7,379,015	10,496,582
(9) Incidental Income	2,177,957	2,175,728	2,189,901
(10) Net Effect of Incidental Income and EBUP Expense = [ (8) - (9) ] / (7)	1.0%	0.5%	0.8%
(11) Three Year Average		0.8%	
(12) Expense Constant as Percent of Premium for Prospective Effective Period		3.7%	
(13) Effect of Incidental Income and EBUP Expense, Exclusive of Expense Constants = (11) / [ 1.0 - (12) ]		0.8%	
(14) Selected Effect of Incidental Income and EBUP Expense, Excluding of Expense Constants		0.0%	

**Notes:**

- (1), (2): Aggregate Financial Reconciliation Report Calls, Calendar Years 2012 - 2014.  
 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 000035 STIP

Section VI - Expenses  
Subsection H - Loss Adjustment Expense  
7/1/2016

Section VI - H  
Exhibit 1

## Defense and Cost Containment Expense ("LAE") Ratio

	Calendar Year		
	2012	2013	2014
(1) Ground Up Paid Losses	475,965,883	510,119,143	528,959,944
(2) Ground Up Paid Defense and Cost Containment Expense	49,621,592	51,596,149	52,252,279
(3) Defense and Cost Containment Expense Ratio = (2) / (1)	10.4%	10.1%	9.9%
(4) Three Year Average Defense and Cost Containment Expense Ratio = Average of (3)		10.1%	
(5) Selected Three Year Average Defense and Cost Containment Expense Ratio		10.1%	
(6) Total Loss Adjustment Expense Ratio (LAE / Loss)		<b>20.0%</b>	

### Notes:

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

(6): (5) + [ (9) from Section VI-H, Exhibit 2 ]



# VI 000036 STIP

Section VI - Expenses  
 Subsection H - Loss Adjustment Expense  
 7/1/2016

Section VI - H  
 Exhibit 2

## Adjusting and Other ("AO") Expense Ratio

		Calendar Year		
		2012	2013	2014
(1)	Direct Incurred Losses	456,647,089	538,259,587	604,817,244
(2)	Factor to Adjust the Direct Losses to Full Coverage Losses	1.140	1.135	1.126
(3)	Estimated Full Coverage Incurred Losses = (1) x (2)	520,461,458	611,147,775	680,794,193
(4)	Direct Incurred Adjusting and Other Expense	43,704,127	59,883,085	65,115,809
(5)	Factor to Adjust the Direct Adjusting and Other Expense to Full Coverage AO Expense	1.065	1.063	1.059
(6)	Estimated Full Coverage Adjusting and Other Expense = (4) x (5)	46,558,417	63,680,494	68,964,017
(7)	Adjusted Adjusting and Other Expense Ratio = (6) / (3)	8.95%	10.42%	10.13%
(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),(4): Aggregate Financial Calendar Year Expense Data Calls, 2012 - 2014.

(2),(5): Section VI-I, Exhibit 1, Page 1.

# VI 000037 STIP

Section VI - Expenses  
 Subsection I - Adjustment for Large Deductible Policies  
 7/1/2016

Section VI - I  
 Exhibit 1  
 Page 1

## Adjustment to the Adjusting and Other Expense Provision

	Calendar Year		
	2012	2013	2014
(1) Average Premium Reduction Factor for Large Deductible Policies	0.818	0.818	0.831
(2) Loss Elimination Ratio (LER) for Large Deductible Policies = (1) x 1.111	90.9%	90.8%	92.4%
(3) Market Share (Standard Premium Basis) of Large Deductible Policies	13.5%	13.1%	12.1%
(4) LER for Full Coverage plus Large Deductible Policies = [ (2) x (3) ] + { 0.0 x [ 1.0 - (3) ] }	12.3%	11.9%	11.2%
(5) Factor to Adjust the Direct Losses to Full Coverage Losses = 1.0 / [ 1.0 - (4) ]	1.140	1.135	1.126
(6) Factor to Adjust the Direct AO Expense to Full Coverage AO Expense = 1.0 / { 1.0 - [ 0.5 x (4) ] }	1.065	1.063	1.059

**Notes:**

(1),(3): Exhibit 2.

(2): 1.111 from Exhibit 1, Page 2.

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

# VI 000038 STIP

Section VI - Expenses  
 Subsection I - Adjustment for Large Deductible Policies  
 7/1/2016

Section VI - I  
 Exhibit 1  
 Page 2

## Loss Elimination Ratio for Large Deductible Policies

		As a % of Standard Premium plus ARAP
(1)	Commission and Other Acquisition Expense Ratio	12.3%
(2)	Premium Discount Ratio	4.9%
(3)	Premium Tax Ratio = 2.28% x [ 1.0 - (2) ]	2.2%
(4)	Profit Provision	0.0%
(5)	Insolvency Fund Assessment	0.2%
(6)	Residual Market Subsidy (Retrospectively-rated policies)	-0.2%
(7)	Variable Expense Ratio = (1) + (2) + (3) + (4) + (5) + (6)	19.4%
(8)	Expected Loss Ratio without LAE	63.3%
(9)	Defense and Cost Containment Expense ("DCC")	6.3%
(10)	Adjusting and Other Expenses ("AO")	5.8%
(11)	Variable Adjusting and Other Expenses = 0.5 x (10)	2.9%
(12)	Portion of Expected Loss + LAE Ratio that varies with deductible (ELARD) = (8) + (9) + (11)	72.6%
(13)	LER / D = [ 1.0 - (7) ] / (12)	1.111

D = Average Premium Reduction Factor for Large Deductible Policies

LER = Loss Elimination Ratio

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

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

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

**Notes:**

Values approved for rates effective 4/1/14.

(9) = 10.0% x (8), ratio of DCC to Losses from the 4/1/14 filing.

(10) = 9.2% x (8), ratio of AO to Losses from the 4/1/14 filing.

# VI 000039 STIP

Section VI - Expenses  
 Subsection I - Adjustment for Large Deductible Policies  
 7/1/2016

Section VI - I  
 Exhibit 2

## Average Large Deductible Premium Reduction Factor and Large Deductible Market Share

		Policy Year												
		2011	2012	2013	2014*									
(1)	Standard Earned Premium Excluding Large Deductible Policies	776,211,969	794,363,914	820,373,080	479,535,529									
(2)	Earned Premium Net of Deductible Credit for Large Deductible Policies	20,928,477	23,710,372	20,822,734	10,090,386									
(3)	Standard Earned Premium for Large Deductible Policies	118,202,056	126,865,296	117,101,684	63,382,412									
(4)	Standard Earned Premium for All Policies = (1) + (3)	894,414,025	921,229,210	937,474,764	542,917,941									
(5)	Average Premium Reduction Factor for Large Deductible Policies = $1.0 - [(2) / (3)]$	0.823	0.813	0.822	0.841									
(6)	Market Share (Standard Premium Basis) of Large Deductible Policies = (3) / (4)	13.2%	13.8%	12.5%	11.7%									
		<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;">2012</th> <th style="text-align: center;">2013</th> <th style="text-align: center;">2014</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0.818</td> <td style="text-align: center;">0.818</td> <td style="text-align: center;">0.831</td> </tr> </tbody> </table>				Calendar Year			2012	2013	2014	0.818	0.818	0.831
Calendar Year														
2012	2013	2014												
0.818	0.818	0.831												
(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	13.5%	13.1%	12.1%										

**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 2014 is an incomplete Policy Year, valued as of 12/31/2014

# VI 000040 STIP

Section VI - Expenses  
 Subsection J - Expected Loss Ratios Underlying the Proposed Rates & Rating Values  
 7/1/2016

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	10.9%
(2) Average Premium Discount as a % of Standard Premium + ARAP	5.0%
(3) Premium Tax Ratio = 2.28% x [ 1.0 - (2) ]	2.2%
(4) Variable Expense Ratio = (1) + (2) + (3)	18.0%
(5) Underwriting Profit Provision	0.0%
(6) Permissible Loss, LAE, and Fixed Expense Ratio = 1.0 - [ (4) + (5) ]	82.0%
(7) Fixed Expense Ratio	5.0%
(8) Expected Loss and Loss Adjustment Expense Ratio = (6) - (7)	77.0%
(9) Total Loss Adjustment Expense Ratio (LAE / Loss)	20.0%
(10) Expected Loss Ratio without Loss Adjustment Expense = (8) / [ 1.0 + (9) ]	64.2%

**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 3.

(7): Section VI-B, Exhibit 1. The Average Fixed Expense Ratio, 5%, is divided by [1.0 + indicated rate change], 1.5%, to give the Fixed Expense Ratio underlying the proposed rates.

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

# VII 000015 STIP

Section VII - Profit  
 Subsection A - Summary  
 7/1/2016

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	950.01
(2)	Collected Premium Net - After Premium Discount	950.01
(3)	Loss & LAE Ratio	77.00%
(4)	Commission Ratio	6.27%
(5)	Premium Discount	5.00%
(6)	General Expense Ratio	4.57%
(7)	Other Acquisition Expense Ratio	3.60%
(8)	Premium Tax Rate	2.17%
(9)	Reinsurance Expense Ratio	1.00%
(10)	Miscellaneous and Other Taxes	0.40%
Cost of Capital:		
(11)	Weighted Average Cost of Capital	7.44%
Portfolio Rate of Return:		
(12)	After Tax Portfolio Rate of Return	2.97%
Leverage Ratio:		
(13)	Reserves to Surplus Ratio	1.84
Profit Provision:		
(14)	Profit Provision Calculation	0.00%

**Notes:**

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

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

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

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

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

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

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

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

# VII 000035 STIP

Section VII - Profit  
Subsection B - DCF Models  
7/1/2016

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)								
07/01/15	09/30/15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/01/15	12/31/15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01/01/16	03/31/16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04/01/16	06/30/16	(6.05)	0.00	(6.05)	0.00	0.00	0.00	(6.05)	(5.74)
07/01/16	09/30/16	(3.21)	0.00	(3.20)	0.04	(117.28)	0.00	(120.44)	(112.11)
10/01/16	12/31/16	(13.89)	0.09	(13.80)	0.23	(92.70)	0.86	(105.41)	(96.37)
01/01/17	03/31/17	(17.47)	0.17	(17.30)	0.82	(124.28)	1.54	(139.22)	(125.02)
04/01/17	06/30/17	(6.25)	0.27	(5.98)	1.77	(86.38)	2.46	(88.13)	(77.73)
07/01/17	09/30/17	13.75	0.34	14.08	2.70	45.16	3.09	65.04	56.34
10/01/17	12/31/17	15.19	0.29	15.49	3.32	40.71	2.76	62.29	53.00
01/01/18	03/31/18	10.35	0.25	10.61	3.52	34.29	2.46	50.87	42.52
04/01/18	06/30/18	(14.01)	0.22	(13.79)	3.45	28.86	2.21	20.72	17.01
07/01/18	09/30/18	(9.50)	0.21	(9.29)	3.40	25.19	2.00	21.30	17.18
10/01/18	12/31/18	11.82	0.20	12.02	3.29	23.35	1.81	40.47	32.06
01/01/19	03/31/19	6.88	0.17	7.05	2.99	20.62	1.64	32.30	25.13
04/01/19	06/30/19	3.77	0.15	3.53	2.72	18.30	1.49	26.04	19.90
07/01/19	09/30/19	1.45	0.14	1.59	2.47	16.44	1.35	21.86	16.41
10/01/19	12/31/19	0.67	0.13	0.79	2.25	15.10	1.23	19.38	14.28
01/01/20	03/31/20	0.39	0.11	0.51	2.05	13.12	1.12	16.80	12.17
04/01/20	06/30/20	0.39	0.10	0.50	1.87	11.46	1.03	14.85	10.56
07/01/20	09/30/20	0.39	0.10	0.49	1.72	10.16	0.94	13.31	9.30
10/01/20	12/31/20	0.39	0.09	0.48	1.58	9.30	0.87	12.23	8.39
01/01/21	03/31/21	0.15	0.08	0.23	1.46	8.03	0.80	10.52	7.09
04/01/21	06/30/21	0.15	0.08	0.23	1.35	6.95	0.74	9.27	6.14
07/01/21	09/30/21	0.15	0.07	0.22	1.26	5.93	0.69	8.10	5.27
10/01/21	12/31/21	0.15	0.07	0.22	1.18	5.06	0.64	7.10	4.54
01/01/22	03/31/22	0.17	0.06	0.24	1.11	3.83	0.61	5.79	3.63
04/01/22	06/30/22	0.17	0.06	0.23	1.06	2.80	0.58	4.68	2.88
07/01/22	09/30/22	0.17	0.06	0.23	1.02	2.23	0.56	4.05	2.45
10/01/22	12/31/22	0.17	0.06	0.23	0.99	2.12	0.54	3.89	2.31
01/01/23	03/31/23	0.17	0.05	0.22	0.97	1.95	0.53	3.66	2.14
04/01/23	06/30/23	0.17	0.05	0.22	0.94	1.80	0.51	3.47	1.99
07/01/23	09/30/23	0.17	0.05	0.22	0.91	1.70	0.50	3.34	1.88
10/01/23	12/31/23	0.17	0.05	0.22	0.89	1.66	0.49	3.25	1.80
01/01/24	03/31/24	0.10	0.05	0.15	0.87	1.58	0.47	3.08	1.67
04/01/24	06/30/24	0.10	0.05	0.15	0.85	1.51	0.46	2.97	1.59
07/01/24	09/30/24	0.10	0.05	0.15	0.83	1.40	0.45	2.83	1.48
10/01/24	12/31/24	0.10	0.05	0.15	0.81	1.25	0.44	2.65	1.37
01/01/25	03/31/25	0.12	0.04	0.17	0.79	1.04	0.43	2.43	1.23
04/01/25	06/30/25	0.12	0.04	0.17	0.78	0.86	0.42	2.23	1.11
07/01/25	09/30/25	0.12	0.04	0.17	0.77	0.78	0.42	2.13	1.04
10/01/25	12/31/25	0.12	0.04	0.17	0.76	0.78	0.41	2.11	1.01
01/01/26	03/31/26	0.12	0.04	0.16	0.75	0.77	0.41	2.08	0.98
04/01/26	06/30/26	0.12	0.04	0.16	0.74	0.76	0.40	2.06	0.95
07/01/26	09/30/26	0.12	0.04	0.16	0.73	0.75	0.40	2.03	0.92
10/01/26	12/31/26	0.12	0.04	0.16	0.72	0.74	0.39	2.01	0.89
01/01/27	03/31/27	0.11	0.04	0.15	0.71	0.72	0.38	1.96	0.86
04/01/27	06/30/27	0.11	0.04	0.15	0.70	0.69	0.38	1.92	0.83
07/01/27	09/30/27	0.11	0.04	0.15	0.69	0.68	0.37	1.89	0.80
10/01/27	12/31/27	0.11	0.04	0.15	0.68	0.67	0.37	1.86	0.77
01/01/28	03/31/28	0.12	0.04	0.16	0.67	0.64	0.36	1.83	0.75
04/01/28	06/30/28	0.12	0.04	0.16	0.66	0.62	0.36	1.80	0.72
07/01/28	09/30/28	0.12	0.04	0.16	0.65	0.70	0.36	1.86	0.73
10/01/28	12/31/28	0.12	0.04	0.16	0.64	0.85	0.35	2.00	0.77
01/01/29	03/31/29	0.10	0.03	0.14	0.63	1.03	0.34	2.14	0.81
04/01/29	06/30/29	0.10	0.03	0.13	0.62	1.19	0.34	2.28	0.85
07/01/29	09/30/29	0.10	0.03	0.13	0.60	1.17	0.33	2.23	0.82
10/01/29	12/31/29	0.10	0.03	0.13	0.58	0.99	0.32	2.02	0.73
01/01/30	03/31/30	0.09	0.03	0.12	0.57	0.74	0.31	1.74	0.61
04/01/30	06/30/30	0.09	0.03	0.12	0.56	0.53	0.31	1.51	0.52
07/01/30	09/30/30	0.09	0.03	0.12	0.55	0.45	0.30	1.42	0.48
10/01/30	12/31/30	0.09	0.03	0.12	0.55	0.49	0.30	1.45	0.49
01/01/31	03/31/31	0.01	0.03	0.04	0.54	0.54	0.30	1.42	0.47
04/01/31	06/30/31	0.01	0.03	0.04	0.54	0.58	0.29	1.45	0.47
07/01/31	09/30/31	0.01	0.03	0.04	0.53	0.57	0.29	1.43	0.45
10/01/31	12/31/31	0.01	0.03	0.04	0.52	0.53	0.28	1.38	0.43
01/01/32	03/31/32	0.00	0.03	0.03	0.51	0.47	0.28	1.29	0.39
04/01/32	06/30/32	0.00	0.03	0.03	0.51	0.41	0.28	1.22	0.37
07/01/32	09/30/32	0.00	0.03	0.03	0.50	0.39	0.27	1.19	0.35
10/01/32	12/31/32	0.00	0.03	0.03	0.50	0.40	0.27	1.19	0.35
01/01/33	03/31/33	0.00	0.03	0.03	0.49	0.40	0.27	1.19	0.34
04/01/33	06/30/33	0.00	0.03	0.03	0.49	0.40	0.26	1.18	0.33
07/01/33	09/30/33	0.00	0.03	0.03	0.48	0.43	0.26	1.20	0.33
10/01/33	12/31/33	0.00	0.03	0.03	0.48	0.46	0.26	1.22	0.33
01/01/34	03/31/34	0.00	0.03	0.03	0.47	0.50	0.25	1.25	0.33
04/01/34	06/30/34	0.00	0.02	0.03	0.46	0.53	0.25	1.27	0.33
07/01/34	09/30/34	0.00	0.02	0.03	0.45	0.54	0.25	1.26	0.32
10/01/34	12/31/34	0.00	0.02	0.03	0.45	0.52	0.24	1.23	0.31
01/01/35	03/31/35	0.00	0.02	0.03	0.44	0.49	0.24	1.19	0.29
04/01/35	06/30/35	0.00	0.02	0.02	0.43	0.46	0.24	1.16	0.28
07/01/35	09/30/35	0.00	0.02	0.02	0.43	0.43	0.23	1.11	0.26
10/01/35	12/31/35	0.00	0.02	0.02	0.42	0.39	0.23	1.07	0.25
01/01/36	03/31/36	0.00	0.02	0.02	0.42	0.34	0.23	1.00	0.23
04/01/36	06/30/36	0.00	0.02	0.02	0.41	0.29	0.22	0.95	0.21

# VII 000036 STIP

Section VII - Profit  
 Subsection B - DCF Models  
 7/1/2016

Section VII-B  
 Exhibit 1

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

TIME INTERVAL		POST TAX CASH FROM UW MINUS INVESTABLE RESERVES	BOND INTEREST TAX DEDUCTION FOR INSURERS	NET CASH FLOW FROM UNDERWRITING	CASH POST-TAX INCOME	NET FLOW FROM SURPLUS ACCOUNT	SURPLUS POST-TAX INCOME	CASH FLOWS TO INVESTORS (NOMINAL)	CASH FLOWS TO INVESTORS (PV NOMINAL)
FROM (1)	TO (2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
07/01/36	09/30/36	0.00	0.02	0.02	0.41	0.27	0.22	0.93	0.21
10/01/36	12/31/36	0.00	0.02	0.02	0.40	0.28	0.22	0.93	0.20
01/01/37	03/31/37	0.00	0.02	0.02	0.40	0.29	0.22	0.93	0.20
04/01/37	06/30/37	0.00	0.02	0.02	0.40	0.30	0.22	0.93	0.20
07/01/37	09/30/37	0.00	0.02	0.02	0.39	0.33	0.21	0.96	0.20
10/01/37	12/31/37	0.00	0.02	0.02	0.39	0.38	0.21	1.00	0.20
01/01/38	03/31/38	0.00	0.02	0.02	0.38	0.43	0.21	1.05	0.21
04/01/38	06/30/38	0.00	0.02	0.02	0.38	0.48	0.20	1.08	0.21
07/01/38	09/30/38	0.00	0.02	0.02	0.37	0.51	0.20	1.10	0.21
10/01/38	12/31/38	0.00	0.02	0.02	0.36	0.51	0.20	1.09	0.21
01/01/39	03/31/39	0.00	0.02	0.02	0.36	0.51	0.19	1.08	0.20
04/01/39	06/30/39	0.00	0.02	0.02	0.35	0.50	0.19	1.07	0.19
07/01/39	09/30/39	0.00	0.02	0.02	0.34	0.51	0.19	1.06	0.19
10/01/39	12/31/39	0.00	0.02	0.02	0.34	0.51	0.18	1.05	0.18
01/01/40	03/31/40	0.00	0.02	0.02	0.33	0.51	0.18	1.04	0.18
04/01/40	06/30/40	0.00	0.02	0.02	0.32	0.50	0.18	1.02	0.17
07/01/40	09/30/40	0.00	0.02	0.02	0.32	0.51	0.17	1.01	0.17
10/01/40	12/31/40	0.00	0.02	0.02	0.31	0.51	0.17	1.01	0.16
01/01/41	03/31/41	0.00	0.02	0.02	0.30	0.51	0.16	0.99	0.16
04/01/41	06/30/41	0.00	0.02	0.02	0.30	0.50	0.16	0.98	0.15
07/01/41	09/30/41	0.00	0.02	0.02	0.29	0.51	0.16	0.97	0.15
10/01/41	12/31/41	0.00	0.02	0.02	0.28	0.51	0.15	0.96	0.15
01/01/42	03/31/42	0.00	0.01	0.02	0.27	0.51	0.15	0.95	0.14
04/01/42	06/30/42	0.00	0.01	0.02	0.27	0.50	0.15	0.93	0.14
07/01/42	09/30/42	0.00	0.01	0.02	0.26	0.51	0.14	0.93	0.13
10/01/42	12/31/42	0.00	0.01	0.02	0.25	0.51	0.14	0.92	0.13
01/01/43	03/31/43	0.00	0.01	0.02	0.25	0.51	0.13	0.90	0.13
04/01/43	06/30/43	0.00	0.01	0.02	0.24	0.50	0.13	0.89	0.12
07/01/43	09/30/43	0.00	0.01	0.02	0.23	0.51	0.13	0.88	0.12
10/01/43	12/31/43	0.00	0.01	0.01	0.23	0.51	0.12	0.87	0.12
01/01/44	03/31/44	0.00	0.01	0.01	0.22	0.51	0.12	0.86	0.11
04/01/44	06/30/44	0.00	0.01	0.01	0.21	0.50	0.12	0.85	0.11
07/01/44	09/30/44	0.00	0.01	0.01	0.21	0.51	0.11	0.84	0.10
10/01/44	12/31/44	0.00	0.01	0.01	0.20	0.51	0.11	0.83	0.10
01/01/45	03/31/45	0.00	0.01	0.01	0.19	0.51	0.10	0.82	0.10
04/01/45	06/30/45	0.00	0.01	0.01	0.19	0.50	0.10	0.80	0.10
07/01/45	09/30/45	0.00	0.01	0.01	0.18	0.51	0.10	0.79	0.09
10/01/45	12/31/45	0.00	0.01	0.01	0.17	0.51	0.09	0.79	0.09
01/01/46	03/31/46	0.00	0.01	0.01	0.16	0.51	0.09	0.77	0.09
04/01/46	06/30/46	0.00	0.01	0.01	0.16	0.50	0.09	0.76	0.08
07/01/46	09/30/46	0.00	0.01	0.01	0.15	0.51	0.08	0.75	0.08
10/01/46	12/31/46	0.00	0.01	0.01	0.14	0.51	0.08	0.74	0.08
01/01/47	03/31/47	0.00	0.01	0.01	0.14	0.51	0.07	0.73	0.08
04/01/47	06/30/47	0.00	0.01	0.01	0.13	0.50	0.07	0.72	0.07
07/01/47	09/30/47	0.00	0.01	0.01	0.12	0.51	0.07	0.71	0.07
10/01/47	12/31/47	0.00	0.01	0.01	0.12	0.51	0.06	0.70	0.07
01/01/48	03/31/48	0.00	0.01	0.01	0.11	0.51	0.06	0.69	0.07
04/01/48	06/30/48	0.00	0.01	0.01	0.10	0.50	0.06	0.67	0.06
07/01/48	09/30/48	0.00	0.01	0.01	0.10	0.51	0.05	0.66	0.06
10/01/48	12/31/48	0.00	0.00	0.01	0.09	0.51	0.05	0.66	0.06
01/01/49	03/31/49	0.00	0.00	0.01	0.08	0.51	0.04	0.64	0.06
04/01/49	06/30/49	0.00	0.00	0.01	0.08	0.50	0.04	0.63	0.06
07/01/49	09/30/49	0.00	0.00	0.01	0.07	0.51	0.04	0.62	0.05
10/01/49	12/31/49	0.00	0.00	0.01	0.06	0.51	0.03	0.61	0.05
01/01/50	03/31/50	0.00	0.00	0.01	0.05	0.51	0.03	0.60	0.05
04/01/50	06/30/50	0.00	0.00	0.01	0.05	0.50	0.03	0.58	0.05
07/01/50	09/30/50	0.00	0.00	0.00	0.04	0.51	0.02	0.58	0.05
10/01/50	12/31/50	0.00	0.00	0.00	0.03	0.51	0.02	0.57	0.05
01/01/51	03/31/51	0.00	0.00	0.00	0.03	0.51	0.01	0.55	0.04
04/01/51	06/30/51	0.00	0.00	0.00	0.02	0.50	0.01	0.54	0.04
07/01/51	09/30/51	0.00	0.00	0.00	0.01	0.44	0.01	0.46	0.04
10/01/51	12/31/51	0.00	0.00	0.00	0.01	0.33	0.00	0.35	0.03
01/01/52	03/31/52	0.00	0.00	0.00	0.00	0.19	0.00	0.19	0.01
04/01/52	06/30/52	0.00	0.00	0.00	0.00	0.06	0.00	0.06	0.00
TOTAL		0.00	6.13	6.13	96.61	0.00	59.58	162.32	(0.00)

Notes:

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

(4) = Table B2, (5)

(5) = (3) + (4)

(6) = Table C3, (7)<sub>k</sub>, x { [ 1.0 + Table A1, (12) ] ^ 0.25 - 1.0 }

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

(8) = Table D1, (7)<sub>k</sub>, x { [ 1.0 + Table A1, (12) ] ^ 0.25 - 1.0 }

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

(10) = (9) x (1 + WACC)<sup>time in years</sup>, based on the time interval with beginning date 07/01/15

WACC is the weighted average cost of capital from Section VII-E, Exhibit 1 which is equal to 7.44%.

The Total PV is equal to zero which implies that the profit provision derived from an investors prospective is equal to the profit provision derived from insurers prospective and is equal to 0% from Table A1, (14).



VII 000037 STIP

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

TIME INTERVAL		INVESTOR SUPPLIED	NET CAPITAL CHARGES			SOURCES TO PAY NET CAPITAL CHARGE				CASH FLOW TO INSURER (11)	PV CASH FLOW TO INSURER (12)
						INVESTOR SUPPLIED	POLICYHOLDER SUPPLIED				
							AFTER TAX INV INCOME ON INVESTOR SUPPLIED FUNDS (7)	POLICYHOLDER SUPPLIED INVESTABLE FUNDS (8)	AFTER TAX INV INCOME ON POLICYHOLDER SUPPLIED FUNDS (9)		
FROM (1)	TO (2)	CAPITAL NEEDED FROM INVESTORS (3)	INVESTOR REQUIRED RETURN CAPITAL CHARGE (4)	BOND INTEREST TAX DEDUCTION FOR INSURERS (5)	NET CAPITAL COST TO INSURERS (6)						
07/01/15	09/30/15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/01/15	12/31/15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01/01/16	03/31/16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04/01/16	06/30/16	5.46	0.00	0.00	0.00	0.00	0.00	0.00	(0.60)	(0.60)	(0.56)
07/01/16	09/30/16	126.54	0.10	0.00	0.09	0.04	21.56	0.00	0.60	0.54	0.50
10/01/16	12/31/16	233.13	2.29	0.09	2.20	0.93	88.25	0.16	0.00	(1.11)	(1.01)
01/01/17	03/31/17	374.88	4.22	0.17	4.05	1.71	200.12	0.65	0.00	(1.69)	(1.52)
04/01/17	06/30/17	467.51	6.78	0.27	6.51	2.76	320.24	1.47	0.00	(2.29)	(2.02)
07/01/17	09/30/17	408.60	8.46	0.34	8.12	3.44	418.94	2.35	0.00	(2.33)	(2.02)
10/01/17	12/31/17	352.69	7.39	0.29	7.10	3.00	460.32	3.08	0.00	(1.02)	(0.87)
01/01/18	03/31/18	308.06	6.38	0.25	6.13	2.59	461.91	3.38	0.00	(0.15)	(0.13)
04/01/18	06/30/18	293.21	5.57	0.22	5.35	2.26	441.48	3.40	0.00	0.31	0.25
07/01/18	09/30/18	277.53	5.31	0.21	5.10	2.16	416.08	3.25	0.00	0.31	0.25
10/01/18	12/31/18	242.35	5.02	0.20	4.82	2.04	387.84	3.06	0.00	0.28	0.22
01/01/19	03/31/19	214.86	4.39	0.17	4.21	1.78	357.39	2.85	0.00	0.42	0.33
04/01/19	06/30/19	193.18	3.89	0.15	3.73	1.58	327.44	2.63	0.00	0.47	0.36
07/01/19	09/30/19	175.29	3.50	0.14	3.36	1.42	298.86	2.41	0.00	0.47	0.35
10/01/19	12/31/19	159.53	3.17	0.13	3.05	1.29	271.91	2.20	0.00	0.44	0.32
01/01/20	03/31/20	146.01	2.89	0.11	2.77	1.17	248.33	2.00	0.00	0.40	0.29
04/01/20	06/30/20	134.16	2.64	0.10	2.54	1.07	227.83	1.83	0.00	0.36	0.26
07/01/20	09/30/20	123.61	2.43	0.10	2.33	0.99	209.71	1.67	0.00	0.33	0.23
10/01/20	12/31/20	113.92	2.24	0.09	2.15	0.91	193.19	1.54	0.00	0.30	0.21
01/01/21	03/31/21	105.74	2.06	0.08	1.98	0.84	178.80	1.42	0.00	0.28	0.19
04/01/21	06/30/21	98.64	1.91	0.08	1.84	0.78	166.39	1.31	0.00	0.25	0.17
07/01/21	09/30/21	92.56	1.79	0.07	1.71	0.73	155.85	1.22	0.00	0.23	0.15
10/01/21	12/31/21	87.35	1.67	0.07	1.61	0.68	146.92	1.15	0.00	0.22	0.14
01/01/22	03/31/22	83.34	1.58	0.06	1.52	0.64	140.01	1.08	0.00	0.20	0.13
04/01/22	06/30/22	80.36	1.51	0.06	1.45	0.61	135.00	1.03	0.00	0.19	0.12
07/01/22	09/30/22	77.95	1.45	0.06	1.40	0.59	131.04	0.99	0.00	0.19	0.11
10/01/22	12/31/22	75.66	1.41	0.06	1.35	0.57	127.28	0.96	0.00	0.18	0.11
01/01/23	03/31/23	73.54	1.37	0.05	1.31	0.56	123.87	0.94	0.00	0.18	0.10
04/01/23	06/30/23	71.58	1.33	0.05	1.28	0.54	120.74	0.91	0.00	0.17	0.10
07/01/23	09/30/23	69.71	1.30	0.05	1.24	0.53	117.78	0.89	0.00	0.17	0.10
10/01/23	12/31/23	67.88	1.26	0.05	1.21	0.51	114.89	0.87	0.00	0.17	0.09
01/01/24	03/31/24	66.20	1.23	0.05	1.18	0.50	112.15	0.84	0.00	0.16	0.09
04/01/24	06/30/24	64.59	1.20	0.05	1.15	0.49	109.54	0.82	0.00	0.16	0.09
07/01/24	09/30/24	63.08	1.17	0.05	1.12	0.47	107.13	0.81	0.00	0.16	0.08
10/01/24	12/31/24	61.73	1.14	0.05	1.10	0.46	104.99	0.79	0.00	0.16	0.08
01/01/25	03/31/25	60.56	1.12	0.04	1.07	0.45	103.18	0.77	0.00	0.15	0.08
04/01/25	06/30/25	59.58	1.10	0.04	1.05	0.45	101.69	0.76	0.00	0.15	0.08
07/01/25	09/30/25	58.68	1.08	0.04	1.04	0.44	100.36	0.75	0.00	0.15	0.07
10/01/25	12/31/25	57.77	1.06	0.04	1.02	0.43	99.03	0.74	0.00	0.15	0.07
01/01/26	03/31/26	56.89	1.05	0.04	1.00	0.42	97.74	0.73	0.00	0.15	0.07
04/01/26	06/30/26	56.01	1.03	0.04	0.99	0.42	96.46	0.72	0.00	0.15	0.07
07/01/26	09/30/26	55.13	1.01	0.04	0.97	0.41	95.20	0.71	0.00	0.15	0.07
10/01/26	12/31/26	54.27	1.00	0.04	0.96	0.41	93.96	0.70	0.00	0.15	0.07
01/01/27	03/31/27	53.44	0.98	0.04	0.94	0.40	92.76	0.69	0.00	0.15	0.06
04/01/27	06/30/27	52.63	0.97	0.04	0.93	0.39	91.61	0.68	0.00	0.15	0.06
07/01/27	09/30/27	51.84	0.95	0.04	0.91	0.39	90.47	0.67	0.00	0.15	0.06
10/01/27	12/31/27	51.06	0.94	0.04	0.90	0.38	89.37	0.67	0.00	0.15	0.06
01/01/28	03/31/28	50.30	0.92	0.04	0.89	0.38	88.30	0.66	0.00	0.15	0.06
04/01/28	06/30/28	49.56	0.91	0.04	0.87	0.37	87.28	0.65	0.00	0.14	0.06
07/01/28	09/30/28	48.74	0.90	0.04	0.86	0.36	86.10	0.64	0.00	0.14	0.06
10/01/28	12/31/28	47.77	0.88	0.04	0.85	0.36	84.66	0.63	0.00	0.14	0.06
01/01/29	03/31/29	46.63	0.86	0.03	0.83	0.35	82.88	0.62	0.00	0.14	0.05
04/01/29	06/30/29	45.34	0.84	0.03	0.81	0.34	80.81	0.61	0.00	0.14	0.05
07/01/29	09/30/29	44.07	0.82	0.03	0.79	0.33	78.78	0.59	0.00	0.14	0.05
10/01/29	12/31/29	42.99	0.80	0.03	0.77	0.32	77.08	0.58	0.00	0.14	0.05
01/01/30	03/31/30	42.16	0.78	0.03	0.75	0.32	75.83	0.57	0.00	0.14	0.05
04/01/30	06/30/30	41.55	0.76	0.03	0.73	0.31	74.96	0.56	0.00	0.13	0.05
07/01/30	09/30/30	41.01	0.75	0.03	0.72	0.31	74.24	0.55	0.00	0.13	0.05
10/01/30	12/31/30	40.44	0.74	0.03	0.71	0.30	73.44	0.55	0.00	0.13	0.05
01/01/31	03/31/31	39.89	0.73	0.03	0.70	0.30	72.54	0.54	0.00	0.13	0.04
04/01/31	06/30/31	39.30	0.72	0.03	0.69	0.29	71.57	0.53	0.00	0.13	0.04
07/01/31	09/30/31	38.71	0.71	0.03	0.68	0.29	70.60	0.53	0.00	0.13	0.04
10/01/31	12/31/31	38.17	0.70	0.03	0.67	0.28	69.71	0.52	0.00	0.13	0.04
01/01/32	03/31/32	37.70	0.69	0.03	0.66	0.28	68.86	0.51	0.00	0.13	0.04
04/01/32	06/30/32	37.28	0.68	0.03	0.66	0.28	68.12	0.51	0.00	0.13	0.04
07/01/32	09/30/32	36.89	0.67	0.03	0.65	0.27	67.42	0.50	0.00	0.13	0.04
10/01/32	12/31/32	36.49	0.67	0.03	0.64	0.27	66.70	0.50	0.00	0.13	0.04
01/01/33	03/31/33	36.09	0.66	0.03	0.63	0.27	65.96	0.49	0.00	0.12	0.04
04/01/33	06/30/33	35.68	0.65	0.03	0.63	0.27	65.22	0.48	0.00	0.12	0.03
07/01/33	09/30/33	35.25	0.65	0.03	0.62	0.26	64.44	0.48	0.00	0.12	0.03
10/01/33	12/31/33	34.79	0.64	0.03	0.61	0.26	63.59	0.47	0.00	0.12	0.03
01/01/34	03/31/34	34.29	0.63	0.03	0.60	0.26	62.68	0.47	0.00	0.12	0.03
04/01/34	06/30/34	33.76	0.62	0.02	0.60	0.25	61.71	0.46	0.00	0.12	0.03
07/01/34	09/30/34	33.23	0.61	0.02	0.59	0.25	60.73	0.45	0.00	0.12	0.03
10/01/34	12/31/34	32.71	0.60	0.02	0.58	0.24	59.78	0.45	0.00	0.11	0.03
01/01/35	03/31/35	32.22	0.59	0.02	0.57	0.24	58.88	0.44	0.00	0.11	0.03
04/01/35	06/30/35	31.76	0.58	0.02	0.56	0.24	58.04	0.43	0.00	0.11	0.03

VII 000038 STIP

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

TIME INTERVAL		INVESTOR SUPPLIED	NET CAPITAL CHARGES			SOURCES TO PAY NET CAPITAL CHARGE				CASH FLOW TO INSURER (11)	PV CASH FLOW TO INSURER (12)
						INVESTOR SUPPLIED	POLICYHOLDER SUPPLIED				
							AFTER TAX INV INCOME ON INVESTOR SUPPLIED FUNDS (7)	POLICYHOLDER SUPPLIED INVESTABLE FUNDS (8)	AFTER TAX INV INCOME ON POLICYHOLDER SUPPLIED FUNDS (9)		
FROM (1)	TO (2)	CAPITAL NEEDED FROM INVESTORS (3)	INVESTOR REQUIRED RETURN CAPITAL CHARGE (4)	BOND INTEREST TAX DEDUCTION FOR INSURERS (5)	NET CAPITAL COST TO INSURERS (6)						
07/01/35	09/30/35	31.33	0.57	0.02	0.55	0.23	57.25	0.43	0.00	0.11	0.03
10/01/35	12/31/35	30.93	0.57	0.02	0.54	0.23	56.53	0.42	0.00	0.11	0.02
01/01/36	03/31/36	30.59	0.56	0.02	0.54	0.23	55.91	0.42	0.00	0.11	0.02
04/01/36	06/30/36	30.30	0.55	0.02	0.53	0.22	55.38	0.41	0.00	0.10	0.02
07/01/36	09/30/36	30.03	0.55	0.02	0.53	0.22	54.88	0.41	0.00	0.10	0.02
10/01/36	12/31/36	29.74	0.54	0.02	0.52	0.22	54.36	0.40	0.00	0.10	0.02
01/01/37	03/31/37	29.45	0.54	0.02	0.52	0.22	53.82	0.40	0.00	0.10	0.02
04/01/37	06/30/37	29.15	0.53	0.02	0.51	0.22	53.28	0.40	0.00	0.10	0.02
07/01/37	09/30/37	28.82	0.53	0.02	0.51	0.21	52.68	0.39	0.00	0.10	0.02
10/01/37	12/31/37	28.44	0.52	0.02	0.50	0.21	51.99	0.39	0.00	0.10	0.02
01/01/38	03/31/38	28.01	0.51	0.02	0.49	0.21	51.19	0.38	0.00	0.10	0.02
04/01/38	06/30/38	27.52	0.51	0.02	0.49	0.21	50.31	0.38	0.00	0.10	0.02
07/01/38	09/30/38	27.01	0.50	0.02	0.48	0.20	49.38	0.37	0.00	0.09	0.02
10/01/38	12/31/38	26.50	0.49	0.02	0.47	0.20	48.44	0.36	0.00	0.09	0.02
01/01/39	03/31/39	25.99	0.48	0.02	0.46	0.19	47.51	0.36	0.00	0.09	0.02
04/01/39	06/30/39	25.49	0.47	0.02	0.45	0.19	46.59	0.35	0.00	0.09	0.02
07/01/39	09/30/39	24.98	0.46	0.02	0.44	0.19	45.66	0.34	0.00	0.09	0.02
10/01/39	12/31/39	24.46	0.45	0.02	0.43	0.18	44.72	0.34	0.00	0.09	0.01
01/01/40	03/31/40	23.95	0.44	0.02	0.43	0.18	43.79	0.33	0.00	0.08	0.01
04/01/40	06/30/40	23.45	0.43	0.02	0.42	0.18	42.86	0.32	0.00	0.08	0.01
07/01/40	09/30/40	22.94	0.42	0.02	0.41	0.17	41.93	0.32	0.00	0.08	0.01
10/01/40	12/31/40	22.42	0.42	0.02	0.40	0.17	40.99	0.31	0.00	0.08	0.01
01/01/41	03/31/41	21.91	0.41	0.02	0.39	0.16	40.06	0.30	0.00	0.08	0.01
04/01/41	06/30/41	21.41	0.40	0.02	0.38	0.16	39.14	0.29	0.00	0.07	0.01
07/01/41	09/30/41	20.90	0.39	0.02	0.37	0.16	38.20	0.29	0.00	0.07	0.01
10/01/41	12/31/41	20.39	0.38	0.02	0.36	0.15	37.27	0.28	0.00	0.07	0.01
01/01/42	03/31/42	19.88	0.37	0.01	0.35	0.15	36.34	0.27	0.00	0.07	0.01
04/01/42	06/30/42	19.37	0.36	0.01	0.35	0.15	35.41	0.27	0.00	0.07	0.01
07/01/42	09/30/42	18.86	0.35	0.01	0.34	0.14	34.48	0.26	0.00	0.07	0.01
10/01/42	12/31/42	18.35	0.34	0.01	0.33	0.14	33.54	0.25	0.00	0.06	0.01
01/01/43	03/31/43	17.84	0.33	0.01	0.32	0.13	32.61	0.25	0.00	0.06	0.01
04/01/43	06/30/43	17.33	0.32	0.01	0.31	0.13	31.68	0.24	0.00	0.06	0.01
07/01/43	09/30/43	16.82	0.31	0.01	0.30	0.13	30.75	0.23	0.00	0.06	0.01
10/01/43	12/31/43	16.31	0.30	0.01	0.29	0.12	29.82	0.23	0.00	0.06	0.01
01/01/44	03/31/44	15.80	0.30	0.01	0.28	0.12	28.89	0.22	0.00	0.06	0.01
04/01/44	06/30/44	15.29	0.29	0.01	0.27	0.12	27.96	0.21	0.00	0.05	0.01
07/01/44	09/30/44	14.78	0.28	0.01	0.27	0.11	27.03	0.21	0.00	0.05	0.01
10/01/44	12/31/44	14.27	0.27	0.01	0.26	0.11	26.09	0.20	0.00	0.05	0.01
01/01/45	03/31/45	13.76	0.26	0.01	0.25	0.10	25.16	0.19	0.00	0.05	0.01
04/01/45	06/30/45	13.25	0.25	0.01	0.24	0.10	24.23	0.18	0.00	0.05	0.01
07/01/45	09/30/45	12.74	0.24	0.01	0.23	0.10	23.30	0.18	0.00	0.05	0.01
10/01/45	12/31/45	12.23	0.23	0.01	0.22	0.09	22.37	0.17	0.00	0.04	0.00
01/01/46	03/31/46	11.72	0.22	0.01	0.21	0.09	21.43	0.16	0.00	0.04	0.00
04/01/46	06/30/46	11.21	0.21	0.01	0.20	0.09	20.51	0.16	0.00	0.04	0.00
07/01/46	09/30/46	10.70	0.20	0.01	0.19	0.08	19.58	0.15	0.00	0.04	0.00
10/01/46	12/31/46	10.19	0.19	0.01	0.19	0.08	18.64	0.14	0.00	0.04	0.00
01/01/47	03/31/47	9.68	0.18	0.01	0.18	0.07	17.71	0.14	0.00	0.03	0.00
04/01/47	06/30/47	9.17	0.18	0.01	0.17	0.07	16.78	0.13	0.00	0.03	0.00
07/01/47	09/30/47	8.66	0.17	0.01	0.16	0.07	15.85	0.12	0.00	0.03	0.00
10/01/47	12/31/47	8.15	0.16	0.01	0.15	0.06	14.91	0.12	0.00	0.03	0.00
01/01/48	03/31/48	7.64	0.15	0.01	0.14	0.06	13.98	0.11	0.00	0.03	0.00
04/01/48	06/30/48	7.13	0.14	0.01	0.13	0.06	13.06	0.10	0.00	0.03	0.00
07/01/48	09/30/48	6.63	0.13	0.01	0.12	0.05	12.13	0.10	0.00	0.02	0.00
10/01/48	12/31/48	6.11	0.12	0.00	0.12	0.05	11.19	0.09	0.00	0.02	0.00
01/01/49	03/31/49	5.60	0.11	0.00	0.11	0.04	10.26	0.08	0.00	0.02	0.00
04/01/49	06/30/49	5.10	0.10	0.00	0.10	0.04	9.33	0.08	0.00	0.02	0.00
07/01/49	09/30/49	4.59	0.09	0.00	0.09	0.04	8.40	0.07	0.00	0.02	0.00
10/01/49	12/31/49	4.07	0.08	0.00	0.08	0.03	7.46	0.06	0.00	0.02	0.00
01/01/50	03/31/50	3.56	0.07	0.00	0.07	0.03	6.53	0.05	0.00	0.01	0.00
04/01/50	06/30/50	3.06	0.06	0.00	0.06	0.03	5.61	0.05	0.00	0.01	0.00
07/01/50	09/30/50	2.55	0.06	0.00	0.05	0.02	4.67	0.04	0.00	0.01	0.00
10/01/50	12/31/50	2.04	0.05	0.00	0.04	0.02	3.74	0.03	0.00	0.01	0.00
01/01/51	03/31/51	1.53	0.04	0.00	0.04	0.01	2.81	0.03	0.00	0.01	0.00
04/01/51	06/30/51	1.02	0.03	0.00	0.03	0.01	1.88	0.02	0.00	0.01	0.00
07/01/51	09/30/51	0.58	0.02	0.00	0.02	0.01	1.07	0.01	0.00	0.00	0.00
10/01/51	12/31/51	0.25	0.01	0.00	0.01	0.00	0.46	0.01	0.00	0.00	0.00
01/01/52	03/31/52	0.06	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00
04/01/52	06/30/52	(0.00)	0.00	0.00	0.00	0.00	(0.00)	0.00	0.00	0.00	0.00
TOTAL		8,527.09	154.31	6.13	148.18	62.69	12,718.45	93.50	0.00	8.01	(0.00)

Notes:

- (3) = Table D1, (9)
- (4) =  $(3)_{t-1} \times [(1.0 + WACC)^{0.25} - 1.0]$ ,  
 where WACC is the weighted average cost of capital from Section VII-E, Exhibit 1 which is equal to 7.44%
- (5) =  $(3)_{t-1} \times [(1.0 + Debt Capital Cost)^{0.25} - 1.0] \times Debt Capital Share \times 0.35$ ,  
 where Debt Capital Cost=4.16% and Debt Capital Share=20%, from Section VII-E, Exhibit 1.
- (6) = (4) - (5)
- (7) =  $(3)_{t-1} \times [(1.0 + Table A1, (12))^{0.25} - 1.0]$
- (8) = Table C3, (10)
- (9) =  $(8)_{t-1} \times [(1.0 + Table A1, (12))^{0.25} - 1.0]$
- (10) = Table C3, (9)
- (11) =  $-1.0 \times [(6) - (7) - (9) - (10)]$
- (12) =  $(11) \times (1 + WACC)^{time in years}$ , based on the time interval with beginning date 07/01/15,  
 where WACC is the weighted average cost of capital from Section VII-E, Exhibit 1 which is equal to 7.44%.

VII 000039 STIP

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

TIME INTERVAL		COLLECTED PREMIUM NET	LOSS & LAE PAYOUT	UNDERWRITING EXPENSES							PRE TAX CASH FLOWS FROM UW	FEDERAL INCOME TAX EXPENSE ON UW	POST TAX CASH FLOWS FROM UW
				COMMIS. & BROKER.	GENERAL EXPENSES	OTHER ACQ. EXPENSES	PREMIUM TAXES	MISC. AND OTHER TAXES	REINS. EXPENSES	TOTAL PRETAX UW EXPENSES			
FROM (1)	TO (2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
07/01/15	09/30/15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/01/15	12/31/15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01/01/16	03/31/16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04/01/16	06/30/16	5.46	0.00	0.36	0.00	1.44	0.00	0.00	0.00	1.80	3.66	4.26	(0.60)
07/01/16	09/30/16	53.55	5.59	3.53	6.21	8.45	0.00	0.95	2.39	21.54	26.42	4.26	22.16
10/01/16	12/31/16	116.83	15.04	7.71	6.83	8.16	5.19	0.84	2.12	30.85	70.94	4.26	66.69
01/01/17	03/31/17	182.46	27.42	12.04	10.47	10.49	4.59	1.18	3.00	41.78	113.26	1.39	111.87
04/01/17	06/30/17	200.65	37.81	13.24	10.67	7.46	6.50	0.98	2.49	41.33	121.50	1.39	120.12
07/01/17	09/30/17	165.37	44.01	10.91	4.98	0.00	5.39	0.00	0.00	21.28	100.09	1.39	98.70
10/01/17	12/31/17	98.40	45.38	6.49	3.76	0.00	0.00	0.00	0.00	10.26	42.77	1.39	41.38
01/01/18	03/31/18	52.39	46.64	3.46	2.10	0.00	0.00	0.00	0.00	5.56	0.19	(1.40)	1.58
04/01/18	06/30/18	28.41	47.66	1.88	0.70	0.00	0.00	0.00	0.00	2.57	(21.82)	(1.40)	(20.43)
07/01/18	09/30/18	20.99	46.40	1.39	0.00	0.00	0.00	0.00	0.00	1.39	(26.80)	(1.40)	(25.40)
10/01/18	12/31/18	14.33	43.02	0.95	0.00	0.00	0.00	0.00	0.00	0.95	(29.64)	(1.40)	(28.24)
01/01/19	03/31/19	7.15	37.98	0.47	0.00	0.00	0.00	0.00	0.00	0.47	(31.30)	(0.86)	(30.45)
04/01/19	06/30/19	3.12	33.72	0.21	0.00	0.00	0.00	0.00	0.00	0.21	(30.80)	(0.86)	(29.95)
07/01/19	09/30/19	0.91	30.28	0.06	0.00	0.00	0.00	0.00	0.00	0.06	(29.44)	(0.86)	(28.58)
10/01/19	12/31/19	0.00	27.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(27.81)	(0.86)	(26.96)
01/01/20	03/31/20	0.00	24.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(24.18)	(0.60)	(23.57)
04/01/20	06/30/20	0.00	21.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(21.10)	(0.60)	(20.50)
07/01/20	09/30/20	0.00	18.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(18.72)	(0.60)	(18.12)
10/01/20	12/31/20	0.00	17.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(17.12)	(0.60)	(16.52)
01/01/21	03/31/21	0.00	14.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(14.79)	(0.39)	(14.39)
04/01/21	06/30/21	0.00	12.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(12.81)	(0.39)	(12.41)
07/01/21	09/30/21	0.00	10.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(10.93)	(0.39)	(10.53)
10/01/21	12/31/21	0.00	9.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(9.32)	(0.39)	(8.93)
01/01/22	03/31/22	0.00	7.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(7.06)	(0.15)	(6.91)
04/01/22	06/30/22	0.00	5.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(5.16)	(0.15)	(5.01)
07/01/22	09/30/22	0.00	4.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(4.11)	(0.15)	(3.96)
10/01/22	12/31/22	0.00	3.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(3.91)	(0.15)	(3.76)
01/01/23	03/31/23	0.00	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(3.58)	(0.17)	(3.41)
04/01/23	06/30/23	0.00	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(3.31)	(0.17)	(3.13)
07/01/23	09/30/23	0.00	3.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(3.14)	(0.17)	(2.96)
10/01/23	12/31/23	0.00	3.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(3.06)	(0.17)	(2.88)
01/01/24	03/31/24	0.00	2.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(2.91)	(0.17)	(2.74)
04/01/24	06/30/24	0.00	2.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(2.78)	(0.17)	(2.62)
07/01/24	09/30/24	0.00	2.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(2.57)	(0.17)	(2.41)
10/01/24	12/31/24	0.00	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(2.30)	(0.17)	(2.14)
01/01/25	03/31/25	0.00	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.92)	(0.10)	(1.81)
04/01/25	06/30/25	0.00	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.59)	(0.10)	(1.49)
07/01/25	09/30/25	0.00	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.43)	(0.10)	(1.33)
10/01/25	12/31/25	0.00	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.43)	(0.10)	(1.33)
01/01/26	03/31/26	0.00	1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.42)	(0.12)	(1.29)
04/01/26	06/30/26	0.00	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.40)	(0.12)	(1.28)
07/01/26	09/30/26	0.00	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.39)	(0.12)	(1.26)
10/01/26	12/31/26	0.00	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.36)	(0.12)	(1.24)
01/01/27	03/31/27	0.00	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.32)	(0.12)	(1.20)
04/01/27	06/30/27	0.00	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.28)	(0.12)	(1.16)
07/01/27	09/30/27	0.00	1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.25)	(0.12)	(1.13)
10/01/27	12/31/27	0.00	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.23)	(0.12)	(1.11)
01/01/28	03/31/28	0.00	1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.18)	(0.11)	(1.07)
04/01/28	06/30/28	0.00	1.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.14)	(0.11)	(1.03)
07/01/28	09/30/28	0.00	1.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.29)	(0.11)	(1.17)
10/01/28	12/31/28	0.00	1.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.56)	(0.11)	(1.44)
01/01/29	03/31/29	0.00	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.90)	(0.12)	(1.78)
04/01/29	06/30/29	0.00	2.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(2.19)	(0.12)	(2.07)
07/01/29	09/30/29	0.00	2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(2.15)	(0.12)	(2.03)
10/01/29	12/31/29	0.00	1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.82)	(0.12)	(1.70)
01/01/30	03/31/30	0.00	1.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.36)	(0.10)	(1.26)
04/01/30	06/30/30	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.97)	(0.10)	(0.87)
07/01/30	09/30/30	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.82)	(0.10)	(0.72)
10/01/30	12/31/30	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.90)	(0.10)	(0.80)
01/01/31	03/31/31	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.99)	(0.09)	(0.90)
04/01/31	06/30/31	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.06)	(0.09)	(0.98)
07/01/31	09/30/31	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(1.06)	(0.09)	(0.97)
10/01/31	12/31/31	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.98)	(0.09)	(0.89)
01/01/32	03/31/32	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.86)	(0.01)	(0.84)
04/01/32	06/30/32	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.76)	(0.01)	(0.74)
07/01/32	09/30/32	0.00	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.72)	(0.01)	(0.70)
10/01/32	12/31/32	0.00	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.73)	(0.01)	(0.72)
01/01/33	03/31/33	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.74)	(0.00)	(0.74)
04/01/33	06/30/33	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.74)	(0.00)	(0.74)
07/01/33	09/30/33	0.00	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.79)	(0.00)	(0.78)
10/01/33	12/31/33	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.85)	(0.00)	(0.84)
01/01/34	03/31/34	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.92)	(0.00)	(0.91)
04/01/34	06/30/34	0.00	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.97)	(0.00)	(0.97)
07/01/34	09/30/34	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.99)	(0.00)	(0.98)
10/01/34	12/31/34	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.95)	(0.00)	(0.95)
01/01/35	03/31/35	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.90)	(0.00)	(0.89)
04/01/35	06/30/35	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.85)	(0.00)	(0.85)
07/01/35	09/30/35	0.00	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.79)	(0.00)	(0.79)
10/01/35	12/31/35	0.00	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.72)	(0.00)	(0.72)
01/01/36	03/31/36	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.62)	(0.00)	(0.62)
04/01/36	06/30/36	0.00	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.54)	(0.00)	(0.53)
07/01/36	09/30/												

# VII 000040 STIP

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

TIME INTERVAL		COLLECTED PREMIUM NET (3)	LOSS & LAE PAYOUT (4)	UNDERWRITING EXPENSES							PRE TAX CASH FLOWS FROM UW (12)	FEDERAL INCOME TAX EXPENSE ON UW (13)	POST TAX CASH FLOWS FROM UW (14)
				COMMISS. & BROKER. (5)	GENERAL EXPENSES (6)	OTHER ACQ. EXPENSES (7)	PREMIUM TAXES (8)	MISC. AND OTHER TAXES (9)	REINS. EXPENSES (10)	TOTAL PRETAX UW EXPENSES (11)			
FROM (1)	TO (2)												
10/01/36	12/31/36	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.52)	(0.00)	(0.52)
01/01/37	03/31/37	0.00	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.54)	(0.00)	(0.53)
04/01/37	06/30/37	0.00	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.55)	(0.00)	(0.55)
07/01/37	09/30/37	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.61)	(0.00)	(0.60)
10/01/37	12/31/37	0.00	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.69)	(0.00)	(0.69)
01/01/38	03/31/38	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.80)	(0.00)	(0.79)
04/01/38	06/30/38	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.88)	(0.00)	(0.88)
07/01/38	09/30/38	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
10/01/38	12/31/38	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.94)	(0.00)	(0.94)
01/01/39	03/31/39	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
04/01/39	06/30/39	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
07/01/39	09/30/39	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
10/01/39	12/31/39	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.94)	(0.00)	(0.94)
01/01/40	03/31/40	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
04/01/40	06/30/40	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
07/01/40	09/30/40	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
10/01/40	12/31/40	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.94)	(0.00)	(0.94)
01/01/41	03/31/41	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
04/01/41	06/30/41	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
07/01/41	09/30/41	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
10/01/41	12/31/41	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.94)	(0.00)	(0.94)
01/01/42	03/31/42	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
04/01/42	06/30/42	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
07/01/42	09/30/42	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
10/01/42	12/31/42	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.94)	(0.00)	(0.94)
01/01/43	03/31/43	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
04/01/43	06/30/43	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
07/01/43	09/30/43	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
10/01/43	12/31/43	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.94)	(0.00)	(0.94)
01/01/44	03/31/44	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
04/01/44	06/30/44	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
07/01/44	09/30/44	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
10/01/44	12/31/44	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.94)	(0.00)	(0.94)
01/01/45	03/31/45	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
04/01/45	06/30/45	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
07/01/45	09/30/45	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
10/01/45	12/31/45	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.94)	(0.00)	(0.94)
01/01/46	03/31/46	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
04/01/46	06/30/46	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
07/01/46	09/30/46	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
10/01/46	12/31/46	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.94)	(0.00)	(0.94)
01/01/47	03/31/47	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
04/01/47	06/30/47	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
07/01/47	09/30/47	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
10/01/47	12/31/47	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.94)	(0.00)	(0.94)
01/01/48	03/31/48	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
04/01/48	06/30/48	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
07/01/48	09/30/48	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
10/01/48	12/31/48	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.94)	(0.00)	(0.94)
01/01/49	03/31/49	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
04/01/49	06/30/49	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
07/01/49	09/30/49	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
10/01/49	12/31/49	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.94)	(0.00)	(0.94)
01/01/50	03/31/50	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
04/01/50	06/30/50	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
07/01/50	09/30/50	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
10/01/50	12/31/50	0.00	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.94)	(0.00)	(0.94)
01/01/51	03/31/51	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
04/01/51	06/30/51	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.93)	(0.00)	(0.93)
07/01/51	09/30/51	0.00	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.81)	(0.00)	(0.81)
10/01/51	12/31/51	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.61)	(0.00)	(0.61)
01/01/52	03/31/52	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.34)	(0.00)	(0.34)
04/01/52	06/30/52	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.11)	(0.00)	(0.11)
TOTAL		950.01	769.98	62.70	45.72	36.00	21.66	3.95	10.00	180.02			

Notes:  
 (3) = Table A1, (2) x Table C5\_1, (3)  
 (4) = Table A1, (3) x Table A1, (1a) x Table C5\_1, (4)  
 (5) = Table A1, (4) x Table A1, (1a) x Table C5\_1, (5)  
 (6) = Table A1, (6) x Table A1, (1a) x Table C5\_1, (6)  
 (7) = Table A1, (7) x Table A1, (1a) x Table C5\_1, (7)  
 (8) = Table A1, (8) x Table A1, (1a) x Table C5\_1, (8)  
 (9) = Table A1, (10) x Table A1, (1a) x Table C5\_1, (9)  
 (10) = Table A1, (9) x Table A1, (1a) x Table C5\_1, (10)  
 (11) = (5) + (6) + (7) + (8) + (9) + (10)  
 (12) = (3) - (4) - (11)  
 (13) = Table C2\_6, (6), annual tax expense allocated to the model time periods.  
 (14) = (12) - (13)

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)						
01/01/15	12/31/15	0.00	0.00	0.00	0.00	0.00	0.00
01/01/16	12/31/16	428.92	314.10	314.10	251.28	62.82	177.64
01/01/17	12/31/17	521.09	114.09	(200.01)	(160.01)	(40.00)	681.10
01/01/18	12/31/18	0.00	0.00	(114.09)	(91.27)	(22.82)	91.27
01/01/19	12/31/19	0.00	0.00	0.00	0.00	0.00	0.00
01/01/20	12/31/20	0.00	0.00	0.00	0.00	0.00	0.00
01/01/21	12/31/21	0.00	0.00	0.00	0.00	0.00	0.00
01/01/22	12/31/22	0.00	0.00	0.00	0.00	0.00	0.00
01/01/23	12/31/23	0.00	0.00	0.00	0.00	0.00	0.00
01/01/24	12/31/24	0.00	0.00	0.00	0.00	0.00	0.00
01/01/25	12/31/25	0.00	0.00	0.00	0.00	0.00	0.00
01/01/26	12/31/26	0.00	0.00	0.00	0.00	0.00	0.00
01/01/27	12/31/27	0.00	0.00	0.00	0.00	0.00	0.00
01/01/28	12/31/28	0.00	0.00	0.00	0.00	0.00	0.00
01/01/29	12/31/29	0.00	0.00	0.00	0.00	0.00	0.00
01/01/30	12/31/30	0.00	0.00	0.00	0.00	0.00	0.00
01/01/31	12/31/31	0.00	0.00	0.00	0.00	0.00	0.00
01/01/32	12/31/32	0.00	0.00	0.00	0.00	0.00	0.00
01/01/33	12/31/33	0.00	0.00	0.00	0.00	0.00	0.00
01/01/34	12/31/34	0.00	0.00	0.00	0.00	0.00	0.00
01/01/35	12/31/35	0.00	0.00	0.00	0.00	0.00	0.00
01/01/36	12/31/36	0.00	0.00	0.00	0.00	0.00	0.00
01/01/37	12/31/37	0.00	0.00	0.00	0.00	0.00	0.00
01/01/38	12/31/38	0.00	0.00	0.00	0.00	0.00	0.00
01/01/39	12/31/39	0.00	0.00	0.00	0.00	0.00	0.00
01/01/40	12/31/40	0.00	0.00	0.00	0.00	0.00	0.00
01/01/41	12/31/41	0.00	0.00	0.00	0.00	0.00	0.00
01/01/42	12/31/42	0.00	0.00	0.00	0.00	0.00	0.00
01/01/43	12/31/43	0.00	0.00	0.00	0.00	0.00	0.00
01/01/44	12/31/44	0.00	0.00	0.00	0.00	0.00	0.00
01/01/45	12/31/45	0.00	0.00	0.00	0.00	0.00	0.00
01/01/46	12/31/46	0.00	0.00	0.00	0.00	0.00	0.00
01/01/47	12/31/47	0.00	0.00	0.00	0.00	0.00	0.00
01/01/48	12/31/48	0.00	0.00	0.00	0.00	0.00	0.00
01/01/49	12/31/49	0.00	0.00	0.00	0.00	0.00	0.00
01/01/50	12/31/50	0.00	0.00	0.00	0.00	0.00	0.00
01/01/51	12/31/51	0.00	0.00	0.00	0.00	0.00	0.00
01/01/52	12/31/52	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL		950.01	428.19	0.00	(0.00)	(0.00)	950.01

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)

TABLE C2\_2: DERIVATION OF DISCOUNTED LOSS & LAE RESERVES

ACCIDENT YEAR 2016									
TIME INTERVAL		IRS DISCOUNT FACTOR (3)	UNDISCOUNTED			DISCOUNTED			LOSS & LAE PAID DURING PERIOD (10)
FROM (1)	TO (2)		LOSS & LAE UNPAID BEG OF PERIOD (4)	LOSS & LAE UNPAID END OF PERIOD (5)	CHANGE IN UNDISCOUNTED LOSS & LAE RESERVES (6)	LOSS & LAE UNPAID BEG OF PERIOD (7)	LOSS & LAE UNPAID END OF PERIOD (8)	CHANGE IN DISCOUNTED LOSS & LAE RESERVES (9)	
01/01/15	12/31/15	0.9230	0.00	78.97	78.97	0.00	72.89	72.89	14.08
01/01/16	12/31/16	0.9117	78.97	56.33	(22.65)	72.89	51.36	(21.53)	22.65
01/01/17	12/31/17	0.9039	56.33	38.28	(18.04)	51.36	34.61	(16.75)	18.04
01/01/18	12/31/18	0.9006	38.28	26.83	(11.46)	34.61	24.16	(10.45)	11.46
01/01/19	12/31/19	0.8995	26.83	19.83	(7.00)	24.16	17.84	(6.33)	7.00
01/01/20	12/31/20	0.8968	19.83	16.56	(3.27)	17.84	14.85	(2.99)	3.27
01/01/21	12/31/21	0.9034	16.56	14.85	(1.71)	14.85	13.41	(1.44)	1.71
01/01/22	12/31/22	0.9122	14.85	13.45	(1.40)	13.41	12.27	(1.14)	1.40
01/01/23	12/31/23	0.9174	13.45	12.55	(0.90)	12.27	11.51	(0.76)	0.90
01/01/24	12/31/24	0.9279	12.55	11.86	(0.68)	11.51	11.01	(0.50)	0.68
01/01/25	12/31/25	0.9389	11.86	11.23	(0.63)	11.01	10.54	(0.47)	0.63
01/01/26	12/31/26	0.9506	11.23	10.66	(0.57)	10.54	10.13	(0.41)	0.57
01/01/27	12/31/27	0.9632	10.66	9.72	(0.94)	10.13	9.36	(0.78)	0.94
01/01/28	12/31/28	0.9768	9.72	9.09	(0.63)	9.36	8.88	(0.48)	0.63
01/01/29	12/31/29	0.9917	9.09	8.61	(0.48)	8.88	8.53	(0.34)	0.48
01/01/30	12/31/30	0.9917	8.61	8.20	(0.41)	8.53	8.13	(0.40)	0.41
01/01/31	12/31/31	0.9917	8.20	7.84	(0.36)	8.13	7.78	(0.35)	0.36
01/01/32	12/31/32	0.9917	7.84	7.39	(0.45)	7.78	7.33	(0.44)	0.45
01/01/33	12/31/33	0.9917	7.39	6.96	(0.43)	7.33	6.91	(0.43)	0.43
01/01/34	12/31/34	0.9917	6.96	6.67	(0.29)	6.91	6.61	(0.29)	0.29
01/01/35	12/31/35	0.9917	6.67	6.41	(0.26)	6.61	6.36	(0.26)	0.26
01/01/36	12/31/36	0.9917	6.41	6.02	(0.39)	6.36	5.97	(0.39)	0.39
01/01/37	12/31/37	0.9917	6.02	5.57	(0.45)	5.97	5.52	(0.45)	0.45
01/01/38	12/31/38	0.9917	5.57	5.12	(0.45)	5.52	5.07	(0.45)	0.45
01/01/39	12/31/39	0.9917	5.12	4.66	(0.45)	5.07	4.63	(0.45)	0.45
01/01/40	12/31/40	0.9917	4.66	4.21	(0.45)	4.63	4.18	(0.45)	0.45
01/01/41	12/31/41	0.9917	4.21	3.76	(0.45)	4.18	3.73	(0.45)	0.45
01/01/42	12/31/42	0.9917	3.76	3.31	(0.45)	3.73	3.28	(0.45)	0.45
01/01/43	12/31/43	0.9917	3.31	2.86	(0.45)	3.28	2.83	(0.45)	0.45
01/01/44	12/31/44	0.9917	2.86	2.41	(0.45)	2.83	2.39	(0.45)	0.45
01/01/45	12/31/45	0.9917	2.41	1.95	(0.45)	2.39	1.94	(0.45)	0.45
01/01/46	12/31/46	0.9917	1.95	1.50	(0.45)	1.94	1.49	(0.45)	0.45
01/01/47	12/31/47	0.9917	1.50	1.05	(0.45)	1.49	1.04	(0.45)	0.45
01/01/48	12/31/48	0.9917	1.05	0.60	(0.45)	1.04	0.59	(0.45)	0.45
01/01/49	12/31/49	0.9917	0.60	0.15	(0.45)	0.59	0.15	(0.45)	0.45
01/01/50	12/31/50	0.9917	0.15	0.00	(0.15)	0.15	0.00	(0.15)	0.15
01/01/51	12/31/51	0.9917	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01/01/52	12/31/52	0.9917	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL			425.44	425.44	0.00	397.26	397.26	(0.00)	93.06

- Notes:
- (3): Discount factors specified in IRS Internal Revenue Bulletin 2015-45.
  - (4) = (5)<sub>t-1</sub>
  - (5) = (10), Total - (10), cumulative
  - (6) = (5) - (4)
  - (7) = (8)<sub>t-1</sub>
  - (8) = (3) x (5)
  - (9) = (8) - (7)
  - (10) = Table A1, (3) x Table A1, (1a) x Loss & LAE Flow (from Section VII-I, Exhibit 1) for each accident year

VII 000043 STIP

TABLE C2\_3: DERIVATION OF DISCOUNTED LOSS & LAE RESERVES

ACCIDENT YEAR									
2017									
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)							
01/01/15	12/31/15		0.00	0.00	0.00	0.00	0.00	0.00	
01/01/16	12/31/16		0.00	453.66	453.66	0.00	418.71	418.71	130.79
01/01/17	12/31/17	0.9230	0.00	453.66	(147.35)	418.71	279.28	(139.43)	147.35
01/01/18	12/31/18	0.9117	453.66	306.31	(96.98)	279.28	189.22	(90.06)	96.98
01/01/19	12/31/19	0.9039	306.31	209.33	(60.12)	189.22	134.38	(54.84)	60.12
01/01/20	12/31/20	0.9006	209.33	149.20	(36.32)	134.38	101.54	(32.84)	36.32
01/01/21	12/31/21	0.8995	149.20	112.88	(13.04)	101.54	89.54	(12.01)	13.04
01/01/22	12/31/22	0.8968	112.88	99.84	(9.73)	89.54	81.41	(8.13)	9.73
01/01/23	12/31/23	0.9034	99.84	90.12	(8.34)	81.41	74.60	(6.81)	8.34
01/01/24	12/31/24	0.9122	90.12	81.78	(4.39)	74.60	71.00	(3.60)	4.39
01/01/25	12/31/25	0.9174	81.78	77.39	(4.26)	71.00	67.86	(3.14)	4.26
01/01/26	12/31/26	0.9279	77.39	73.13	(3.86)	67.86	65.04	(2.81)	3.86
01/01/27	12/31/27	0.9389	73.13	69.27	(3.43)	65.04	62.59	(2.45)	3.43
01/01/28	12/31/28	0.9506	69.27	65.85	(7.12)	62.59	56.56	(6.03)	7.12
01/01/29	12/31/29	0.9632	65.85	58.72	(2.39)	56.56	55.02	(1.54)	2.39
01/01/30	12/31/30	0.9768	58.72	56.33	(3.36)	55.02	52.53	(2.50)	3.36
01/01/31	12/31/31	0.9917	56.33	52.96	(2.17)	52.53	50.37	(2.15)	2.17
01/01/32	12/31/32	0.9917	52.96	50.80	(2.29)	50.37	48.11	(2.27)	2.29
01/01/33	12/31/33	0.9917	50.80	48.51	(3.06)	48.11	45.07	(3.03)	3.06
01/01/34	12/31/34	0.9917	48.51	45.45	(2.53)	45.07	42.57	(2.51)	2.53
01/01/35	12/31/35	0.9917	45.45	42.92	(1.52)	42.57	41.06	(1.50)	1.52
01/01/36	12/31/36	0.9917	42.92	41.41	(1.69)	41.06	39.39	(1.68)	1.69
01/01/37	12/31/37	0.9917	41.41	39.72	(2.83)	39.39	36.58	(2.81)	2.83
01/01/38	12/31/38	0.9917	39.72	36.89	(2.84)	36.58	33.77	(2.81)	2.84
01/01/39	12/31/39	0.9917	36.89	34.05	(2.84)	33.77	30.96	(2.81)	2.84
01/01/40	12/31/40	0.9917	34.05	31.21	(2.84)	30.96	28.14	(2.81)	2.84
01/01/41	12/31/41	0.9917	31.21	28.38	(2.84)	28.14	25.33	(2.81)	2.84
01/01/42	12/31/42	0.9917	28.38	25.54	(2.84)	25.33	22.52	(2.81)	2.84
01/01/43	12/31/43	0.9917	25.54	22.71	(2.84)	22.52	19.70	(2.81)	2.84
01/01/44	12/31/44	0.9917	22.71	19.87	(2.84)	19.70	16.89	(2.81)	2.84
01/01/45	12/31/45	0.9917	19.87	17.03	(2.84)	16.89	14.08	(2.81)	2.84
01/01/46	12/31/46	0.9917	17.03	14.20	(2.84)	14.08	11.27	(2.81)	2.84
01/01/47	12/31/47	0.9917	14.20	11.36	(2.84)	11.27	8.45	(2.81)	2.84
01/01/48	12/31/48	0.9917	11.36	8.53	(2.84)	8.45	5.64	(2.81)	2.84
01/01/49	12/31/49	0.9917	8.53	5.69	(2.84)	5.64	2.83	(2.81)	2.84
01/01/50	12/31/50	0.9917	5.69	2.85	(2.84)	2.83	0.02	(2.81)	2.84
01/01/51	12/31/51	0.9917	2.85	0.02	(2.84)	0.02	0.00	(0.02)	2.84
01/01/52	12/31/52	0.9917	0.02	0.00	(0.02)	0.00	0.00	(0.02)	0.02
TOTAL			2,483.90	2,483.90	0.00	2,322.03	2,322.03	(0.00)	584.45

Notes:

(3): Discount factors specified in IRS Internal Revenue Bulletin 2015-45.

(4) = (5)<sub>t-1</sub>

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

(6) = (5) - (4)

(7) = (8)<sub>t-1</sub>

(8) = (3) x (5)

(9) = (8) - (7)

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

VII 000044 STIP

TABLE C2\_4: DERIVATION OF DISCOUNTED LOSS & LAE RESERVES

ACCIDENT YEAR 2018									
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)							
1/1/2015	12/31/2015		0.00	0.00	0.00	0.00	0.00	0.00	
1/1/2016	12/31/2016		0.00	0.00	0.00	0.00	0.00	0.00	
1/1/2017	12/31/2017		0.00	0.00	0.00	0.00	0.00	0.00	
1/1/2018	12/31/2018	0.9230	0.00	63.87	63.87	0.00	58.95	58.95	28.60
1/1/2019	12/31/2019	0.9117	63.87	43.22	(20.65)	58.95	39.41	(19.54)	20.65
1/1/2020	12/31/2020	0.9039	43.22	29.87	(13.36)	39.41	27.00	(12.41)	13.36
1/1/2021	12/31/2021	0.9006	29.87	21.64	(8.23)	27.00	19.49	(7.51)	8.23
1/1/2022	12/31/2022	0.8995	21.64	17.14	(4.50)	19.49	15.42	(4.07)	4.50
1/1/2023	12/31/2023	0.8968	17.14	15.27	(1.87)	15.42	13.70	(1.73)	1.87
1/1/2024	12/31/2024	0.9034	15.27	13.81	(1.46)	13.70	12.47	(1.22)	1.46
1/1/2025	12/31/2025	0.9122	13.81	12.70	(1.11)	12.47	11.59	(0.89)	1.11
1/1/2026	12/31/2026	0.9174	12.70	12.02	(0.69)	11.59	11.02	(0.56)	0.69
1/1/2027	12/31/2027	0.9279	12.02	11.36	(0.65)	11.02	10.54	(0.48)	0.65
1/1/2028	12/31/2028	0.9389	11.36	10.78	(0.59)	10.54	10.12	(0.43)	0.59
1/1/2029	12/31/2029	0.9506	10.78	10.04	(0.74)	10.12	9.54	(0.58)	0.74
1/1/2030	12/31/2030	0.9632	10.04	9.16	(0.88)	9.54	8.82	(0.72)	0.88
1/1/2031	12/31/2031	0.9768	9.16	8.73	(0.43)	8.82	8.53	(0.29)	0.43
1/1/2032	12/31/2032	0.9917	8.73	8.26	(0.47)	8.53	8.19	(0.34)	0.47
1/1/2033	12/31/2033	0.9917	8.26	7.91	(0.35)	8.19	7.85	(0.35)	0.35
1/1/2034	12/31/2034	0.9917	7.91	7.51	(0.40)	7.85	7.45	(0.40)	0.40
1/1/2035	12/31/2035	0.9917	7.51	7.05	(0.46)	7.45	7.00	(0.45)	0.46
1/1/2036	12/31/2036	0.9917	7.05	6.71	(0.35)	7.00	6.65	(0.34)	0.35
1/1/2037	12/31/2037	0.9917	6.71	6.46	(0.25)	6.65	6.41	(0.25)	0.25
1/1/2038	12/31/2038	0.9917	6.46	6.13	(0.33)	6.41	6.08	(0.33)	0.33
1/1/2039	12/31/2039	0.9917	6.13	5.68	(0.45)	6.08	5.64	(0.44)	0.45
1/1/2040	12/31/2040	0.9917	5.68	5.23	(0.45)	5.64	5.19	(0.44)	0.45
1/1/2041	12/31/2041	0.9917	5.23	4.79	(0.45)	5.19	4.75	(0.44)	0.45
1/1/2042	12/31/2042	0.9917	4.79	4.34	(0.45)	4.75	4.30	(0.44)	0.45
1/1/2043	12/31/2043	0.9917	4.34	3.89	(0.45)	4.30	3.86	(0.44)	0.45
1/1/2044	12/31/2044	0.9917	3.89	3.44	(0.45)	3.86	3.41	(0.44)	0.45
1/1/2045	12/31/2045	0.9917	3.44	2.99	(0.45)	3.41	2.97	(0.44)	0.45
1/1/2046	12/31/2046	0.9917	2.99	2.54	(0.45)	2.97	2.52	(0.44)	0.45
1/1/2047	12/31/2047	0.9917	2.54	2.09	(0.45)	2.52	2.08	(0.44)	0.45
1/1/2048	12/31/2048	0.9917	2.09	1.65	(0.45)	2.08	1.63	(0.44)	0.45
1/1/2049	12/31/2049	0.9917	1.65	1.20	(0.45)	1.63	1.19	(0.44)	0.45
1/1/2050	12/31/2050	0.9917	1.20	0.75	(0.45)	1.19	0.74	(0.44)	0.45
1/1/2051	12/31/2051	0.9917	0.75	0.30	(0.45)	0.74	0.30	(0.44)	0.45
1/1/2052	12/31/2052	0.9917	0.30	0.00	(0.30)	0.30	0.00	(0.30)	0.30
TOTAL			368.53	368.53	0.00	344.79	344.79	0.00	92.47

Notes:

(3): Discount factors specified in IRS Internal Revenue Bulletin 2015-45.

(4) = (5)<sub>t-1</sub>

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

(6) = (5) - (4)

(7) = (8)<sub>t-1</sub>

(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)
01/01/15	12/31/15	0.00	0.00	0.00	0.00	0.00
01/01/16	12/31/16	14.08	72.89	86.97	54.18	141.16
01/01/17	12/31/17	153.44	397.17	550.62	114.65	665.26
01/01/18	12/31/18	193.99	(97.23)	96.76	10.46	107.22
01/01/19	12/31/19	129.09	(120.05)	9.04	0.74	9.78
01/01/20	12/31/20	80.48	(73.57)	6.90	0.00	6.90
01/01/21	12/31/21	47.82	(43.33)	4.49	0.00	4.49
01/01/22	12/31/22	19.25	(17.51)	1.74	0.00	1.74
01/01/23	12/31/23	13.00	(11.00)	2.00	0.00	2.00
01/01/24	12/31/24	10.70	(8.79)	1.92	0.00	1.92
01/01/25	12/31/25	6.18	(4.99)	1.19	0.00	1.19
01/01/26	12/31/26	5.58	(4.17)	1.41	0.00	1.41
01/01/27	12/31/27	5.08	(3.70)	1.37	0.00	1.37
01/01/28	12/31/28	4.96	(3.65)	1.31	0.00	1.31
01/01/29	12/31/29	8.49	(7.09)	1.40	0.00	1.40
01/01/30	12/31/30	3.76	(2.60)	1.15	0.00	1.15
01/01/31	12/31/31	4.20	(3.19)	1.01	0.00	1.01
01/01/32	12/31/32	3.00	(2.84)	0.16	0.00	0.16
01/01/33	12/31/33	3.08	(3.06)	0.03	0.00	0.03
01/01/34	12/31/34	3.89	(3.86)	0.03	0.00	0.03
01/01/35	12/31/35	3.28	(3.25)	0.03	0.00	0.03
01/01/36	12/31/36	2.12	(2.10)	0.02	0.00	0.02
01/01/37	12/31/37	2.33	(2.31)	0.02	0.00	0.02
01/01/38	12/31/38	3.61	(3.58)	0.03	0.00	0.03
01/01/39	12/31/39	3.74	(3.71)	0.03	0.00	0.03
01/01/40	12/31/40	3.74	(3.71)	0.03	0.00	0.03
01/01/41	12/31/41	3.74	(3.71)	0.03	0.00	0.03
01/01/42	12/31/42	3.74	(3.71)	0.03	0.00	0.03
01/01/43	12/31/43	3.74	(3.71)	0.03	0.00	0.03
01/01/44	12/31/44	3.74	(3.71)	0.03	0.00	0.03
01/01/45	12/31/45	3.74	(3.71)	0.03	0.00	0.03
01/01/46	12/31/46	3.74	(3.71)	0.03	0.00	0.03
01/01/47	12/31/47	3.74	(3.71)	0.03	0.00	0.03
01/01/48	12/31/48	3.74	(3.71)	0.03	0.00	0.03
01/01/49	12/31/49	3.74	(3.71)	0.03	0.00	0.03
01/01/50	12/31/50	3.74	(3.71)	0.03	0.00	0.03
01/01/51	12/31/51	3.43	(3.40)	0.03	0.00	0.03
01/01/52	12/31/52	0.32	(0.31)	0.00	0.00	0.00
TOTAL		769.98	0.00	769.98	180.02	950.01

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)
01/01/15	12/31/15	0.00	0.00	0.00	0.00
01/01/16	12/31/16	177.64	141.16	36.48	12.77
01/01/17	12/31/17	681.10	665.26	15.84	5.54
01/01/18	12/31/18	91.27	107.22	(15.95)	(5.58)
01/01/19	12/31/19	0.00	9.78	(9.78)	(3.42)
01/01/20	12/31/20	0.00	6.90	(6.90)	(2.42)
01/01/21	12/31/21	0.00	4.49	(4.49)	(1.57)
01/01/22	12/31/22	0.00	1.74	(1.74)	(0.61)
01/01/23	12/31/23	0.00	2.00	(2.00)	(0.70)
01/01/24	12/31/24	0.00	1.92	(1.92)	(0.67)
01/01/25	12/31/25	0.00	1.19	(1.19)	(0.42)
01/01/26	12/31/26	0.00	1.41	(1.41)	(0.49)
01/01/27	12/31/27	0.00	1.37	(1.37)	(0.48)
01/01/28	12/31/28	0.00	1.31	(1.31)	(0.46)
01/01/29	12/31/29	0.00	1.40	(1.40)	(0.49)
01/01/30	12/31/30	0.00	1.15	(1.15)	(0.40)
01/01/31	12/31/31	0.00	1.01	(1.01)	(0.35)
01/01/32	12/31/32	0.00	0.16	(0.16)	(0.05)
01/01/33	12/31/33	0.00	0.03	(0.03)	(0.01)
01/01/34	12/31/34	0.00	0.03	(0.03)	(0.01)
01/01/35	12/31/35	0.00	0.03	(0.03)	(0.01)
01/01/36	12/31/36	0.00	0.02	(0.02)	(0.01)
01/01/37	12/31/37	0.00	0.02	(0.02)	(0.01)
01/01/38	12/31/38	0.00	0.03	(0.03)	(0.01)
01/01/39	12/31/39	0.00	0.03	(0.03)	(0.01)
01/01/40	12/31/40	0.00	0.03	(0.03)	(0.01)
01/01/41	12/31/41	0.00	0.03	(0.03)	(0.01)
01/01/42	12/31/42	0.00	0.03	(0.03)	(0.01)
01/01/43	12/31/43	0.00	0.03	(0.03)	(0.01)
01/01/44	12/31/44	0.00	0.03	(0.03)	(0.01)
01/01/45	12/31/45	0.00	0.03	(0.03)	(0.01)
01/01/46	12/31/46	0.00	0.03	(0.03)	(0.01)
01/01/47	12/31/47	0.00	0.03	(0.03)	(0.01)
01/01/48	12/31/48	0.00	0.03	(0.03)	(0.01)
01/01/49	12/31/49	0.00	0.03	(0.03)	(0.01)
01/01/50	12/31/50	0.00	0.03	(0.03)	(0.01)
01/01/51	12/31/51	0.00	0.03	(0.03)	(0.01)
01/01/52	12/31/52	0.00	0.00	(0.00)	(0.00)
TOTAL		950.01	950.01	(0.00)	(0.00)

Notes:

(3) = Table C2\_1, (8)

(4) = Table C2\_5, (7)

(5) = (3) - (4)

(6) = 0.35 x (5), where 0.35 is the Federal income tax rate.

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TABLE C2\_7: ADMITTED PREPAID TAX (DEFERRED TAX ASSET - DTA)

TIME INTERVAL		AY 2016		AY 2017		AY 2018		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)											
01/01/15	12/31/15							0.00	0.00			0.00
01/01/16	12/31/16							0.00	0.39	314.10	21.99	22.38
01/01/17	12/31/17	(21.53)	22.65					1.11	3.22	114.09	7.99	11.21
01/01/18	12/31/18	(16.75)	18.04	(139.43)	147.35			9.21	3.17	0.00	0.00	3.17
01/01/19	12/31/19	(10.45)	11.46	(90.06)	96.98	(19.54)	20.65	9.04	2.42	0.00	0.00	2.42
01/01/20	12/31/20	(6.33)	7.00	(54.84)	60.12	(12.41)	13.36	6.90	1.57	0.00	0.00	1.57
01/01/21	12/31/21	(2.99)	3.27	(32.84)	36.32	(7.51)	8.23	4.49	0.61	0.00	0.00	0.61
01/01/22	12/31/22	(1.44)	1.71	(12.01)	13.04	(4.07)	4.50	1.74	0.70	0.00	0.00	0.70
01/01/23	12/31/23	(1.14)	1.40	(8.13)	9.73	(1.73)	1.87	2.00	0.67	0.00	0.00	0.67
01/01/24	12/31/24	(0.76)	0.90	(6.81)	8.34	(1.22)	1.46	1.92	0.42	0.00	0.00	0.42
01/01/25	12/31/25	(0.50)	0.68	(3.60)	4.39	(0.89)	1.11	1.19	0.49	0.00	0.00	0.49
01/01/26	12/31/26	(0.47)	0.63	(3.14)	4.26	(0.56)	0.69	1.41	0.48	0.00	0.00	0.48
01/01/27	12/31/27	(0.41)	0.57	(2.81)	3.86	(0.48)	0.65	1.37	0.46	0.00	0.00	0.46
01/01/28	12/31/28	(0.78)	0.94	(2.45)	3.43	(0.43)	0.59	1.31	0.49	0.00	0.00	0.49
01/01/29	12/31/29	(0.48)	0.63	(6.03)	7.12	(0.58)	0.74	1.40	0.40	0.00	0.00	0.40
01/01/30	12/31/30	(0.34)	0.48	(1.54)	2.39	(0.72)	0.88	1.15	0.35	0.00	0.00	0.35
01/01/31	12/31/31	(0.40)	0.41	(2.50)	3.36	(0.29)	0.43	1.01	0.05	0.00	0.00	0.05
01/01/32	12/31/32	(0.35)	0.36	(2.15)	2.17	(0.34)	0.47	0.16	0.01	0.00	0.00	0.01
01/01/33	12/31/33	(0.44)	0.45	(2.27)	2.29	(0.35)	0.35	0.03	0.01	0.00	0.00	0.01
01/01/34	12/31/34	(0.43)	0.43	(3.03)	3.06	(0.40)	0.40	0.03	0.01	0.00	0.00	0.01
01/01/35	12/31/35	(0.29)	0.29	(2.51)	2.53	(0.45)	0.46	0.03	0.01	0.00	0.00	0.01
01/01/36	12/31/36	(0.26)	0.26	(1.50)	1.52	(0.34)	0.35	0.02	0.01	0.00	0.00	0.01
01/01/37	12/31/37	(0.39)	0.39	(1.68)	1.69	(0.25)	0.25	0.02	0.01	0.00	0.00	0.01
01/01/38	12/31/38	(0.45)	0.45	(2.81)	2.83	(0.33)	0.33	0.03	0.01	0.00	0.00	0.01
01/01/39	12/31/39	(0.45)	0.45	(2.81)	2.84	(0.44)	0.45	0.03	0.01	0.00	0.00	0.01
01/01/40	12/31/40	(0.45)	0.45	(2.81)	2.84	(0.44)	0.45	0.03	0.01	0.00	0.00	0.01
01/01/41	12/31/41	(0.45)	0.45	(2.81)	2.84	(0.44)	0.45	0.03	0.01	0.00	0.00	0.01
01/01/42	12/31/42	(0.45)	0.45	(2.81)	2.84	(0.44)	0.45	0.03	0.01	0.00	0.00	0.01
01/01/43	12/31/43	(0.45)	0.45	(2.81)	2.84	(0.44)	0.45	0.03	0.01	0.00	0.00	0.01
01/01/44	12/31/44	(0.45)	0.45	(2.81)	2.84	(0.44)	0.45	0.03	0.01	0.00	0.00	0.01
01/01/45	12/31/45	(0.45)	0.45	(2.81)	2.84	(0.44)	0.45	0.03	0.01	0.00	0.00	0.01
01/01/46	12/31/46	(0.45)	0.45	(2.81)	2.84	(0.44)	0.45	0.03	0.01	0.00	0.00	0.01
01/01/47	12/31/47	(0.45)	0.45	(2.81)	2.84	(0.44)	0.45	0.03	0.01	0.00	0.00	0.01
01/01/48	12/31/48	(0.45)	0.45	(2.81)	2.84	(0.44)	0.45	0.03	0.01	0.00	0.00	0.01
01/01/49	12/31/49	(0.45)	0.45	(2.81)	2.84	(0.44)	0.45	0.03	0.01	0.00	0.00	0.01
01/01/50	12/31/50	(0.45)	0.45	(2.81)	2.84	(0.44)	0.45	0.03	0.01	0.00	0.00	0.01
01/01/51	12/31/51	(0.15)	0.15	(2.81)	2.84	(0.44)	0.45	0.03	0.00	0.00	0.00	0.00
01/01/52	12/31/52	0.00	0.00	(0.02)	0.02	(0.30)	0.30	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) = 0.35 x (9)<sub>t-1</sub>, where 0.35 is the Federal income tax rate.  
 (11) = Table C2\_1, (4)  
 (12) = 0.2 x 0.35 x (11), 0.35 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)									
07/01/15	09/30/15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/01/15	12/31/15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01/01/16	03/31/16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04/01/16	06/30/16	0.00	0.00	(5.46)	0.00	5.46	(0.60)	(0.60)	0.00	5.46
07/01/16	09/30/16	196.83	19.24	168.46	16.78	30.82	21.56	0.60	21.56	9.26
10/01/16	12/31/16	315.85	71.01	253.09	22.38	111.40	88.25	0.00	88.25	23.15
01/01/17	03/31/17	450.42	165.41	355.51	19.59	240.74	200.12	0.00	200.12	40.62
04/01/17	06/30/17	479.43	295.54	391.07	16.79	367.11	320.24	0.00	320.24	46.87
07/01/17	09/30/17	272.57	419.20	225.70	14.00	452.06	418.94	0.00	418.94	33.12
10/01/17	12/31/17	116.22	500.54	127.30	11.21	478.25	460.32	0.00	460.32	17.93
01/01/18	03/31/18	29.02	524.57	74.91	9.20	469.48	461.91	0.00	461.91	7.57
04/01/18	06/30/18	0.00	500.43	30.18	7.19	463.07	441.48	0.00	441.48	21.59
07/01/18	09/30/18	0.00	454.02	1.68	5.18	447.16	416.08	0.00	416.08	31.09
10/01/18	12/31/18	0.00	411.00	0.74	3.17	407.10	387.84	0.00	387.84	19.26
01/01/19	03/31/19	0.00	373.02	0.27	2.98	369.78	357.39	0.00	357.39	12.39
04/01/19	06/30/19	0.00	339.31	0.06	2.79	336.46	327.44	0.00	327.44	9.01
07/01/19	09/30/19	0.00	309.03	0.00	2.60	306.42	298.86	0.00	298.86	7.56
10/01/19	12/31/19	0.00	281.21	0.00	2.42	278.80	271.91	0.00	271.91	6.89
01/01/20	03/31/20	0.00	257.04	0.00	2.20	254.83	248.33	0.00	248.33	6.50
04/01/20	06/30/20	0.00	235.93	0.00	1.99	233.94	227.83	0.00	227.83	6.10
07/01/20	09/30/20	0.00	217.21	0.00	1.78	215.43	209.71	0.00	209.71	5.71
10/01/20	12/31/20	0.00	200.08	0.00	1.57	198.51	193.19	0.00	193.19	5.32
01/01/21	03/31/21	0.00	185.30	0.00	1.33	183.97	178.80	0.00	178.80	5.17
04/01/21	06/30/21	0.00	172.49	0.00	1.09	171.40	166.39	0.00	166.39	5.02
07/01/21	09/30/21	0.00	161.56	0.00	0.85	160.71	155.85	0.00	155.85	4.86
10/01/21	12/31/21	0.00	152.24	0.00	0.61	151.64	146.92	0.00	146.92	4.71
01/01/22	03/31/22	0.00	145.18	0.00	0.63	144.55	140.01	0.00	140.01	4.54
04/01/22	06/30/22	0.00	140.02	0.00	0.65	139.36	135.00	0.00	135.00	4.36
07/01/22	09/30/22	0.00	135.90	0.00	0.68	135.22	131.04	0.00	131.04	4.19
10/01/22	12/31/22	0.00	131.99	0.00	0.70	131.29	127.28	0.00	127.28	4.01
01/01/23	03/31/23	0.00	128.41	0.00	0.69	127.72	123.87	0.00	123.87	3.84
04/01/23	06/30/23	0.00	125.10	0.00	0.68	124.42	120.74	0.00	120.74	3.68
07/01/23	09/30/23	0.00	121.96	0.00	0.68	121.29	117.78	0.00	117.78	3.51
10/01/23	12/31/23	0.00	118.91	0.00	0.67	118.24	114.89	0.00	114.89	3.34
01/01/24	03/31/24	0.00	116.00	0.00	0.61	115.39	112.15	0.00	112.15	3.24
04/01/24	06/30/24	0.00	113.21	0.00	0.54	112.67	109.54	0.00	109.54	3.13
07/01/24	09/30/24	0.00	110.64	0.00	0.48	110.16	107.13	0.00	107.13	3.03
10/01/24	12/31/24	0.00	108.33	0.00	0.42	107.92	104.99	0.00	104.99	2.93
01/01/25	03/31/25	0.00	106.42	0.00	0.44	105.98	103.18	0.00	103.18	2.80
04/01/25	06/30/25	0.00	104.83	0.00	0.45	104.37	101.69	0.00	101.69	2.68
07/01/25	09/30/25	0.00	103.39	0.00	0.47	102.92	100.36	0.00	100.36	2.56
10/01/25	12/31/25	0.00	101.96	0.00	0.49	101.47	99.03	0.00	99.03	2.43
01/01/26	03/31/26	0.00	100.54	0.00	0.49	100.05	97.74	0.00	97.74	2.31
04/01/26	06/30/26	0.00	99.14	0.00	0.49	98.66	96.46	0.00	96.46	2.19
07/01/26	09/30/26	0.00	97.76	0.00	0.48	97.27	95.20	0.00	95.20	2.07
10/01/26	12/31/26	0.00	96.39	0.00	0.48	95.91	93.96	0.00	93.96	1.95
01/01/27	03/31/27	0.00	95.08	0.00	0.48	94.60	92.76	0.00	92.76	1.84
04/01/27	06/30/27	0.00	93.80	0.00	0.47	93.33	91.61	0.00	91.61	1.72
07/01/27	09/30/27	0.00	92.55	0.00	0.46	92.08	90.47	0.00	90.47	1.61
10/01/27	12/31/27	0.00	91.32	0.00	0.46	90.86	89.37	0.00	89.37	1.49
01/01/28	03/31/28	0.00	90.14	0.00	0.47	89.67	88.30	0.00	88.30	1.37
04/01/28	06/30/28	0.00	89.00	0.00	0.47	88.52	87.28	0.00	87.28	1.25
07/01/28	09/30/28	0.00	87.71	0.00	0.48	87.23	86.10	0.00	86.10	1.13
10/01/28	12/31/28	0.00	86.15	0.00	0.49	85.66	84.66	0.00	84.66	1.00
01/01/29	03/31/29	0.00	84.25	0.00	0.47	83.78	82.88	0.00	82.88	0.90
04/01/29	06/30/29	0.00	82.06	0.00	0.45	81.61	80.81	0.00	80.81	0.80
07/01/29	09/30/29	0.00	79.91	0.00	0.42	79.48	78.78	0.00	78.78	0.70
10/01/29	12/31/29	0.00	78.09	0.00	0.40	77.69	77.08	0.00	77.08	0.60
01/01/30	03/31/30	0.00	76.73	0.00	0.39	76.34	75.83	0.00	75.83	0.51
04/01/30	06/30/30	0.00	75.76	0.00	0.38	75.39	74.96	0.00	74.96	0.42
07/01/30	09/30/30	0.00	74.94	0.00	0.36	74.58	74.24	0.00	74.24	0.34
10/01/30	12/31/30	0.00	74.04	0.00	0.35	73.69	73.44	0.00	73.44	0.25
01/01/31	03/31/31	0.00	73.06	0.00	0.28	72.78	72.54	0.00	72.54	0.24
04/01/31	06/30/31	0.00	71.99	0.00	0.20	71.79	71.57	0.00	71.57	0.22
07/01/31	09/30/31	0.00	70.93	0.00	0.13	70.80	70.60	0.00	70.60	0.21
10/01/31	12/31/31	0.00	69.96	0.00	0.05	69.90	69.71	0.00	69.71	0.19
01/01/32	03/31/32	0.00	69.10	0.00	0.04	69.05	68.86	0.00	68.86	0.19
04/01/32	06/30/32	0.00	68.34	0.00	0.03	68.31	68.12	0.00	68.12	0.19
07/01/32	09/30/32	0.00	67.62	0.00	0.02	67.60	67.42	0.00	67.42	0.19
10/01/32	12/31/32	0.00	66.89	0.00	0.01	66.88	66.70	0.00	66.70	0.19
01/01/33	03/31/33	0.00	66.16	0.00	0.01	66.15	65.96	0.00	65.96	0.18
04/01/33	06/30/33	0.00	65.41	0.00	0.01	65.40	65.22	0.00	65.22	0.18
07/01/33	09/30/33	0.00	64.62	0.00	0.01	64.61	64.44	0.00	64.44	0.18
10/01/33	12/31/33	0.00	63.78	0.00	0.01	63.77	63.59	0.00	63.59	0.17
01/01/34	03/31/34	0.00	62.86	0.00	0.01	62.85	62.68	0.00	62.68	0.17
04/01/34	06/30/34	0.00	61.89	0.00	0.01	61.88	61.71	0.00	61.71	0.17
07/01/34	09/30/34	0.00	60.90	0.00	0.01	60.89	60.73	0.00	60.73	0.17
10/01/34	12/31/34	0.00	59.95	0.00	0.01	59.94	59.78	0.00	59.78	0.16
01/01/35	03/31/35	0.00	59.06	0.00	0.01	59.05	58.88	0.00	58.88	0.16
04/01/35	06/30/35	0.00	58.21	0.00	0.01	58.20	58.04	0.00	58.04	0.16
07/01/35	09/30/35	0.00	57.42	0.00	0.01	57.41	57.25	0.00	57.25	0.16

**VII 000049 STIP**

**TABLE C3: POLICYHOLDER SUPPLIED INVESTABLE FUNDS**

TIME INTERVAL		UNEARNED PREMIUM RESERVES (3)	LOSS & LAE RESERVES (4)	ADMITTED PREMIUM RECEIVABLES (5)	ADMITTED PREPAID TAX (DTA) (6)	INVESTABLE RESERVES (7)	CUMULATIVE POST TAX CASH FLOW FROM UW (8)	POST TAX CASH FROM UW AVAILABLE TO INVESTORS (9)	POLICYHOLDER SUPPLIED INVESTABLE FUNDS (10)	RESERVES FUNDED BY INVESTORS (11)
FROM (1)	TO (2)									
10/01/35	12/31/35	0.00	56.70	0.00	0.01	56.69	56.53	0.00	56.53	0.16
01/01/36	03/31/36	0.00	56.08	0.00	0.01	56.07	55.91	0.00	55.91	0.16
04/01/36	06/30/36	0.00	55.54	0.00	0.01	55.54	55.38	0.00	55.38	0.16
07/01/36	09/30/36	0.00	55.04	0.00	0.01	55.03	54.88	0.00	54.88	0.15
10/01/36	12/31/36	0.00	54.52	0.00	0.01	54.51	54.36	0.00	54.36	0.15
01/01/37	03/31/37	0.00	53.98	0.00	0.01	53.97	53.82	0.00	53.82	0.15
04/01/37	06/30/37	0.00	53.43	0.00	0.01	53.43	53.28	0.00	53.28	0.15
07/01/37	09/30/37	0.00	52.83	0.00	0.01	52.82	52.68	0.00	52.68	0.14
10/01/37	12/31/37	0.00	52.14	0.00	0.01	52.13	51.99	0.00	51.99	0.14
01/01/38	03/31/38	0.00	51.34	0.00	0.01	51.33	51.19	0.00	51.19	0.14
04/01/38	06/30/38	0.00	50.46	0.00	0.01	50.45	50.31	0.00	50.31	0.14
07/01/38	09/30/38	0.00	49.53	0.00	0.01	49.51	49.38	0.00	49.38	0.13
10/01/38	12/31/38	0.00	48.59	0.00	0.01	48.58	48.44	0.00	48.44	0.13
01/01/39	03/31/39	0.00	47.65	0.00	0.01	47.64	47.51	0.00	47.51	0.13
04/01/39	06/30/39	0.00	46.72	0.00	0.01	46.71	46.59	0.00	46.59	0.12
07/01/39	09/30/39	0.00	45.79	0.00	0.01	45.78	45.66	0.00	45.66	0.12
10/01/39	12/31/39	0.00	44.85	0.00	0.01	44.84	44.72	0.00	44.72	0.12
01/01/40	03/31/40	0.00	43.92	0.00	0.01	43.90	43.79	0.00	43.79	0.12
04/01/40	06/30/40	0.00	42.99	0.00	0.01	42.98	42.86	0.00	42.86	0.11
07/01/40	09/30/40	0.00	42.05	0.00	0.01	42.04	41.93	0.00	41.93	0.11
10/01/40	12/31/40	0.00	41.11	0.00	0.01	41.10	40.99	0.00	40.99	0.11
01/01/41	03/31/41	0.00	40.18	0.00	0.01	40.17	40.06	0.00	40.06	0.11
04/01/41	06/30/41	0.00	39.25	0.00	0.01	39.24	39.14	0.00	39.14	0.10
07/01/41	09/30/41	0.00	38.32	0.00	0.01	38.30	38.20	0.00	38.20	0.10
10/01/41	12/31/41	0.00	37.38	0.00	0.01	37.37	37.27	0.00	37.27	0.10
01/01/42	03/31/42	0.00	36.44	0.00	0.01	36.43	36.34	0.00	36.34	0.10
04/01/42	06/30/42	0.00	35.51	0.00	0.01	35.50	35.41	0.00	35.41	0.09
07/01/42	09/30/42	0.00	34.58	0.00	0.01	34.57	34.48	0.00	34.48	0.09
10/01/42	12/31/42	0.00	33.64	0.00	0.01	33.63	33.54	0.00	33.54	0.09
01/01/43	03/31/43	0.00	32.71	0.00	0.01	32.70	32.61	0.00	32.61	0.08
04/01/43	06/30/43	0.00	31.78	0.00	0.01	31.77	31.68	0.00	31.68	0.08
07/01/43	09/30/43	0.00	30.84	0.00	0.01	30.83	30.75	0.00	30.75	0.08
10/01/43	12/31/43	0.00	29.90	0.00	0.01	29.89	29.82	0.00	29.82	0.08
01/01/44	03/31/44	0.00	28.97	0.00	0.01	28.96	28.89	0.00	28.89	0.07
04/01/44	06/30/44	0.00	28.04	0.00	0.01	28.03	27.96	0.00	27.96	0.07
07/01/44	09/30/44	0.00	27.11	0.00	0.01	27.10	27.03	0.00	27.03	0.07
10/01/44	12/31/44	0.00	26.17	0.00	0.01	26.16	26.09	0.00	26.09	0.07
01/01/45	03/31/45	0.00	25.23	0.00	0.01	25.22	25.16	0.00	25.16	0.06
04/01/45	06/30/45	0.00	24.30	0.00	0.01	24.29	24.23	0.00	24.23	0.06
07/01/45	09/30/45	0.00	23.37	0.00	0.01	23.36	23.30	0.00	23.30	0.06
10/01/45	12/31/45	0.00	22.43	0.00	0.01	22.42	22.37	0.00	22.37	0.05
01/01/46	03/31/46	0.00	21.50	0.00	0.01	21.49	21.43	0.00	21.43	0.05
04/01/46	06/30/46	0.00	20.57	0.00	0.01	20.56	20.51	0.00	20.51	0.05
07/01/46	09/30/46	0.00	19.63	0.00	0.01	19.62	19.58	0.00	19.58	0.05
10/01/46	12/31/46	0.00	18.69	0.00	0.01	18.68	18.64	0.00	18.64	0.04
01/01/47	03/31/47	0.00	17.76	0.00	0.01	17.75	17.71	0.00	17.71	0.04
04/01/47	06/30/47	0.00	16.83	0.00	0.01	16.82	16.78	0.00	16.78	0.04
07/01/47	09/30/47	0.00	15.90	0.00	0.01	15.89	15.85	0.00	15.85	0.04
10/01/47	12/31/47	0.00	14.96	0.00	0.01	14.95	14.91	0.00	14.91	0.03
01/01/48	03/31/48	0.00	14.02	0.00	0.01	14.01	13.98	0.00	13.98	0.03
04/01/48	06/30/48	0.00	13.09	0.00	0.01	13.08	13.06	0.00	13.06	0.03
07/01/48	09/30/48	0.00	12.16	0.00	0.01	12.15	12.13	0.00	12.13	0.02
10/01/48	12/31/48	0.00	11.22	0.00	0.01	11.21	11.19	0.00	11.19	0.02
01/01/49	03/31/49	0.00	10.29	0.00	0.01	10.28	10.26	0.00	10.26	0.02
04/01/49	06/30/49	0.00	9.36	0.00	0.01	9.35	9.33	0.00	9.33	0.02
07/01/49	09/30/49	0.00	8.42	0.00	0.01	8.41	8.40	0.00	8.40	0.01
10/01/49	12/31/49	0.00	7.49	0.00	0.01	7.47	7.46	0.00	7.46	0.01
01/01/50	03/31/50	0.00	6.55	0.00	0.01	6.54	6.53	0.00	6.53	0.01
04/01/50	06/30/50	0.00	5.62	0.00	0.01	5.61	5.61	0.00	5.61	0.01
07/01/50	09/30/50	0.00	4.69	0.00	0.01	4.68	4.67	0.00	4.67	0.00
10/01/50	12/31/50	0.00	3.75	0.00	0.01	3.74	3.74	0.00	3.74	0.00
01/01/51	03/31/51	0.00	2.81	0.00	0.01	2.81	2.81	0.00	2.81	0.00
04/01/51	06/30/51	0.00	1.89	0.00	0.01	1.88	1.88	0.00	1.88	0.00
07/01/51	09/30/51	0.00	1.07	0.00	0.00	1.07	1.07	0.00	1.07	0.00
10/01/51	12/31/51	0.00	0.46	0.00	0.00	0.46	0.46	0.00	0.46	0.00
01/01/52	03/31/52	0.00	0.11	0.00	0.00	0.11	0.11	0.00	0.11	0.00
04/01/52	06/30/52	0.00	(0.00)	0.00	0.00	(0.00)	(0.00)	0.00	(0.00)	0.00
TOTAL		1,860.34	13,071.40	1,623.50	167.45	13,140.79	12,717.85	0.00	12,718.45	422.34

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)<sub>t-1</sub>, 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)					
07/01/15	09/30/15	0.00	0.00	0.00	0.00	0.00
10/01/15	12/31/15	0.00	0.00	0.00	0.00	0.00
01/01/16	03/31/16	0.00	0.00	0.00	0.00	0.00
04/01/16	06/30/16	0.00	5.46	5.46	0.00	(5.46)
07/01/16	09/30/16	30.64	59.00	59.00	0.00	168.46
10/01/16	12/31/16	113.06	175.83	145.19	0.00	253.09
01/01/17	03/31/17	263.37	358.29	245.22	0.00	355.51
04/01/17	06/30/17	470.58	558.93	295.56	0.00	391.07
07/01/17	09/30/17	677.44	724.31	253.73	0.00	225.70
10/01/17	12/31/17	833.79	822.71	145.27	0.00	127.30
01/01/18	03/31/18	920.99	875.10	41.31	0.00	74.91
04/01/18	06/30/18	950.01	903.51	(17.48)	16.32	30.18
07/01/18	09/30/18	950.01	924.50	(25.51)	23.82	1.68
10/01/18	12/31/18	950.01	938.83	(11.18)	10.44	0.74
01/01/19	03/31/19	950.01	945.98	(4.02)	3.76	0.27
04/01/19	06/30/19	950.01	949.10	(0.91)	0.85	0.06
07/01/19	09/30/19	950.01	950.01	0.00	0.00	0.00
10/01/19	12/31/19	950.01	950.01	0.00	0.00	0.00
01/01/20	03/31/20	950.01	950.01	0.00	0.00	0.00
04/01/20	06/30/20	950.01	950.01	0.00	0.00	0.00
07/01/20	09/30/20	950.01	950.01	0.00	0.00	0.00
10/01/20	12/31/20	950.01	950.01	0.00	0.00	0.00
01/01/21	03/31/21	950.01	950.01	0.00	0.00	0.00
04/01/21	06/30/21	950.01	950.01	0.00	0.00	0.00
07/01/21	09/30/21	950.01	950.01	0.00	0.00	0.00
10/01/21	12/31/21	950.01	950.01	0.00	0.00	0.00
01/01/22	03/31/22	950.01	950.01	0.00	0.00	0.00
04/01/22	06/30/22	950.01	950.01	0.00	0.00	0.00
07/01/22	09/30/22	950.01	950.01	0.00	0.00	0.00
10/01/22	12/31/22	950.01	950.01	0.00	0.00	0.00
01/01/23	03/31/23	950.01	950.01	0.00	0.00	0.00
04/01/23	06/30/23	950.01	950.01	0.00	0.00	0.00
07/01/23	09/30/23	950.01	950.01	0.00	0.00	0.00
10/01/23	12/31/23	950.01	950.01	0.00	0.00	0.00
01/01/24	03/31/24	950.01	950.01	0.00	0.00	0.00
04/01/24	06/30/24	950.01	950.01	0.00	0.00	0.00
07/01/24	09/30/24	950.01	950.01	0.00	0.00	0.00
10/01/24	12/31/24	950.01	950.01	0.00	0.00	0.00
01/01/25	03/31/25	950.01	950.01	0.00	0.00	0.00
04/01/25	06/30/25	950.01	950.01	0.00	0.00	0.00
07/01/25	09/30/25	950.01	950.01	0.00	0.00	0.00
10/01/25	12/31/25	950.01	950.01	0.00	0.00	0.00
01/01/26	03/31/26	950.01	950.01	0.00	0.00	0.00
04/01/26	06/30/26	950.01	950.01	0.00	0.00	0.00
07/01/26	09/30/26	950.01	950.01	0.00	0.00	0.00
10/01/26	12/31/26	950.01	950.01	0.00	0.00	0.00
01/01/27	03/31/27	950.01	950.01	0.00	0.00	0.00
04/01/27	06/30/27	950.01	950.01	0.00	0.00	0.00
07/01/27	09/30/27	950.01	950.01	0.00	0.00	0.00
10/01/27	12/31/27	950.01	950.01	0.00	0.00	0.00
01/01/28	03/31/28	950.01	950.01	0.00	0.00	0.00
04/01/28	06/30/28	950.01	950.01	0.00	0.00	0.00
07/01/28	09/30/28	950.01	950.01	0.00	0.00	0.00
10/01/28	12/31/28	950.01	950.01	0.00	0.00	0.00
01/01/29	03/31/29	950.01	950.01	0.00	0.00	0.00
04/01/29	06/30/29	950.01	950.01	0.00	0.00	0.00
07/01/29	09/30/29	950.01	950.01	0.00	0.00	0.00
10/01/29	12/31/29	950.01	950.01	0.00	0.00	0.00
01/01/30	03/31/30	950.01	950.01	0.00	0.00	0.00
04/01/30	06/30/30	950.01	950.01	0.00	0.00	0.00
07/01/30	09/30/30	950.01	950.01	0.00	0.00	0.00
10/01/30	12/31/30	950.01	950.01	0.00	0.00	0.00
01/01/31	03/31/31	950.01	950.01	0.00	0.00	0.00
04/01/31	06/30/31	950.01	950.01	0.00	0.00	0.00
07/01/31	09/30/31	950.01	950.01	0.00	0.00	0.00
10/01/31	12/31/31	950.01	950.01	0.00	0.00	0.00
01/01/32	03/31/32	950.01	950.01	0.00	0.00	0.00
04/01/32	06/30/32	950.01	950.01	0.00	0.00	0.00
07/01/32	09/30/32	950.01	950.01	0.00	0.00	0.00
10/01/32	12/31/32	950.01	950.01	0.00	0.00	0.00
01/01/33	03/31/33	950.01	950.01	0.00	0.00	0.00
04/01/33	06/30/33	950.01	950.01	0.00	0.00	0.00
07/01/33	09/30/33	950.01	950.01	0.00	0.00	0.00
10/01/33	12/31/33	950.01	950.01	0.00	0.00	0.00
01/01/34	03/31/34	950.01	950.01	0.00	0.00	0.00
04/01/34	06/30/34	950.01	950.01	0.00	0.00	0.00
07/01/34	09/30/34	950.01	950.01	0.00	0.00	0.00
10/01/34	12/31/34	950.01	950.01	0.00	0.00	0.00
01/01/35	03/31/35	950.01	950.01	0.00	0.00	0.00
04/01/35	06/30/35	950.01	950.01	0.00	0.00	0.00
07/01/35	09/30/35	950.01	950.01	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)					
10/01/35	12/31/35	950.01	950.01	0.00	0.00	0.00
01/01/36	03/31/36	950.01	950.01	0.00	0.00	0.00
04/01/36	06/30/36	950.01	950.01	0.00	0.00	0.00
07/01/36	09/30/36	950.01	950.01	0.00	0.00	0.00
10/01/36	12/31/36	950.01	950.01	0.00	0.00	0.00
01/01/37	03/31/37	950.01	950.01	0.00	0.00	0.00
04/01/37	06/30/37	950.01	950.01	0.00	0.00	0.00
07/01/37	09/30/37	950.01	950.01	0.00	0.00	0.00
10/01/37	12/31/37	950.01	950.01	0.00	0.00	0.00
01/01/38	03/31/38	950.01	950.01	0.00	0.00	0.00
04/01/38	06/30/38	950.01	950.01	0.00	0.00	0.00
07/01/38	09/30/38	950.01	950.01	0.00	0.00	0.00
10/01/38	12/31/38	950.01	950.01	0.00	0.00	0.00
01/01/39	03/31/39	950.01	950.01	0.00	0.00	0.00
04/01/39	06/30/39	950.01	950.01	0.00	0.00	0.00
07/01/39	09/30/39	950.01	950.01	0.00	0.00	0.00
10/01/39	12/31/39	950.01	950.01	0.00	0.00	0.00
01/01/40	03/31/40	950.01	950.01	0.00	0.00	0.00
04/01/40	06/30/40	950.01	950.01	0.00	0.00	0.00
07/01/40	09/30/40	950.01	950.01	0.00	0.00	0.00
10/01/40	12/31/40	950.01	950.01	0.00	0.00	0.00
01/01/41	03/31/41	950.01	950.01	0.00	0.00	0.00
04/01/41	06/30/41	950.01	950.01	0.00	0.00	0.00
07/01/41	09/30/41	950.01	950.01	0.00	0.00	0.00
10/01/41	12/31/41	950.01	950.01	0.00	0.00	0.00
01/01/42	03/31/42	950.01	950.01	0.00	0.00	0.00
04/01/42	06/30/42	950.01	950.01	0.00	0.00	0.00
07/01/42	09/30/42	950.01	950.01	0.00	0.00	0.00
10/01/42	12/31/42	950.01	950.01	0.00	0.00	0.00
01/01/43	03/31/43	950.01	950.01	0.00	0.00	0.00
04/01/43	06/30/43	950.01	950.01	0.00	0.00	0.00
07/01/43	09/30/43	950.01	950.01	0.00	0.00	0.00
10/01/43	12/31/43	950.01	950.01	0.00	0.00	0.00
01/01/44	03/31/44	950.01	950.01	0.00	0.00	0.00
04/01/44	06/30/44	950.01	950.01	0.00	0.00	0.00
07/01/44	09/30/44	950.01	950.01	0.00	0.00	0.00
10/01/44	12/31/44	950.01	950.01	0.00	0.00	0.00
01/01/45	03/31/45	950.01	950.01	0.00	0.00	0.00
04/01/45	06/30/45	950.01	950.01	0.00	0.00	0.00
07/01/45	09/30/45	950.01	950.01	0.00	0.00	0.00
10/01/45	12/31/45	950.01	950.01	0.00	0.00	0.00
01/01/46	03/31/46	950.01	950.01	0.00	0.00	0.00
04/01/46	06/30/46	950.01	950.01	0.00	0.00	0.00
07/01/46	09/30/46	950.01	950.01	0.00	0.00	0.00
10/01/46	12/31/46	950.01	950.01	0.00	0.00	0.00
01/01/47	03/31/47	950.01	950.01	0.00	0.00	0.00
04/01/47	06/30/47	950.01	950.01	0.00	0.00	0.00
07/01/47	09/30/47	950.01	950.01	0.00	0.00	0.00
10/01/47	12/31/47	950.01	950.01	0.00	0.00	0.00
01/01/48	03/31/48	950.01	950.01	0.00	0.00	0.00
04/01/48	06/30/48	950.01	950.01	0.00	0.00	0.00
07/01/48	09/30/48	950.01	950.01	0.00	0.00	0.00
10/01/48	12/31/48	950.01	950.01	0.00	0.00	0.00
01/01/49	03/31/49	950.01	950.01	0.00	0.00	0.00
04/01/49	06/30/49	950.01	950.01	0.00	0.00	0.00
07/01/49	09/30/49	950.01	950.01	0.00	0.00	0.00
10/01/49	12/31/49	950.01	950.01	0.00	0.00	0.00
01/01/50	03/31/50	950.01	950.01	0.00	0.00	0.00
04/01/50	06/30/50	950.01	950.01	0.00	0.00	0.00
07/01/50	09/30/50	950.01	950.01	0.00	0.00	0.00
10/01/50	12/31/50	950.01	950.01	0.00	0.00	0.00
01/01/51	03/31/51	950.01	950.01	0.00	0.00	0.00
04/01/51	06/30/51	950.01	950.01	0.00	0.00	0.00
07/01/51	09/30/51	950.01	950.01	0.00	0.00	0.00
10/01/51	12/31/51	950.01	950.01	0.00	0.00	0.00
01/01/52	03/31/52	950.01	950.01	0.00	0.00	0.00
04/01/52	06/30/52	950.01	950.01	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)<sub>t-1</sub>, t-1 implies that is nonadmitted if not received in 90 days.

(6) = max{ 0, -(5) x [ 1.0 - Table A1, (4) x Table A1, (1a) / Table A1, (1b) ] }

(7) = Table A1, (1b) x [ Table C5\_2, (6) - Table C5\_1, (12) ] - (6)

VII 00052 STIP

TABLE C5.1: POLICYHOLDER SUPPLIED - UNDERWRITING CASH FLOW PATTERNS

TIME INTERVAL		COLLECTED PREMIUM	LOSS & LAE PAYOUT	COMMISS. & BROKER.	GENERAL EXPENSES	OTHER ACQ. EXPENSES	PREMIUM TAXES	MISC. AND OTHER TAXES	REINS. EXPENSES	PREMIUM DISCOUNT	CUMULATIVE	
FROM	TO										COLLECTED PREMIUM	LOSS & LAE PAYOUT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
07/01/15	09/30/15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
10/01/15	12/31/15	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
01/01/16	03/31/16	0.00%	0.00%	0.0000%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
04/01/16	06/30/16	0.57%	0.00%	0.5744%	0.00%	3.99%	0.00%	0.00%	0.00%	0.57%	0.57%	0.00%
07/01/16	09/30/16	5.64%	0.73%	5.6363%	13.58%	23.49%	0.00%	23.94%	23.94%	5.64%	6.21%	0.73%
10/01/16	12/31/16	12.30%	1.95%	12.2977%	14.94%	22.67%	23.94%	21.21%	21.21%	12.30%	18.51%	2.68%
01/01/17	03/31/17	19.21%	3.56%	19.2059%	22.90%	29.13%	21.21%	29.99%	29.99%	19.21%	37.71%	6.24%
04/01/17	06/30/17	21.12%	4.91%	21.1204%	23.34%	20.72%	29.99%	24.86%	24.86%	21.12%	58.83%	11.15%
07/01/17	09/30/17	17.41%	5.72%	17.4076%	10.89%	0.00%	24.86%	0.00%	0.00%	17.41%	76.24%	16.87%
10/01/17	12/31/17	10.36%	5.89%	10.3582%	8.23%	0.00%	0.00%	0.00%	0.00%	10.36%	86.60%	22.76%
01/01/18	03/31/18	5.51%	6.06%	5.5143%	4.59%	0.00%	0.00%	0.00%	0.00%	5.51%	92.11%	28.82%
04/01/18	06/30/18	2.99%	6.19%	2.9906%	1.53%	0.00%	0.00%	0.00%	0.00%	2.99%	95.11%	35.01%
07/01/18	09/30/18	2.21%	6.03%	2.2098%	0.00%	0.00%	0.00%	0.00%	0.00%	2.21%	97.32%	41.03%
10/01/18	12/31/18	1.51%	5.59%	1.5085%	0.00%	0.00%	0.00%	0.00%	0.00%	1.51%	98.82%	46.62%
01/01/19	03/31/19	0.75%	4.93%	0.7528%	0.00%	0.00%	0.00%	0.00%	0.00%	0.75%	99.58%	51.55%
04/01/19	06/30/19	0.33%	4.38%	0.3282%	0.00%	0.00%	0.00%	0.00%	0.00%	0.33%	99.90%	55.93%
07/01/19	09/30/19	0.10%	3.93%	0.0954%	0.00%	0.00%	0.00%	0.00%	0.00%	0.10%	100.00%	59.87%
10/01/19	12/31/19	0.00%	3.61%	0.0000%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	63.48%
01/01/20	03/31/20	0.00%	3.14%	0.0000%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	66.62%
04/01/20	06/30/20	0.00%	2.74%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	69.36%
07/01/20	09/30/20	0.00%	2.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	71.79%
10/01/20	12/31/20	0.00%	2.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	74.01%
01/01/21	03/31/21	0.00%	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	75.93%
04/01/21	06/30/21	0.00%	1.66%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	77.60%
07/01/21	09/30/21	0.00%	1.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	79.02%
10/01/21	12/31/21	0.00%	1.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	80.23%
01/01/22	03/31/22	0.00%	0.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	81.15%
04/01/22	06/30/22	0.00%	0.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	81.82%
07/01/22	09/30/22	0.00%	0.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	82.35%
10/01/22	12/31/22	0.00%	0.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	82.86%
01/01/23	03/31/23	0.00%	0.47%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	83.32%
04/01/23	06/30/23	0.00%	0.43%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	83.75%
07/01/23	09/30/23	0.00%	0.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	84.16%
10/01/23	12/31/23	0.00%	0.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	84.56%
01/01/24	03/31/24	0.00%	0.38%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	84.94%
04/01/24	06/30/24	0.00%	0.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	85.30%
07/01/24	09/30/24	0.00%	0.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	85.63%
10/01/24	12/31/24	0.00%	0.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	85.93%
01/01/25	03/31/25	0.00%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	86.18%
04/01/25	06/30/25	0.00%	0.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	86.39%
07/01/25	09/30/25	0.00%	0.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	86.57%
10/01/25	12/31/25	0.00%	0.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	86.76%
01/01/26	03/31/26	0.00%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	86.94%
04/01/26	06/30/26	0.00%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	87.12%
07/01/26	09/30/26	0.00%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	87.30%
10/01/26	12/31/26	0.00%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	87.48%
01/01/27	03/31/27	0.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	87.65%
04/01/27	06/30/27	0.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	87.82%
07/01/27	09/30/27	0.00%	0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	87.98%
10/01/27	12/31/27	0.00%	0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	88.14%
01/01/28	03/31/28	0.00%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	88.29%
04/01/28	06/30/28	0.00%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	88.44%
07/01/28	09/30/28	0.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	88.61%
10/01/28	12/31/28	0.00%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	88.81%
01/01/29	03/31/29	0.00%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	89.06%
04/01/29	06/30/29	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	89.34%
07/01/29	09/30/29	0.00%	0.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	89.62%
10/01/29	12/31/29	0.00%	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	89.86%
01/01/30	03/31/30	0.00%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.03%
04/01/30	06/30/30	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.16%
07/01/30	09/30/30	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.27%
10/01/30	12/31/30	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.38%
01/01/31	03/31/31	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.51%
04/01/31	06/30/31	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.65%
07/01/31	09/30/31	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.79%
10/01/31	12/31/31	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	90.91%
01/01/32	03/31/32	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.03%
04/01/32	06/30/32	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.12%
07/01/32	09/30/32	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.22%
10/01/32	12/31/32	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.31%
01/01/33	03/31/33	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.41%
04/01/33	06/30/33	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.50%
07/01/33	09/30/33	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.61%
10/01/33	12/31/33	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.72%
01/01/34	03/31/34	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.84%
04/01/34	06/30/34	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	91.96%
07/01/34	09/30/34	0.00%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.09%
10/01/34	12/31/34	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.21%
01/01/35	03/31/35	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.33%
04/01/35	06/30/35	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.44%
07/01/35	09/30/35	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.54%
10/01/35	12/31/35	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.64%
01/01/36	03/31/36	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.72%



VII 00053 STIP

TABLE C5\_1: POLICYHOLDER SUPPLIED - UNDERWRITING CASH FLOW PATTERNS

TIME INTERVAL		COLLECTED PREMIUM	LOSS & LAE PAYOUT	COMMISS. & BROKER.	GENERAL EXPENSES	OTHER ACQ. EXPENSES	PREMIUM TAXES	MISC. AND OTHER TAXES	REINS. EXPENSES	PREMIUM DISCOUNT	CUMULATIVE	
FROM (1)	TO (2)										COLLECTED PREMIUM (12)	LOSS & LAE PAYOUT (13)
04/01/36	06/30/36	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.79%
07/01/36	09/30/36	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.85%
10/01/36	12/31/36	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.92%
01/01/37	03/31/37	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	92.99%
04/01/37	06/30/37	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.06%
07/01/37	09/30/37	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.14%
10/01/37	12/31/37	0.00%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.23%
01/01/38	03/31/38	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.33%
04/01/38	06/30/38	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.45%
07/01/38	09/30/38	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.57%
10/01/38	12/31/38	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.69%
01/01/39	03/31/39	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.81%
04/01/39	06/30/39	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	93.93%
07/01/39	09/30/39	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.05%
10/01/39	12/31/39	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.18%
01/01/40	03/31/40	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.30%
04/01/40	06/30/40	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.42%
07/01/40	09/30/40	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.54%
10/01/40	12/31/40	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.66%
01/01/41	03/31/41	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.78%
04/01/41	06/30/41	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	94.90%
07/01/41	09/30/41	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.02%
10/01/41	12/31/41	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.15%
01/01/42	03/31/42	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.27%
04/01/42	06/30/42	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.39%
07/01/42	09/30/42	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.51%
10/01/42	12/31/42	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.63%
01/01/43	03/31/43	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.75%
04/01/43	06/30/43	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.87%
07/01/43	09/30/43	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	95.99%
10/01/43	12/31/43	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.12%
01/01/44	03/31/44	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.24%
04/01/44	06/30/44	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.36%
07/01/44	09/30/44	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.48%
10/01/44	12/31/44	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.60%
01/01/45	03/31/45	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.72%
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%	96.84%
07/01/45	09/30/45	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	96.96%
10/01/45	12/31/45	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.09%
01/01/46	03/31/46	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.21%
04/01/46	06/30/46	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.33%
07/01/46	09/30/46	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.45%
10/01/46	12/31/46	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.57%
01/01/47	03/31/47	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.69%
04/01/47	06/30/47	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.81%
07/01/47	09/30/47	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	97.94%
10/01/47	12/31/47	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.06%
01/01/48	03/31/48	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.18%
04/01/48	06/30/48	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.30%
07/01/48	09/30/48	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.42%
10/01/48	12/31/48	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.54%
01/01/49	03/31/49	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.66%
04/01/49	06/30/49	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.78%
07/01/49	09/30/49	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	98.91%
10/01/49	12/31/49	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.03%
01/01/50	03/31/50	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.15%
04/01/50	06/30/50	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.27%
07/01/50	09/30/50	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.39%
10/01/50	12/31/50	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.51%
01/01/51	03/31/51	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.63%
04/01/51	06/30/51	0.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.76%
07/01/51	09/30/51	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.86%
10/01/51	12/31/51	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.94%
01/01/52	03/31/52	0.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	99.99%
04/01/52	06/30/52	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%
TOTAL		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		

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)<sub>t+1</sub> + 5/6 x Table C5\_2, (3)<sub>t</sub>  
 (8) = Table C5\_2, (3)<sub>t-1</sub>  
 (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)
07/01/15	09/30/15		0.00%	0.00%	0.00%	0.00%	0.00%
10/01/15	12/31/15		0.00%	0.00%	0.00%	0.00%	0.00%
01/01/16	03/31/16		0.00%	0.00%	0.00%	0.00%	0.00%
04/01/16	06/30/16		0.00%	0.00%	0.00%	0.00%	0.00%
07/01/16	09/30/16	23.94%	3.22%	3.22%	23.94%	3.22%	3.22%
10/01/16	12/31/16	21.21%	8.68%	8.68%	45.15%	11.90%	11.90%
01/01/17	03/31/17	29.99%	15.82%	15.82%	75.14%	27.72%	27.72%
04/01/17	06/30/17	24.86%	21.81%	21.81%	100.00%	49.53%	49.53%
07/01/17	09/30/17		21.78%	21.78%	100.00%	71.31%	71.31%
10/01/17	12/31/17		16.46%	16.46%	100.00%	87.77%	87.77%
01/01/18	03/31/18		9.18%	9.18%	100.00%	96.95%	96.95%
04/01/18	06/30/18		3.05%	3.05%	100.00%	100.00%	100.00%
07/01/18	09/30/18		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/18	12/31/18		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/19	03/31/19		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/19	06/30/19		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/19	09/30/19		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/19	12/31/19		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/20	03/31/20		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/20	06/30/20		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/20	09/30/20		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/20	12/31/20		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/21	03/31/21		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/21	06/30/21		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/21	09/30/21		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/21	12/31/21		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/22	03/31/22		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/22	06/30/22		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/22	09/30/22		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/22	12/31/22		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/23	03/31/23		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/23	06/30/23		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/23	09/30/23		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/23	12/31/23		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/24	03/31/24		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/24	06/30/24		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/24	09/30/24		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/24	12/31/24		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/25	03/31/25		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/25	06/30/25		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/25	09/30/25		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/25	12/31/25		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/26	03/31/26		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/26	06/30/26		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/26	09/30/26		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/26	12/31/26		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/27	03/31/27		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/27	06/30/27		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/27	09/30/27		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/27	12/31/27		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/28	03/31/28		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/28	06/30/28		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/28	09/30/28		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/28	12/31/28		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/29	03/31/29		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/29	06/30/29		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/29	09/30/29		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/29	12/31/29		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/30	03/31/30		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/30	06/30/30		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/30	09/30/30		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/30	12/31/30		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/31	03/31/31		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/31	06/30/31		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/31	09/30/31		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/31	12/31/31		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/32	03/31/32		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/32	06/30/32		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/32	09/30/32		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/32	12/31/32		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/33	03/31/33		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/33	06/30/33		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/33	09/30/33		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/33	12/31/33		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/34	03/31/34		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/34	06/30/34		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/34	09/30/34		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/34	12/31/34		0.00%	0.00%	100.00%	100.00%	100.00%
01/01/35	03/31/35		0.00%	0.00%	100.00%	100.00%	100.00%
04/01/35	06/30/35		0.00%	0.00%	100.00%	100.00%	100.00%
07/01/35	09/30/35		0.00%	0.00%	100.00%	100.00%	100.00%
10/01/35	12/31/35		0.00%	0.00%	100.00%	100.00%	100.00%

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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)
01/01/36	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%
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%
TOTAL		100.00%	100.00%	100.00%			

Notes:

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

VII 000056 STIP

TABLE D1: CAPITAL NEEDED FROM INVESTORS

TIME INTERVAL		UNEARNED PREMIUM RESERVES (3)	LOSS & LAE RESERVES (4)	TOTAL RESERVES (5)	RESERVES TO SURPLUS RATIO (6)	IMPLIED SURPLUS (7)	RESERVES FUNDED BY INVESTORS (8)	CAPITAL NEEDED FROM INVESTORS (9)
FROM (1)	TO (2)							
07/01/15	09/30/15	0.00	0.00	0.00	1.84	0.00	0.00	0.00
10/01/15	12/31/15	0.00	0.00	0.00	1.84	0.00	0.00	0.00
01/01/16	03/31/16	0.00	0.00	0.00	1.84	0.00	0.00	0.00
04/01/16	06/30/16	0.00	0.00	0.00	1.84	0.00	5.46	5.46
07/01/16	09/30/16	196.83	19.24	216.07	1.84	117.28	9.26	126.54
10/01/16	12/31/16	315.85	71.01	386.86	1.84	209.98	23.15	233.13
01/01/17	03/31/17	450.42	165.41	615.83	1.84	334.26	40.62	374.88
04/01/17	06/30/17	479.43	295.54	774.97	1.84	420.65	46.87	467.51
07/01/17	09/30/17	272.57	419.20	691.77	1.84	375.48	33.12	408.60
10/01/17	12/31/17	116.22	500.54	616.76	1.84	334.77	17.93	352.69
01/01/18	03/31/18	29.02	524.57	553.59	1.84	300.48	7.57	308.06
04/01/18	06/30/18	0.00	500.43	500.43	1.84	271.63	21.59	293.21
07/01/18	09/30/18	0.00	454.02	454.02	1.84	246.44	31.09	277.53
10/01/18	12/31/18	0.00	411.00	411.00	1.84	223.09	19.26	242.35
01/01/19	03/31/19	0.00	373.02	373.02	1.84	202.47	12.39	214.86
04/01/19	06/30/19	0.00	339.31	339.31	1.84	184.17	9.01	193.18
07/01/19	09/30/19	0.00	309.03	309.03	1.84	167.73	7.56	175.29
10/01/19	12/31/19	0.00	281.21	281.21	1.84	152.64	6.89	159.53
01/01/20	03/31/20	0.00	257.04	257.04	1.84	139.52	6.50	146.01
04/01/20	06/30/20	0.00	235.93	235.93	1.84	128.06	6.10	134.16
07/01/20	09/30/20	0.00	217.21	217.21	1.84	117.90	5.71	123.61
10/01/20	12/31/20	0.00	200.08	200.08	1.84	108.60	5.32	113.92
01/01/21	03/31/21	0.00	185.30	185.30	1.84	100.58	5.17	105.74
04/01/21	06/30/21	0.00	172.49	172.49	1.84	93.63	5.02	98.64
07/01/21	09/30/21	0.00	161.56	161.56	1.84	87.69	4.86	92.56
10/01/21	12/31/21	0.00	152.24	152.24	1.84	82.64	4.71	87.35
01/01/22	03/31/22	0.00	145.18	145.18	1.84	78.80	4.54	83.34
04/01/22	06/30/22	0.00	140.02	140.02	1.84	76.00	4.36	80.36
07/01/22	09/30/22	0.00	135.90	135.90	1.84	73.77	4.19	77.95
10/01/22	12/31/22	0.00	131.99	131.99	1.84	71.64	4.01	75.66
01/01/23	03/31/23	0.00	128.41	128.41	1.84	69.70	3.84	73.54
04/01/23	06/30/23	0.00	125.10	125.10	1.84	67.90	3.68	71.58
07/01/23	09/30/23	0.00	121.96	121.96	1.84	66.20	3.51	69.71
10/01/23	12/31/23	0.00	118.91	118.91	1.84	64.54	3.34	67.88
01/01/24	03/31/24	0.00	116.00	116.00	1.84	62.96	3.24	66.20
04/01/24	06/30/24	0.00	113.21	113.21	1.84	61.45	3.13	64.59
07/01/24	09/30/24	0.00	110.64	110.64	1.84	60.05	3.03	63.08
10/01/24	12/31/24	0.00	108.33	108.33	1.84	58.80	2.93	61.73
01/01/25	03/31/25	0.00	106.42	106.42	1.84	57.76	2.80	60.56
04/01/25	06/30/25	0.00	104.83	104.83	1.84	56.90	2.68	59.58
07/01/25	09/30/25	0.00	103.39	103.39	1.84	56.12	2.56	58.68
10/01/25	12/31/25	0.00	101.96	101.96	1.84	55.34	2.43	57.77
01/01/26	03/31/26	0.00	100.54	100.54	1.84	54.57	2.31	56.89
04/01/26	06/30/26	0.00	99.14	99.14	1.84	53.81	2.19	56.01
07/01/26	09/30/26	0.00	97.76	97.76	1.84	53.06	2.07	55.13
10/01/26	12/31/26	0.00	96.39	96.39	1.84	52.32	1.95	54.27
01/01/27	03/31/27	0.00	95.08	95.08	1.84	51.61	1.84	53.44
04/01/27	06/30/27	0.00	93.80	93.80	1.84	50.91	1.72	52.63
07/01/27	09/30/27	0.00	92.55	92.55	1.84	50.23	1.61	51.84
10/01/27	12/31/27	0.00	91.32	91.32	1.84	49.57	1.49	51.06
01/01/28	03/31/28	0.00	90.14	90.14	1.84	48.93	1.37	50.30
04/01/28	06/30/28	0.00	89.00	89.00	1.84	48.31	1.25	49.56
07/01/28	09/30/28	0.00	87.71	87.71	1.84	47.61	1.13	48.74
10/01/28	12/31/28	0.00	86.15	86.15	1.84	46.76	1.00	47.77
01/01/29	03/31/29	0.00	84.25	84.25	1.84	45.73	0.90	46.63
04/01/29	06/30/29	0.00	82.06	82.06	1.84	44.54	0.80	45.34
07/01/29	09/30/29	0.00	79.91	79.91	1.84	43.37	0.70	44.07
10/01/29	12/31/29	0.00	78.09	78.09	1.84	42.39	0.60	42.99
01/01/30	03/31/30	0.00	76.73	76.73	1.84	41.65	0.51	42.16
04/01/30	06/30/30	0.00	75.76	75.76	1.84	41.12	0.42	41.55
07/01/30	09/30/30	0.00	74.94	74.94	1.84	40.68	0.34	41.01
10/01/30	12/31/30	0.00	74.04	74.04	1.84	40.19	0.25	40.44
01/01/31	03/31/31	0.00	73.06	73.06	1.84	39.65	0.24	39.89
04/01/31	06/30/31	0.00	71.99	71.99	1.84	39.08	0.22	39.30
07/01/31	09/30/31	0.00	70.93	70.93	1.84	38.50	0.21	38.71
10/01/31	12/31/31	0.00	69.96	69.96	1.84	37.97	0.19	38.17
01/01/32	03/31/32	0.00	69.10	69.10	1.84	37.51	0.19	37.70
04/01/32	06/30/32	0.00	68.34	68.34	1.84	37.09	0.19	37.28
07/01/32	09/30/32	0.00	67.62	67.62	1.84	36.71	0.19	36.89
10/01/32	12/31/32	0.00	66.89	66.89	1.84	36.31	0.19	36.49
01/01/33	03/31/33	0.00	66.16	66.16	1.84	35.91	0.18	36.09
04/01/33	06/30/33	0.00	65.41	65.41	1.84	35.50	0.18	35.68
07/01/33	09/30/33	0.00	64.62	64.62	1.84	35.08	0.18	35.25
10/01/33	12/31/33	0.00	63.78	63.78	1.84	34.62	0.17	34.79
01/01/34	03/31/34	0.00	62.86	62.86	1.84	34.12	0.17	34.29
04/01/34	06/30/34	0.00	61.89	61.89	1.84	33.59	0.17	33.76
07/01/34	09/30/34	0.00	60.90	60.90	1.84	33.06	0.17	33.23
10/01/34	12/31/34	0.00	59.95	59.95	1.84	32.54	0.16	32.71
01/01/35	03/31/35	0.00	59.06	59.06	1.84	32.05	0.16	32.22
04/01/35	06/30/35	0.00	58.21	58.21	1.84	31.59	0.16	31.76
07/01/35	09/30/35	0.00	57.42	57.42	1.84	31.17	0.16	31.33
10/01/35	12/31/35	0.00	56.70	56.70	1.84	30.77	0.16	30.93

**VII 000057 STIP**

**TABLE D1: CAPITAL NEEDED FROM INVESTORS**

TIME INTERVAL		UNEARNED PREMIUM RESERVES (3)	LOSS & LAE RESERVES (4)	TOTAL RESERVES (5)	RESERVES TO SURPLUS RATIO (6)	IMPLIED SURPLUS (7)	RESERVES FUNDED BY INVESTORS (8)	CAPITAL NEEDED FROM INVESTORS (9)
FROM (1)	TO (2)							
01/01/36	03/31/36	0.00	56.08	56.08	1.84	30.44	0.16	30.59
04/01/36	06/30/36	0.00	55.54	55.54	1.84	30.15	0.16	30.30
07/01/36	09/30/36	0.00	55.04	55.04	1.84	29.87	0.15	30.03
10/01/36	12/31/36	0.00	54.52	54.52	1.84	29.59	0.15	29.74
01/01/37	03/31/37	0.00	53.98	53.98	1.84	29.30	0.15	29.45
04/01/37	06/30/37	0.00	53.43	53.43	1.84	29.00	0.15	29.15
07/01/37	09/30/37	0.00	52.83	52.83	1.84	28.67	0.14	28.82
10/01/37	12/31/37	0.00	52.14	52.14	1.84	28.30	0.14	28.44
01/01/38	03/31/38	0.00	51.34	51.34	1.84	27.87	0.14	28.01
04/01/38	06/30/38	0.00	50.46	50.46	1.84	27.39	0.14	27.52
07/01/38	09/30/38	0.00	49.53	49.53	1.84	26.88	0.13	27.01
10/01/38	12/31/38	0.00	48.59	48.59	1.84	26.37	0.13	26.50
01/01/39	03/31/39	0.00	47.65	47.65	1.84	25.86	0.13	25.99
04/01/39	06/30/39	0.00	46.72	46.72	1.84	25.36	0.12	25.49
07/01/39	09/30/39	0.00	45.79	45.79	1.84	24.85	0.12	24.98
10/01/39	12/31/39	0.00	44.85	44.85	1.84	24.34	0.12	24.46
01/01/40	03/31/40	0.00	43.92	43.92	1.84	23.84	0.12	23.95
04/01/40	06/30/40	0.00	42.99	42.99	1.84	23.33	0.11	23.45
07/01/40	09/30/40	0.00	42.05	42.05	1.84	22.83	0.11	22.94
10/01/40	12/31/40	0.00	41.11	41.11	1.84	22.32	0.11	22.42
01/01/41	03/31/41	0.00	40.18	40.18	1.84	21.81	0.11	21.91
04/01/41	06/30/41	0.00	39.25	39.25	1.84	21.30	0.10	21.41
07/01/41	09/30/41	0.00	38.32	38.32	1.84	20.80	0.10	20.90
10/01/41	12/31/41	0.00	37.38	37.38	1.84	20.29	0.10	20.39
01/01/42	03/31/42	0.00	36.44	36.44	1.84	19.78	0.10	19.88
04/01/42	06/30/42	0.00	35.51	35.51	1.84	19.28	0.09	19.37
07/01/42	09/30/42	0.00	34.58	34.58	1.84	18.77	0.09	18.86
10/01/42	12/31/42	0.00	33.64	33.64	1.84	18.26	0.09	18.35
01/01/43	03/31/43	0.00	32.71	32.71	1.84	17.75	0.08	17.84
04/01/43	06/30/43	0.00	31.78	31.78	1.84	17.25	0.08	17.33
07/01/43	09/30/43	0.00	30.84	30.84	1.84	16.74	0.08	16.82
10/01/43	12/31/43	0.00	29.90	29.90	1.84	16.23	0.08	16.31
01/01/44	03/31/44	0.00	28.97	28.97	1.84	15.72	0.07	15.80
04/01/44	06/30/44	0.00	28.04	28.04	1.84	15.22	0.07	15.29
07/01/44	09/30/44	0.00	27.11	27.11	1.84	14.71	0.07	14.78
10/01/44	12/31/44	0.00	26.17	26.17	1.84	14.20	0.07	14.27
01/01/45	03/31/45	0.00	25.23	25.23	1.84	13.70	0.06	13.76
04/01/45	06/30/45	0.00	24.30	24.30	1.84	13.19	0.06	13.25
07/01/45	09/30/45	0.00	23.37	23.37	1.84	12.68	0.06	12.74
10/01/45	12/31/45	0.00	22.43	22.43	1.84	12.18	0.05	12.23
01/01/46	03/31/46	0.00	21.50	21.50	1.84	11.67	0.05	11.72
04/01/46	06/30/46	0.00	20.57	20.57	1.84	11.16	0.05	11.21
07/01/46	09/30/46	0.00	19.63	19.63	1.84	10.66	0.05	10.70
10/01/46	12/31/46	0.00	18.69	18.69	1.84	10.15	0.04	10.19
01/01/47	03/31/47	0.00	17.76	17.76	1.84	9.64	0.04	9.68
04/01/47	06/30/47	0.00	16.83	16.83	1.84	9.14	0.04	9.17
07/01/47	09/30/47	0.00	15.90	15.90	1.84	8.63	0.04	8.66
10/01/47	12/31/47	0.00	14.96	14.96	1.84	8.12	0.03	8.15
01/01/48	03/31/48	0.00	14.02	14.02	1.84	7.61	0.03	7.64
04/01/48	06/30/48	0.00	13.09	13.09	1.84	7.11	0.03	7.13
07/01/48	09/30/48	0.00	12.16	12.16	1.84	6.60	0.02	6.63
10/01/48	12/31/48	0.00	11.22	11.22	1.84	6.09	0.02	6.11
01/01/49	03/31/49	0.00	10.29	10.29	1.84	5.58	0.02	5.60
04/01/49	06/30/49	0.00	9.36	9.36	1.84	5.08	0.02	5.10
07/01/49	09/30/49	0.00	8.42	8.42	1.84	4.57	0.01	4.59
10/01/49	12/31/49	0.00	7.49	7.49	1.84	4.06	0.01	4.07
01/01/50	03/31/50	0.00	6.55	6.55	1.84	3.56	0.01	3.56
04/01/50	06/30/50	0.00	5.62	5.62	1.84	3.05	0.01	3.06
07/01/50	09/30/50	0.00	4.69	4.69	1.84	2.54	0.00	2.55
10/01/50	12/31/50	0.00	3.75	3.75	1.84	2.03	0.00	2.04
01/01/51	03/31/51	0.00	2.81	2.81	1.84	1.53	0.00	1.53
04/01/51	06/30/51	0.00	1.89	1.89	1.84	1.02	0.00	1.02
07/01/51	09/30/51	0.00	1.07	1.07	1.84	0.58	0.00	0.58
10/01/51	12/31/51	0.00	0.46	0.46	1.84	0.25	0.00	0.25
01/01/52	03/31/52	0.00	0.11	0.11	1.84	0.06	0.00	0.06
04/01/52	06/30/52	0.00	0.00	0.00	1.84	0.00	0.00	0.00
TOTAL		1,860.34	13,071.40	14,931.75		8,104.74	422.34	8,527.09

Notes:

- (3) = Table A1, (1b) x [ Table C5\_2, (6) - Table C5\_2, (7) ]
- (4) = Table A1, (1a) x Table A1, (3) x [ Table C5\_2, (8) - Table C5\_1, (13) ]
- (5) = (3) + (4)
- (6) = Table A1, (13)
- (7) = (5) / (6)
- (8) = Table C3, (11)
- (9) = (7) + (8)

# VII 000080 STIP

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Section VII - E  
Exhibit 1

## Cost of Capital: Summary Exhibit for Property-Casualty Insurance Companies

(1) Discounted Cash Flow	7.37%
(2) Capital Asset Pricing Model	9.15%
(3) Equity Capital Cost	8.26%
(4) Debt Capital Cost	4.16%
(5) Capital Structure	
(a) Equity Capital Share	80%
(b) Debt Capital Share	20%
(6) Weighted Average Cost of Capital (WACC)	7.44%

### Notes:

(1): Exhibit 2, page 1

(2): Exhibit 3, page 1

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

(4): Section VII-J, Exhibit 2, page 3, line (12).

(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

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

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

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

	Time (t) (1)	Dividend Growth Rate (g) (2)	Discounted Dividends (3)
Stage 1	1	7.25%	
	2	7.25%	
	3	7.25%	
	4	7.25%	
	5	7.25%	4.65
Stage 2	6	6.84%	0.92
	7	6.43%	0.91
	8	6.01%	0.90
	9	5.60%	0.89
Stage 3	≥10	5.19%	42.87
(4) Total Discounted Dividends			51.15

(5) Dividend Yield Rate ( $D_1/V_0$ )

1.96%

(6) Cost of Capital (k)

**7.37%**

**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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 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	1,056.6	
1930	966.7	-8.51%
1931	904.8	-6.40%
1932	788.2	-12.89%
1933	778.3	-1.26%
1934	862.2	10.78%
1935	939.0	8.91%
1936	1,060.5	12.94%
1937	1,114.6	5.10%
1938	1,077.7	-3.31%
1939	1,163.6	7.97%
1940	1,266.1	8.81%
1941	1,490.3	17.71%
1942	1,771.8	18.89%
1943	2,073.7	17.04%
1944	2,239.4	7.99%
1945	2,217.8	-0.96%
1946	1,960.9	-11.58%
1947	1,939.4	-1.10%
1948	2,020.0	4.16%
1949	2,008.9	-0.55%
1950	2,184.0	8.72%
1951	2,360.0	8.06%
1952	2,456.1	4.07%
1953	2,571.4	4.69%
1954	2,556.9	-0.56%
1955	2,739.0	7.12%
1956	2,797.4	2.13%
1957	2,856.3	2.11%
1958	2,835.3	-0.74%
1959	3,031.0	6.90%
1960	3,108.7	2.56%
1961	3,188.1	2.55%
1962	3,383.1	6.12%
1963	3,530.4	4.35%
1964	3,734.0	5.77%
1965	3,976.7	6.50%
1966	4,238.9	6.59%
1967	4,355.2	2.74%
1968	4,569.0	4.91%
1969	4,712.5	3.14%
1970	4,722.0	0.20%
1971	4,877.6	3.30%
1972	5,134.3	5.26%
1973	5,424.1	5.64%
1974	5,396.0	-0.52%
1975	5,385.4	-0.20%
1976	5,675.4	5.38%
1977	5,937.0	4.61%
1978	6,267.2	5.56%
1979	6,466.2	3.18%



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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)
1980	6,450.4	-0.24%
1981	6,617.7	2.59%
1982	6,491.3	-1.91%
1983	6,792.0	4.63%
1984	7,285.0	7.26%
1985	7,593.8	4.24%
1986	7,860.5	3.51%
1987	8,132.6	3.46%
1988	8,474.5	4.20%
1989	8,786.4	3.68%
1990	8,955.0	1.92%
1991	8,948.4	-0.07%
1992	9,266.6	3.56%
1993	9,521.0	2.75%
1994	9,905.4	4.04%
1995	10,174.8	2.72%
1996	10,561.0	3.80%
1997	11,034.9	4.49%
1998	11,525.9	4.45%
1999	12,065.9	4.69%
2000	12,559.7	4.09%
2001	12,682.2	0.98%
2002	12,908.8	1.79%
2003	13,271.1	2.81%
2004	13,773.5	3.79%
2005	14,234.2	3.34%
2006	14,613.8	2.67%
2007	14,873.7	1.78%
2008	14,830.4	-0.29%
2009	14,418.7	-2.78%
2010	14,783.8	2.53%
2011	15,020.6	1.60%
2012	15,354.6	2.22%
2013	15,583.3	1.49%
2014	15,961.7	2.43%
(4) Average		3.37%
(5) Rate of Expected Inflation		1.76%
(6) Long-Term Dividend Growth Rate		<b>5.19%</b>

Notes:

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

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

(5): Page 3

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

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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)
2014-10	2.30	0.38	1.92
2014-11	2.33	0.45	1.88
2014-12	2.21	0.51	1.70
2015-01	1.88	0.27	1.61
2015-02	1.98	0.26	1.72
2015-03	2.04	0.28	1.76
2015-04	1.94	0.08	1.86
2015-05	2.20	0.33	1.87
2015-06	2.36	0.50	1.86
2015-07	2.32	0.50	1.82
2015-08	2.17	0.56	1.61
2015-09	2.17	0.65	1.52
<b>Average</b>			<b>1.76%</b>

Source: Federal Reserve Statistical Release, H.15.

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Exhibit 2  
Page 4

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

(1) Growth Forecast { = [ (a) + (b) ] / 2.0 }	6.39
(a) Dividend Component	6.00
(b) Earnings Component	6.77
(2) Fundamental Analysis [ = (a) + (b) ]	8.12
(a) Retention to book	8.41
(b) Stock issuance factor	-0.29
(3) Short-Term Dividend Growth Rate { = [ (1) + (2) ] / 2.0 }	7.25

Notes:

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

Discounted Cash Flow (DCF) Analysis: Parameter Estimation

Property/Casualty Insurance Companies (1)	Dividend Yield (2)	Average Dividend Growth Rate			Average Earnings Growth Rate			Average Earnings Retention Rates as a Percent of Common Equity			Stock Issuance Adjustment Factor			
		Annual Rate of Change			Annual Rate of Change			as a Percent of Common Equity			2015	2018 - 2020	2018 - 2020	Stock Issuance
		Past 10 Years (3)	Past 5 Years (4)	Forecast (5)	Past 10 Years (6)	Past 5 Years (7)	Forecast (8)	Past 10 Years (9)	Past 5 Years (10)	Forecast (11)	Shares (12)	Shares (13)	Market/ Book (14)	Adjustment Factor (15)
1347 PROPERTY INS HLDGS INC	Nil	NA	NA	NA	NA	NA	NA	7.31	7.31	NA	NA	NA	NA	NA
ACE LTD	2.70	11.50	14.50	7.00	11.00	2.50	9.60	10.55	7.82	9.50	315.00	315.00	1.14	0.00
ACMAT CORP -CL A	Nil	NA	NA	NA	-2.36	14.26	NA	5.98	2.88	NA	NA	NA	NA	NA
AFFIRMATIVE INS HOLDINGS INC	Nil	NA	NA	NA	NA	NA	NA	4.15	0.00	NA	NA	NA	NA	NA
ALLEGHANY CORP	Nil	NA	NA	NIL	NA	16.00	8.50	7.14	7.24	6.50	16.00	16.00	0.94	0.00
ALLIANZ SE -ADR	5.11	-2.73	0.72	NA	18.83	-1.32	7.40	7.10	5.27	NA	NA	NA	NA	NA
ALLIED WORLD ASSURANCE CO AG	2.70	NA	22.00	NA	22.10	12.00	-7.50	13.29	11.42	NA	NA	NA	NA	NA
ALLSTATE CORP	2.10	0.50	-6.50	6.00	3.50	3.50	NA	7.72	4.84	10.00	395.00	375.00	1.40	-0.52
AMBAC FINANCIAL GROUP INC	Nil	NA	NA	NA	19.02	NA	11.00	NA	NA	NA	NA	NA	NA	NA
AMERICAN FINANCIAL GROUP INC	1.80	9.50	11.50	10.50	10.00	1.00	8.00	9.14	6.42	7.00	87.00	86.00	1.06	-0.02
AMERICAN INTERNATIONAL GROUP	2.05	NA	NA	NA	-22.00	NA	10.51	10.53	11.41	NA	NA	NA	NA	NA
AMERICAN NATIONAL INSURANCE	3.41	0.40	0.07	NA	4.36	53.22	NA	3.74	3.13	NA	NA	NA	NA	NA
AMERICAN OVERSEAS GROUP LTD	Nil	NA	NA	NA	-10.20	NA	13.00	22.32	26.17	NA	NA	NA	NA	NA
AMERISAFE INC	1.35	NA	NA	NA	18.50	-0.50	10.00	12.07	7.90	NA	NA	NA	NA	NA
AMTRUST FINANCIAL SERVICES	1.77	NA	31.00	NA	NA	25.00	13.50	16.26	15.22	NA	NA	NA	NA	NA
ARCH CAPITAL GROUP LTD	Nil	NA	NA	NIL	7.00	8.00	-4.90	14.08	12.10	9.50	124.00	124.00	1.08	0.00
ARGO GROUP INTL HOLDINGS LTD	1.56	NA	NA	NA	13.91	11.00	11.00	4.64	3.13	NA	NA	NA	NA	NA
ASPEN INSURANCE HOLDINGS LTD	1.88	6.29	3.62	NA	17.27	1.18	-2.48	8.62	7.15	NA	NA	NA	NA	NA
ASSURANT INC	1.58	15.40	12.22	NA	-6.36	7.57	8.25	9.98	7.61	NA	NA	NA	NA	NA
ASSURED GUARANTY LTD	2.00	17.97	18.20	NA	5.91	NA	3.00	9.50	12.16	NA	NA	NA	NA	NA
ATLANTIC AMERICAN CORP	0.51	NA	NA	NA	4.84	24.87	NA	5.43	4.04	NA	NA	NA	NA	NA
ATLAS FINANCIAL HOLDINGS INC	Nil	NA	NA	NA	NA	NA	NA	10.19	10.19	NA	NA	NA	NA	NA
AVIVA PLC -ADR	4.30	NA	NA	NA	NA	1.04	NA	10.99	12.75	NA	NA	NA	NA	NA
AXA -ADR	4.59	7.75	-7.75	NA	8.43	1.42	8.20	5.14	4.21	NA	NA	NA	NA	NA
AXIS CAPITAL HOLDINGS LTD	2.25	10.57	6.60	NA	7.56	7.96	-2.61	10.79	11.20	NA	NA	NA	NA	NA
BALDWIN & LYONS -CL B	4.47	-0.07	-5.50	NA	2.50	1.50	8.00	6.44	4.20	NA	NA	NA	NA	NA
BERKLEY (W R) CORP	0.90	12.50	11.50	7.50	7.50	1.00	1.39	12.23	7.72	9.00	122.00	120.00	1.30	-0.12
BERKSHIRE HATHAWAY	Nil	NA	NA	NIL	24.00	25.00	NA	NA	NA	NA	2450.00	2450.00	1.60	0.00
BLUE CAP REINSURANCE	7.25	NA	NA	NA	NA	NA	NA	3.99	3.99	NA	NA	NA	NA	NA
CHUBB CORP	1.90	9.00	6.50	5.50	13.00	3.00	5.20	9.60	7.02	7.50	225.00	215.00	1.35	-0.40
CINCINNATI FINANCIAL CORP	3.60	6.50	2.00	5.00	1.50	3.00	-3.29	3.51	2.13	4.00	164.00	164.00	1.36	0.00
CITIZENS INC	Nil	NA	NA	NA	-16.40	-24.80	NA	5.34	3.44	NA	NA	NA	NA	NA
CNA FINANCIAL CORP	2.90	NA	24.00	9.00	NA	NA	2.84	5.87	4.18	6.00	270.00	270.00	1.10	0.00
CONIFER HOLDINGS INC	Nil	NA	NA	NA	NA	NA	20.00	1.64	1.64	NA	NA	NA	NA	NA
DONEGAL GROUP INC	2.29	8.47	5.00	NA	-1.61	-6.00	10.00	5.13	1.80	NA	NA	NA	NA	NA
EMC INSURANCE GROUP INC	3.05	3.79	4.15	NA	7.07	5.87	5.00	8.82	5.83	NA	NA	NA	NA	NA
EMPLOYERS HOLDINGS INC	1.14	NA	2.00	NA	0.64	6.50	10.00	16.01	12.84	NA	NA	NA	NA	NA
ENDURANCE SPECIALTY HOLDINGS	2.39	6.82	5.28	NA	4.08	-0.89	9.00	10.35	7.29	NA	NA	NA	NA	NA
ENSTAR GROUP LTD	Nil	NA	NA	NA	13.96	14.63	10.00	15.32	12.28	NA	NA	NA	NA	NA
ERIE INDEMNITY CO -CL A	3.40	11.50	6.00	4.50	1.00	3.50	10.00	7.35	6.32	14.50	46.00	45.00	4.20	-1.75
ESSENT GROUP LTD	Nil	NA	NA	NA	NA	NA	39.82	9.16	9.16	NA	NA	NA	NA	NA
EVEREST RE GROUP LTD	2.28	21.07	4.88	NA	12.34	20.79	1.33	12.73	12.37	NA	NA	NA	NA	NA
FAIRFAX FINANCIAL HOLDINGS	2.28	23.82	13.75	NA	11.90	-18.60	0.60	13.24	7.60	NA	NA	NA	NA	NA
FEDERATED NATIONAL HLDG CO	0.69	NA	NA	NA	30.76	36.47	20.00	15.49	11.78	NA	NA	NA	NA	NA
FIRST ACCEPTANCE CORP	Nil	NA	NA	NA	NA	NA	NA	12.94	14.05	NA	NA	NA	NA	NA
FIRST AMERICAN FINANCIAL CP	2.66	NA	NA	NA	NA	43.35	11.30	5.40	6.09	NA	NA	NA	NA	NA
GENWORTH FINANCIAL INC	Nil	NA	NA	NA	NA	NA	5.00	4.65	1.90	NA	NA	NA	NA	NA
GLOBAL INDEMNITY PLC	Nil	NA	NA	NA	NA	13.00	10.00	8.61	5.90	NA	NA	NA	NA	NA
GREENLIGHT CAPITAL RE LTD	Nil	NA	NA	NA	NA	21.56	10.00	12.26	8.98	NA	NA	NA	NA	NA
HALLMARK FINANCIAL SERVICES	Nil	NA	NA	NA	-4.20	-16.00	15.00	6.53	2.10	NA	NA	NA	NA	NA
HANOVER INSURANCE GROUP INC	2.10	NA	20.00	9.00	NA	-0.50	-1.10	6.73	4.30	7.00	45.00	45.00	1.04	0.00
HARTFORD FINANCIAL SERVICES	1.91	-7.13	-17.70	NA	-11.00	NA	7.00	8.20	4.16	NA	NA	NA	NA	NA
HCC INSURANCE HOLDINGS INC	1.50	16.00	12.50	9.00	11.50	6.00	7.00	9.66	7.72	8.00	95.00	85.00	1.21	-0.58
HCI GROUP INC	3.22	NA	NA	NA	NA	21.00	25.00	18.87	14.86	NA	NA	NA	NA	NA
HERITAGE INSURANCE HOLDINGS	Nil	NA	NA	NA	NA	NA	NA	30.62	30.62	NA	NA	NA	NA	NA
HORACE MANN EDUCATORS CORP	3.13	5.97	17.03	NA	14.52	14.16	12.67	7.93	6.16	NA	NA	NA	NA	NA
INFINITY PROPERTY & CAS CORP	2.29	21.02	22.50	NA	0.09	-1.00	9.00	7.91	5.40	NA	NA	NA	NA	NA
JAMES RIVER GROUP HLDGS LTD	2.47	NA	NA	NA	NA	NA	NA	8.44	5.35	NA	NA	NA	NA	NA
KEMPER CORP/DE	2.82	-5.33	-9.60	NA	3.58	8.61	10.00	4.81	4.08	NA	NA	NA	NA	NA
KINGSTONE COS INC	2.41	NA	NA	NA	1.78	-1.48	NA	12.76	7.54	NA	NA	NA	NA	NA
KINGSWAY FINANCIAL SVCS INC	Nil	NA	NA	NA	NA	-27.90	10.00	14.51	0.00	NA	NA	NA	NA	NA
LOEWS CORP	0.72	2.26	0.00	NA	10.71	3.70	7.28	8.59	3.81	NA	NA	NA	NA	NA

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Discounted Cash Flow (DCF) Analysis: Parameter Estimation

Property/Casualty Insurance 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			as a Percent of Common Equity			2015	2018 - 2020	2018 - 2020	Stock Issuance
		Past 10 Years (3)	Past 5 Years (4)	Forecast (5)	Past 10 Years (6)	Past 5 Years (7)	Forecast (8)	Past 10 Years (9)	Past 5 Years (10)	Forecast (11)	Shares (12)	Shares (13)	Market/ Book (14)	Adjustment Factor (15)
MAIDEN HOLDINGS LTD	3.90	NA	14.95	NA	NA	7.15	12.00	4.60	4.62	NA	NA	NA	NA	NA
MARKEL CORP	Nil	NA	NA	NIL	8.00	-5.50	10.00	8.39	5.62	5.50	14.00	14.00	1.29	0.00
MBIA INC	Nil	NA	NA	NA	-3.86	NA	10.00	14.88	15.70	NA	NA	NA	NA	NA
MERCURY GENERAL CORP	5.00	6.50	2.00	3.50	-4.50	-7.00	7.60	4.33	1.10	3.50	55.00	55.00	1.50	0.00
METLIFE INC	3.31	13.07	6.73	NA	1.97	5.98	7.24	8.55	4.92	NA	NA	NA	NA	NA
MGIC INVESTMENT CORP/WI	Nil	NA	NA	NA	NA	-35.10	19.08	16.45	24.30	NA	NA	NA	NA	NA
NATIONAL GENERAL HOLDINGS CP	0.43	NA	NA	NA	NA	NA	15.00	9.39	9.39	NA	NA	NA	NA	NA
NATIONAL INTERSTATE CORP	1.98	NA	13.00	NA	-0.15	-9.50	13.00	11.81	8.42	NA	NA	NA	NA	NA
NATIONAL SEC GROUP INC	1.09	-14.00	-25.70	NA	-2.25	11.65	NA	9.41	12.45	NA	NA	NA	NA	NA
NAVIGATORS GROUP INC	Nil	NA	NA	NA	10.97	4.50	10.00	7.74	5.88	NA	NA	NA	NA	NA
NMI HOLDINGS INC	Nil	NA	NA	NA	NA	NA	NA	0.00	0.00	NA	NA	NA	NA	NA
OLD REPUBLIC INTL CORP	4.90	7.00	2.00	1.00	-11.00	NA	10.00	5.87	0.00	5.50	261.00	261.00	0.95	0.00
ONEBEACON INSURANCE GROUP	6.24	NA	-11.00	NA	NA	8.00	47.80	5.99	1.28	NA	NA	NA	NA	NA
OXBRIDGE RE HOLDINGS LTD	8.35	NA	NA	NA	NA	NA	NA	6.24	6.24	NA	NA	NA	NA	NA
PARTNERRE LTD	2.10	7.60	7.25	NA	8.85	5.70	0.59	12.88	10.44	NA	NA	NA	NA	NA
PROASSURANCE CORP	2.70	NA	NA	NA	19.90	8.50	5.00	11.93	11.70	NA	NA	NA	NA	NA
PROGRESSIVE CORP-OHIO	2.40	31.50	31.00	10.00	1.50	8.50	7.59	15.81	10.76	14.00	585.00	570.00	2.35	-0.87
RADIAN GROUP INC	0.07	-18.80	-26.00	NA	-24.30	NA	-4.78	24.84	35.56	NA	NA	NA	NA	NA
RENAISSANCE HOLDINGS LTD	1.17	5.72	4.01	NA	9.41	12.82	5.59	19.61	16.65	NA	NA	NA	NA	NA
RLI CORP	1.50	12.50	6.50	4.00	8.00	-2.50	9.80	11.32	9.70	8.50	43.00	35.00	1.45	-2.26
SAFETY INSURANCE GROUP INC	5.72	19.93	10.00	NA	6.65	-2.50	15.00	9.63	3.83	NA	NA	NA	NA	NA
SCOR SE -ADR	9.74	-22.90	7.04	NA	NA	2.54	NA	6.45	5.03	NA	NA	NA	NA	NA
SELECTIVE INS GROUP INC	1.90	5.00	0.50	2.50	2.00	-2.50	7.40	6.00	1.83	6.50	57.00	57.00	1.20	0.00
STATE AUTO FINANCIAL CORP	1.87	11.49	-4.50	NA	-1.77	13.50	8.00	9.65	0.10	NA	NA	NA	NA	NA
STATE NATIONAL COS INC	2.67	NA	NA	NA	NA	NA	NA	3.15	3.15	NA	NA	NA	NA	NA
SWISS RE LTD -ADR	9.22	NA	NA	NA	11.40	29.49	NA	6.23	5.53	NA	NA	NA	NA	NA
SYMETRA FINANCIAL CORP	1.45	NA	NA	NA	NA	14.20	4.10	5.99	5.06	NA	NA	NA	NA	NA
THIRD POINT REINSURANCE LTD	Nil	NA	NA	NA	NA	NA	15.00	10.41	10.41	NA	NA	NA	NA	NA
TRAVELERS COS INC	2.50	6.00	10.50	6.00	16.50	7.50	4.58	8.39	5.80	7.50	310.00	300.00	1.35	-0.29
TRIPLE-S MANAGEMENT CORP	Nil	NA	NA	NA	NA	5.05	7.85	9.41	8.25	NA	NA	NA	NA	NA
UNICO AMERICAN CORP	Nil	NA	NA	NA	0.16	-25.00	NA	8.18	4.33	NA	NA	NA	NA	NA
UNITED FIRE GROUP INC	2.81	5.92	5.00	NA	NA	NA	10.00	7.00	3.73	NA	NA	NA	NA	NA
UNITED INSURANCE HOLDINGS CO	1.58	NA	5.43	NA	NA	-9.18	20.00	20.88	14.82	NA	NA	NA	NA	NA
UNIVERSAL INSURANCE HLDGS	2.08	NA	-2.00	NA	43.00	8.00	NA	27.97	9.42	NA	NA	NA	NA	NA
VALIDUS HOLDINGS LTD	2.95	NA	21.47	NA	NA	-1.66	3.55	12.46	7.68	NA	NA	NA	NA	NA
VOYA FINANCIAL INC	0.11	NA	NA	NA	NA	NA	12.35	7.37	7.37	NA	NA	NA	NA	NA
WHITE MTNS INS GROUP LTD	0.10	0.00	-25.00	NA	10.97	33.00	-7.70	6.43	4.82	NA	NA	NA	NA	NA
WMIH CORP	Nil	NA	NA	NA	NA	NA	NA	2.00	2.00	NA	NA	NA	NA	NA
XL GROUP PLC	2.20	-12.00	-11.00	10.50	-3.50	-10.00	1.37	9.29	5.60	6.50	305.00	275.00	0.73	0.69
Average	1.96	6.46	5.05	6.50	5.82	5.67	8.82	9.75	7.67	7.80	284.95	279.86	1.41	-0.29

Notes:

Sources: Value Line Investment Survey (VLIS), Part 3, The Ratings & Reports, September 11, 2015  
 Value Line Investment Survey, Part 2, Small and Mid Cap Edition, September 4, 2015  
 Compustat Database (Version as of September 30, 2015)  
<http://finance.yahoo.com> (data available on October 27, 2015)

All companies with Nil values pay no dividends.

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

$$D_1 = D_0 \times [1.0 + (0.5 \times \text{Dividend Growth Rate})] \quad \text{where Dividend Growth Rate} = 7.25\% \text{ from Page 4.}$$

(12), (13): in millions.

(15) = [(14) - 1.0] x [(13) / (12)]<sup>t</sup> - 1.0, where t is 0.25 for the years between midyear 2015 and midyear 2019.

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Section VII - Profit  
 Subsection E - Cost of Capital  
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 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 ( $\beta$ ) (4)	Estimated Cost of Capital (K) (5)
Short-Term	0.03	8.57	1.00	8.63
Intermediate-Term	1.55	7.57	1.00	9.15
Long-Term	2.65	7.00	1.00	9.67
<b>Average</b>	<b>1.41</b>	<b>7.71</b>	<b>1.00</b>	<b>9.15</b>

**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 (7))

Long-Term = average yield on 20-year U.S. Treasury (line (10))

(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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### Capital Asset Pricing Model - Beta Coefficient

<u>Property/Casualty Insurance Companies</u>	<u>Beta Coefficients</u>
1347 PROPERTY INS HLDGS INC	0.92
ACE LTD	0.90
ACMAT CORP -CL A	0.49
AFFIRMATIVE INS HOLDINGS INC	0.90
ALLEGHANY CORP	0.75
ALLIANZ SE -ADR	1.51
ALLIED WORLD ASSURANCE CO AG	0.70
ALLSTATE CORP	0.90
AMBAC FINANCIAL GROUP INC	2.83
AMERICAN FINANCIAL GROUP INC	0.90
AMERICAN INTERNATIONAL GROUP	1.40
AMERICAN NATIONAL INSURANCE	0.98
AMERICAN OVERSEAS GROUP LTD	1.30
AMERISAFE INC	0.85
AMTRUST FINANCIAL SERVICES	0.85
ARCH CAPITAL GROUP LTD	0.65
ARGO GROUP INTL HOLDINGS LTD	0.80
ASPEN INSURANCE HOLDINGS LTD	0.82
ASSURANT INC	0.88
ASSURED GUARANTY LTD	1.68
ATLANTIC AMERICAN CORP	0.61
ATLAS FINANCIAL HOLDINGS INC	1.40
AVIVA PLC -ADR	1.38
AXA -ADR	1.70
AXIS CAPITAL HOLDINGS LTD	0.97
BALDWIN & LYONS -CL B	0.60
BERKLEY (W R) CORP	0.75
BERKSHIRE HATHAWAY	0.75
BLUE CAP REINSURANCE	NA
CHUBB CORP	0.80
CINCINNATI FINANCIAL CORP	0.90
CITIZENS INC	1.05
CNA FINANCIAL CORP	1.00
CONIFER HOLDINGS INC	NA
DONEGAL GROUP INC	0.50
EMC INSURANCE GROUP INC	0.68
EMPLOYERS HOLDINGS INC	1.00
ENDURANCE SPECIALTY HOLDINGS	0.94
ENSTAR GROUP LTD	0.81
ERIE INDEMNITY CO -CL A	0.75
ESSENT GROUP LTD	NA
EVEREST RE GROUP LTD	0.77
FAIRFAX FINANCIAL HOLDINGS	0.66

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## Capital Asset Pricing Model - Beta Coefficient

<u>Property/Casualty Insurance Companies</u>	<u>Beta Coefficients</u>
FEDERATED NATIONAL HLDG CO	1.14
FIRST ACCEPTANCE CORP	0.86
FIRST AMERICAN FINANCIAL CP	0.90
GENWORTH FINANCIAL INC	1.86
GLOBAL INDEMNITY PLC	0.75
GREENLIGHT CAPITAL RE LTD	0.96
HALLMARK FINANCIAL SERVICES	0.80
HANOVER INSURANCE GROUP INC	0.90
HARTFORD FINANCIAL SERVICES	1.62
HCC INSURANCE HOLDINGS INC	0.90
HCI GROUP INC	0.90
HERITAGE INSURANCE HOLDINGS	NA
HORACE MANN EDUCATORS CORP	1.34
INFINITY PROPERTY & CAS CORP	0.80
JAMES RIVER GROUP HLDGS LTD	NA
KEMPER CORP/DE	1.00
KINGSTONE COS INC	0.01
KINGSWAY FINANCIAL SVCS INC	1.02
LOEWS CORP	1.04
MAIDEN HOLDINGS LTD	0.90
MARKEL CORP	0.70
MBIA INC	1.60
MERCURY GENERAL CORP	0.70
METLIFE INC	1.74
MGIC INVESTMENT CORP/WI	2.51
NATIONAL GENERAL HOLDINGS CP	1.40
NATIONAL INTERSTATE CORP	0.80
NATIONAL SEC GROUP INC	0.35
NAVIGATORS GROUP INC	0.80
NMI HOLDINGS INC	NA
OLD REPUBLIC INTL CORP	1.05
ONEBEACON INSURANCE GROUP	0.70
OXBRIDGE RE HOLDINGS LTD	NA
PARTNERRE LTD	0.95
PROASSURANCE CORP	0.70
PROGRESSIVE CORP-OHIO	0.85
RADIAN GROUP INC	1.86
RENAISSANCERE HOLDINGS LTD	0.73
RLI CORP	0.85
SAFETY INSURANCE GROUP INC	0.75
SCOR SE -ADR	1.17
SELECTIVE INS GROUP INC	0.95
STATE AUTO FINANCIAL CORP	0.95



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## Capital Asset Pricing Model - Beta Coefficient

<u>Property/Casualty Insurance Companies</u>	<u>Beta Coefficients</u>
STATE NATIONAL COS INC	NA
SWISS RE LTD -ADR	1.18
SYMETRA FINANCIAL CORP	1.12
THIRD POINT REINSURANCE LTD	1.22
TRAVELERS COS INC	0.80
TRIPLE-S MANAGEMENT CORP	0.98
UNICO AMERICAN CORP	0.40
UNITED FIRE GROUP INC	0.90
UNITED INSURANCE HOLDINGS CO	0.94
UNIVERSAL INSURANCE HLDGS	1.10
VALIDUS HOLDINGS LTD	0.83
VOYA FINANCIAL INC	1.51
WHITE MTNS INS GROUP LTD	0.60
WMIH CORP	1.90
XL GROUP PLC	1.00
Average	1.00

Sources: Value Line Investment Survey (VLIS), Part 3, The Ratings & Reports, September 11, 2015  
Value Line Investment Survey, Part 2, Small and Mid Cap Edition, September 4, 2015  
Compustat Database (Version as of September 30, 2015)  
If no information for a specific company in the above sources, use Yahoo.

Capital Structure Ratios of Property-Casualty Insurance Companies

Property/Casualty Insurance 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)
1347 PROPERTY INS HLDGS INC	0.0	0.0	0.0	49.9	1.00	0.00
ACE LTD	6,218.0	0.0	6,218.0	29,587.0	0.83	0.17
ACMAT CORP -CL A	8.1	0.0	8.1	32.5	0.80	0.20
AFFIRMATIVE INS HOLDINGS INC	126.7	0.0	126.7	-134.4	NA	NA
ALLEGHANY CORP	1,767.1	0.0	1,767.1	7,473.4	0.81	0.19
ALLIANZ SE -ADR	26,029.3	0.0	26,029.3	73,509.9	0.74	0.26
ALLIED WORLD ASSURANCE CO AG	818.0	0.0	818.0	3,778.3	0.82	0.18
ALLSTATE CORP	5,205.0	0.0	5,205.0	22,304.0	0.81	0.19
AMBAC FINANCIAL GROUP INC	14,013.3	0.0	14,013.3	1,399.1	0.09	0.91
AMERICAN FINANCIAL GROUP INC	1,501.0	0.0	1,501.0	4,879.0	0.76	0.24
AMERICAN INTERNATIONAL GROUP	31,217.0	0.0	31,217.0	106,898.0	0.77	0.23
AMERICAN NATIONAL INSURANCE	108.2	0.0	108.2	4,432.1	0.98	0.02
AMERICAN OVERSEAS GROUP LTD	70.3	0.0	70.3	52.3	0.43	0.57
AMERISAFE INC	0.1	0.0	0.1	447.0	1.00	0.00
AMTRUST FINANCIAL SERVICES	938.9	300.0	1,238.9	1,737.0	0.58	0.42
ARCH CAPITAL GROUP LTD	900.0	325.0	1,225.0	5,805.1	0.83	0.17
ARGO GROUP INTL HOLDINGS LTD	378.5	0.0	378.5	1,646.7	0.81	0.19
ASPEN INSURANCE HOLDINGS LTD	687.7	0.0	687.7	3,418.8	0.83	0.17
ASSURANT INC	1,171.1	0.0	1,171.1	5,181.3	0.82	0.18
ASSURED GUARANTY LTD	1,303.0	0.0	1,303.0	5,758.0	0.82	0.18
ATLANTIC AMERICAN CORP	33.7	0.1	33.8	104.1	0.76	0.24
ATLAS FINANCIAL HOLDINGS INC	0.0	2.0	2.0	107.4	0.98	0.02
AVIVA PLC -ADR	13,739.8	311.6	14,051.4	15,606.0	0.53	0.47
AXA -ADR	12,978.3	0.0	12,978.3	78,921.5	0.86	0.14
AXIS CAPITAL HOLDINGS LTD	990.8	627.8	1,618.6	5,193.3	0.76	0.24
BALDWIN & LYONS -CL B	20.0	0.0	20.0	399.5	0.95	0.05
BERKLEY (W R) CORP	2,561.7	0.0	2,561.7	4,589.9	0.64	0.36
BERKSHIRE HATHAWAY	80,209.0	0.0	80,209.0	240,170.0	0.75	0.25
BLUE CAP REINSURANCE	8.0	0.0	8.0	180.5	0.96	0.04
CHUBB CORP	3,300.0	0.0	3,300.0	16,296.0	0.83	0.17
CINCINNATI FINANCIAL CORP	876.0	0.0	876.0	6,573.0	0.88	0.12
CITIZENS INC	0.0	0.0	0.0	258.4	1.00	0.00
CNA FINANCIAL CORP	2,559.0	0.0	2,559.0	12,794.0	0.83	0.17
CONIFER HOLDINGS INC	27.6	6.1	33.7	44.2	0.57	0.43
DONEGAL GROUP INC	58.5	0.0	58.5	416.1	0.88	0.12
EMC INSURANCE GROUP INC	25.0	0.0	25.0	502.9	0.95	0.05
EMPLOYERS HOLDINGS INC	92.0	0.0	92.0	686.8	0.88	0.12
ENDURANCE SPECIALTY HOLDINGS	527.7	17.2	544.9	3,168.0	0.85	0.15
ENSTAR GROUP LTD	319.6	0.0	319.6	2,304.9	0.88	0.12

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Capital Structure Ratios of Property-Casualty Insurance Companies

Property/Casualty Insurance 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)
ERIE INDEMNITY CO -CL A	0.0	0.0	0.0	703.0	1.00	0.00
ESSENT GROUP LTD	0.0	0.0	0.0	955.7	1.00	0.00
EVEREST RE GROUP LTD	638.4	0.0	638.4	7,451.1	0.92	0.08
FAIRFAX FINANCIAL HOLDINGS	3,179.0	1,164.7	4,343.7	8,361.0	0.66	0.34
FEDERATED NATIONAL HLDG CO	0.0	0.0	0.0	192.6	1.00	0.00
FIRST ACCEPTANCE CORP	40.3	0.0	40.3	107.0	0.73	0.27
FIRST AMERICAN FINANCIAL CP	587.3	0.0	587.3	2,572.9	0.81	0.19
GENWORTH FINANCIAL INC	6,854.0	0.0	6,854.0	14,923.0	0.69	0.31
GLOBAL INDEMNITY PLC	174.7	0.0	174.7	908.3	0.84	0.16
GREENLIGHT CAPITAL RE LTD	0.0	0.0	0.0	1,165.2	1.00	0.00
HALLMARK FINANCIAL SERVICES	56.7	0.0	56.7	252.0	0.82	0.18
HANOVER INSURANCE GROUP INC	903.5	0.0	903.5	2,844.0	0.76	0.24
HARTFORD FINANCIAL SERVICES	6,109.0	0.0	6,109.0	18,720.0	0.75	0.25
HCC INSURANCE HOLDINGS INC	824.3	0.0	824.3	3,903.4	0.83	0.17
HCI GROUP INC	129.5	0.0	129.5	182.6	0.58	0.42
HERITAGE INSURANCE HOLDINGS	0.0	0.0	0.0	255.1	1.00	0.00
HORACE MANN EDUCATORS CORP	237.9	0.0	237.9	1,336.5	0.85	0.15
INFINITY PROPERTY & CAS CORP	276.7	0.0	276.7	697.7	0.72	0.28
JAMES RIVER GROUP HLDGS LTD	220.9	0.0	220.9	687.9	0.76	0.24
KEMPER CORP/DE	756.2	0.0	756.2	2,090.7	0.73	0.27
KINGSTONE COS INC	0.0	0.0	0.0	40.5	1.00	0.00
KINGSWAY FINANCIAL SVCS INC	59.0	6.3	65.3	37.5	0.36	0.64
LOEWS CORP	10,668.0	0.0	10,668.0	19,280.0	0.64	0.36
MAIDEN HOLDINGS LTD	360.0	315.0	675.0	925.7	0.58	0.42
MARKEL CORP	2,253.6	0.0	2,253.6	7,594.8	0.77	0.23
MBIA INC	8,076.0	0.0	8,076.0	3,929.0	0.33	0.67
MERCURY GENERAL CORP	290.0	0.0	290.0	1,875.4	0.87	0.13
METLIFE INC	23,775.0	1.0	23,776.0	72,052.0	0.75	0.25
MGIC INVESTMENT CORP/WI	1,296.4	0.0	1,296.4	1,036.9	0.44	0.56
NATIONAL GENERAL HOLDINGS CP	380.1	55.0	435.1	1,004.7	0.70	0.30
NATIONAL INTERSTATE CORP	12.0	0.0	12.0	362.1	0.97	0.03
NATIONAL SEC GROUP INC	19.6	0.0	19.6	42.8	0.69	0.31
NAVIGATORS GROUP INC	263.4	0.0	263.4	1,027.2	0.80	0.20
NMI HOLDINGS INC	0.0	0.0	0.0	427.0	1.00	0.00
OLD REPUBLIC INTL CORP	965.0	0.0	965.0	3,924.0	0.80	0.20
ONEBEACON INSURANCE GROUP	281.8	0.0	281.8	1,047.0	0.79	0.21
OXBRIDGE RE HOLDINGS LTD	0.0	0.0	0.0	36.7	1.00	0.00
PARTNERRE LTD	821.0	34.2	855.1	7,014.8	0.89	0.11

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Capital Structure Ratios of Property-Casualty Insurance Companies

Property/Casualty Insurance 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)
PROASSURANCE CORP	250.0	0.0	250.0	2,157.9	0.90	0.10
PROGRESSIVE CORP-OHIO	2,164.7	0.0	2,164.7	6,928.6	0.76	0.24
RADIAN GROUP INC	1,209.9	74.7	1,284.6	2,097.1	0.62	0.38
RENAISSANCERE HOLDINGS LTD	286.6	400.0	686.6	3,465.7	0.83	0.17
RLI CORP	149.6	0.0	149.6	845.1	0.85	0.15
SAFETY INSURANCE GROUP INC	0.0	0.0	0.0	708.3	1.00	0.00
SCOR SE -ADR	2,700.9	0.0	2,700.9	6,890.3	0.72	0.28
SELECTIVE INS GROUP INC	385.0	0.0	385.0	1,275.6	0.77	0.23
STATE AUTO FINANCIAL CORP	100.8	0.0	100.8	872.9	0.90	0.10
STATE NATIONAL COS INC	44.5	0.0	44.5	240.9	0.84	0.16
SWISS RE LTD -ADR	14,316.0	0.0	14,316.0	35,930.0	0.72	0.28
SYMETRA FINANCIAL CORP	697.2	0.0	697.2	3,360.6	0.83	0.17
THIRD POINT REINSURANCE LTD	82.5	0.0	82.5	1,451.9	0.95	0.05
TRAVELERS COS INC	6,349.0	0.0	6,349.0	24,836.0	0.80	0.20
TRIPLE-S MANAGEMENT CORP	74.5	0.0	74.5	858.6	0.92	0.08
UNICO AMERICAN CORP	0.0	0.0	0.0	71.8	1.00	0.00
UNITED FIRE GROUP INC	0.0	0.0	0.0	817.4	1.00	0.00
UNITED INSURANCE HOLDINGS CO	13.5	0.0	13.5	203.8	0.94	0.06
UNIVERSAL INSURANCE HLDGS	30.6	19.0	49.6	199.9	0.80	0.20
VALIDUS HOLDINGS LTD	1,458.0	0.0	1,458.0	3,588.0	0.71	0.29
VOYA FINANCIAL INC	10,353.8	0.0	10,353.8	16,107.9	0.61	0.39
WHITE MTNS INS GROUP LTD	753.7	0.0	753.7	3,996.6	0.84	0.16
WMIH CORP	31.2	0.0	31.2	88.2	0.74	0.26
XL GROUP PLC	1,853.9	0.0	1,853.9	10,033.8	0.84	0.16
Average					<b>0.80</b>	<b>0.20</b>

Notes:

Source: Compustat Database (Version as of September 30, 2015)

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

(7) = 1.0 - (6)

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Loss & LAE and Unearned Premium Reserves to Surplus Ratio  
 (\$ in Millions)

Year End (1)	Loss & LAE Reserves (2)	Unearned Premium Reserves (3)	Surplus (4)	Ratio = [ (2) + (3) ] / (4) (5)
2010	249,797	70,133	175,364	1.82
2011	255,065	71,702	172,545	1.89
2012	260,350	76,048	181,779	1.85
2013	262,894	81,382	186,373	1.85
2014	262,805	83,674	192,947	1.80
Average				<b>1.84</b>

Notes:

(2), (4): Best's Aggregates and Averages, 2015 edition, page 127.

(3): Data for Unearned Premium were provided by AM Best after a request from WCRIBMA.

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)		
07/01/15	09/30/15	0.0%	0.0%	25.6%	0.1%	0.0%	49.3%	0.0%	0.0%	25.1%	0.0%
10/01/15	12/31/15	0.0%	0.0%	25.6%	0.0%	0.0%	49.3%	0.2%	0.0%	25.1%	0.0%
01/01/16	03/31/16	0.1%	0.0%	25.6%	0.1%	0.0%	49.3%	0.0%	0.0%	25.1%	0.0%
04/01/16	06/30/16	11.2%	11.2%	25.6%	2.7%	2.7%	49.3%	1.1%	1.0%	25.1%	4.5%
07/01/16	09/30/16	38.1%	38.1%	25.6%	34.5%	34.5%	49.3%	37.8%	37.8%	25.1%	36.2%
10/01/16	12/31/16	22.6%	22.6%	25.6%	26.0%	26.0%	49.3%	22.4%	22.4%	25.1%	24.2%
01/01/17	03/31/17	15.4%	15.4%	25.6%	20.5%	20.5%	49.3%	20.1%	20.1%	25.1%	19.1%
04/01/17	06/30/17	4.0%	4.0%	25.6%	5.7%	5.7%	49.3%	7.4%	7.5%	25.1%	5.7%
07/01/17	09/30/17	2.2%	2.2%	25.6%	1.8%	1.8%	49.3%	3.1%	3.0%	25.1%	2.2%
10/01/17	12/31/17	2.8%	2.8%	25.6%	4.0%	4.0%	49.3%	5.6%	5.6%	25.1%	4.1%
01/01/18	03/31/18	1.9%	1.9%	25.6%	2.2%	2.2%	49.3%	1.9%	1.9%	25.1%	2.0%
04/01/18	06/30/18	1.1%	1.1%	25.6%	1.2%	1.5%	49.3%	0.2%	0.5%	25.1%	1.1%
07/01/18	09/30/18	0.1%	0.7%	25.6%	0.2%	1.1%	49.3%	0.0%	0.2%	25.1%	0.8%
10/01/18	12/31/18	0.0%	0.0%	25.6%	0.1%	0.0%	49.3%	0.1%	0.0%	25.1%	0.0%
01/01/19	03/31/19	0.0%	0.0%	25.6%	0.0%	0.0%	49.3%	0.1%	0.0%	25.1%	0.0%
04/01/19	06/30/19	0.0%	0.0%	25.6%	0.0%	0.0%	49.3%	0.0%	0.0%	25.1%	0.0%
07/01/19	09/30/19	0.2%	0.0%	25.6%	0.2%	0.0%	49.3%	0.0%	0.0%	25.1%	0.0%
10/01/19	12/31/19	0.2%	0.0%	25.6%	0.4%	0.0%	49.3%	0.0%	0.0%	25.1%	0.0%
01/01/20	03/31/20	0.1%	0.0%	25.6%	0.3%	0.0%	49.3%	0.0%	0.0%	25.1%	0.0%
Total											100.0%

Notes:

(5), (8), (11) are calculated using Unit Statistical Plan data for PY 2013.

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

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

VII 000096 STIP

## VII 000097 STIP

Section VII - Profit  
Subsection H - Expense Weights  
7/1/2016

Section VII - H  
Exhibit 1

### Cash Flow Weights

Item of Expense Allowance (% of Standard Premium plus ARAP)	Policy Year		Average
	2012	2013	
(1) Expected Losses	63.94%	66.35%	65.14%
(2) Expected Loss Adjustment Expense (LAE):	12.77%	13.25%	13.01%
(a) Defense and Cost Containment Expense	6.48%	6.73%	6.61%
(b) Adjusting and Other Expense	6.29%	6.52%	6.40%
(3) Expected Losses + Expected LAE [= (1) + (2) ]	76.71%	79.60%	78.15%
(4) Fixed Expenses	5.04%	5.05%	5.04%
(a) General Expenses	4.63%	4.65%	4.64%
(b) Miscellaneous and Other Taxes	0.40%	0.40%	0.40%
(5) Variable Expenses [= (5a) + (5b) + (5c) ]	18.03%	18.03%	18.03%
(a) Total Acquisition	10.87%	10.87%	10.87%
(i) Commissions	6.27%	6.27%	6.27%
(ii) Other Acquisition	3.60%	3.60%	3.60%
(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	2.17%	2.17%	2.17%
(c) Premium Discount	5.00%	5.00%	5.00%
(6) Total Expenses [= (4) + (5) ]	23.07%	23.08%	23.08%

**Notes:**

- (1): Policy Year 2012 and Policy Year 2013 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 0.2 where 0.2 is the LAE ratio calculated in VI-H, Exhibit 1.
- (2a), (2b): Loss Adjustment Expense split between DCC and AO is  $0.508 = 0.101 / 0.2$  and  $0.492 = 1 - 0.508$  where 0.101 is three year average ratio of DCC to loss from Section VI-H, Exhibit 1, line (4) and LAE ratio = 0.2 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 2012 Fixed Expenses split between General Expenses and Other Taxes based on \$38,534,619 General Expenses and \$3,329,959 Other Taxes. Policy Year 2013 General Expenses split based on \$40,737,916 General Expenses and \$3,520,356 Other Taxes. See VI-B, Exhibit 1, columns (12) & (13).
- (5a): Section VI-G, Exhibit 1.
- (5b), (5c): Section VI-A, Exhibit 1.

# VII 000098 STIP

Section VII - Profit  
Subsection I - Loss & LAE Flow  
7/1/2016

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)					
07/01/15	09/30/15	0.0000	0.0000	0.0000	0.0000	0.0000
10/01/15	12/31/15	0.0000	0.0000	0.0000	0.0000	0.0000
01/01/16	03/31/16	0.0000	0.0000	0.0000	0.0000	0.0000
04/01/16	06/30/16	0.0000	0.0000	0.0000	0.0000	0.0000
07/01/16	09/30/16	0.2500	0.0480	0.0480	0.1490	0.0563
10/01/16	12/31/16	0.2500	0.0480	0.0480	0.1490	0.0563
01/01/17	03/31/17	0.2500	0.0480	0.0480	0.1490	0.0563
04/01/17	06/30/17	0.2500	0.0480	0.0480	0.1490	0.0563
07/01/17	09/30/17	0.0000	0.0658	0.0658	0.0329	0.0631
10/01/17	12/31/17	0.0000	0.0658	0.0658	0.0329	0.0631
01/01/18	03/31/18	0.0000	0.0658	0.0658	0.0329	0.0631
04/01/18	06/30/18	0.0000	0.0658	0.0658	0.0329	0.0631
07/01/18	09/30/18	0.0000	0.0431	0.0431	0.0216	0.0414
10/01/18	12/31/18	0.0000	0.0431	0.0431	0.0216	0.0414
01/01/19	03/31/19	0.0000	0.0431	0.0431	0.0216	0.0414
04/01/19	06/30/19	0.0000	0.0431	0.0431	0.0216	0.0414
07/01/19	09/30/19	0.0000	0.0267	0.0267	0.0134	0.0256
10/01/19	12/31/19	0.0000	0.0267	0.0267	0.0134	0.0256
01/01/20	03/31/20	0.0000	0.0267	0.0267	0.0134	0.0256
04/01/20	06/30/20	0.0000	0.0267	0.0267	0.0134	0.0256
07/01/20	09/30/20	0.0000	0.0161	0.0161	0.0081	0.0155
10/01/20	12/31/20	0.0000	0.0161	0.0161	0.0081	0.0155
01/01/21	03/31/21	0.0000	0.0161	0.0161	0.0081	0.0155
04/01/21	06/30/21	0.0000	0.0161	0.0161	0.0081	0.0155
07/01/21	09/30/21	0.0000	0.0058	0.0058	0.0029	0.0055
10/01/21	12/31/21	0.0000	0.0058	0.0058	0.0029	0.0055
01/01/22	03/31/22	0.0000	0.0058	0.0058	0.0029	0.0055
04/01/22	06/30/22	0.0000	0.0058	0.0058	0.0029	0.0055
07/01/22	09/30/22	0.0000	0.0043	0.0043	0.0022	0.0042
10/01/22	12/31/22	0.0000	0.0043	0.0043	0.0022	0.0042
01/01/23	03/31/23	0.0000	0.0043	0.0043	0.0022	0.0042
04/01/23	06/30/23	0.0000	0.0043	0.0043	0.0022	0.0042
07/01/23	09/30/23	0.0000	0.0037	0.0037	0.0019	0.0036
10/01/23	12/31/23	0.0000	0.0037	0.0037	0.0019	0.0036
01/01/24	03/31/24	0.0000	0.0037	0.0037	0.0019	0.0036
04/01/24	06/30/24	0.0000	0.0037	0.0037	0.0019	0.0036
07/01/24	09/30/24	0.0000	0.0019	0.0019	0.0010	0.0019
10/01/24	12/31/24	0.0000	0.0019	0.0019	0.0010	0.0019
01/01/25	03/31/25	0.0000	0.0019	0.0019	0.0010	0.0019
04/01/25	06/30/25	0.0000	0.0019	0.0019	0.0010	0.0019
07/01/25	09/30/25	0.0000	0.0019	0.0019	0.0009	0.0018
10/01/25	12/31/25	0.0000	0.0019	0.0019	0.0009	0.0018
01/01/26	03/31/26	0.0000	0.0019	0.0019	0.0009	0.0018
04/01/26	06/30/26	0.0000	0.0019	0.0019	0.0009	0.0018
07/01/26	09/30/26	0.0000	0.0017	0.0017	0.0009	0.0016
10/01/26	12/31/26	0.0000	0.0017	0.0017	0.0009	0.0016
01/01/27	03/31/27	0.0000	0.0017	0.0017	0.0009	0.0016
04/01/27	06/30/27	0.0000	0.0017	0.0017	0.0009	0.0016
07/01/27	09/30/27	0.0000	0.0015	0.0015	0.0008	0.0015
10/01/27	12/31/27	0.0000	0.0015	0.0015	0.0008	0.0015
01/01/28	03/31/28	0.0000	0.0015	0.0015	0.0008	0.0015
04/01/28	06/30/28	0.0000	0.0015	0.0015	0.0008	0.0015
07/01/28	09/30/28	0.0000	0.0032	0.0032	0.0016	0.0031
10/01/28	12/31/28	0.0000	0.0032	0.0032	0.0016	0.0031
01/01/29	03/31/29	0.0000	0.0032	0.0032	0.0016	0.0031
04/01/29	06/30/29	0.0000	0.0032	0.0032	0.0016	0.0031
07/01/29	09/30/29	0.0000	0.0011	0.0011	0.0005	0.0010
10/01/29	12/31/29	0.0000	0.0011	0.0011	0.0005	0.0010
01/01/30	03/31/30	0.0000	0.0011	0.0011	0.0005	0.0010
04/01/30	06/30/30	0.0000	0.0011	0.0011	0.0005	0.0010
07/01/30	09/30/30	0.0000	0.0015	0.0015	0.0008	0.0014
10/01/30	12/31/30	0.0000	0.0015	0.0015	0.0008	0.0014
01/01/31	03/31/31	0.0000	0.0015	0.0015	0.0008	0.0014
04/01/31	06/30/31	0.0000	0.0015	0.0015	0.0008	0.0014
07/01/31	09/30/31	0.0000	0.0010	0.0010	0.0005	0.0009
10/01/31	12/31/31	0.0000	0.0010	0.0010	0.0005	0.0009
01/01/32	03/31/32	0.0000	0.0010	0.0010	0.0005	0.0009
04/01/32	06/30/32	0.0000	0.0010	0.0010	0.0005	0.0009
07/01/32	09/30/32	0.0000	0.0010	0.0010	0.0005	0.0010
10/01/32	12/31/32	0.0000	0.0010	0.0010	0.0005	0.0010
01/01/33	03/31/33	0.0000	0.0010	0.0010	0.0005	0.0010
04/01/33	06/30/33	0.0000	0.0010	0.0010	0.0005	0.0010
07/01/33	09/30/33	0.0000	0.0014	0.0014	0.0007	0.0013
10/01/33	12/31/33	0.0000	0.0014	0.0014	0.0007	0.0013
01/01/34	03/31/34	0.0000	0.0014	0.0014	0.0007	0.0013
04/01/34	06/30/34	0.0000	0.0014	0.0014	0.0007	0.0013
07/01/34	09/30/34	0.0000	0.0011	0.0011	0.0006	0.0011
10/01/34	12/31/34	0.0000	0.0011	0.0011	0.0006	0.0011



# VII 000099 STIP

Section VII - Profit  
 Subsection I - Loss & LAE Flow  
 7/1/2016

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)					
01/01/35	03/31/35	0.0000	0.0011	0.0011	0.0006	0.0011
04/01/35	06/30/35	0.0000	0.0011	0.0011	0.0006	0.0011
07/01/35	09/30/35	0.0000	0.0007	0.0007	0.0003	0.0006
10/01/35	12/31/35	0.0000	0.0007	0.0007	0.0003	0.0006
01/01/36	03/31/36	0.0000	0.0007	0.0007	0.0003	0.0006
04/01/36	06/30/36	0.0000	0.0007	0.0007	0.0003	0.0006
07/01/36	09/30/36	0.0000	0.0008	0.0008	0.0004	0.0007
10/01/36	12/31/36	0.0000	0.0008	0.0008	0.0004	0.0007
01/01/37	03/31/37	0.0000	0.0008	0.0008	0.0004	0.0007
04/01/37	06/30/37	0.0000	0.0008	0.0008	0.0004	0.0007
07/01/37	09/30/37	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/37	12/31/37	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/38	03/31/38	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/38	06/30/38	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/38	09/30/38	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/38	12/31/38	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/39	03/31/39	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/39	06/30/39	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/39	09/30/39	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/39	12/31/39	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/40	03/31/40	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/40	06/30/40	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/40	09/30/40	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/40	12/31/40	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/41	03/31/41	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/41	06/30/41	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/41	09/30/41	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/41	12/31/41	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/42	03/31/42	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/42	06/30/42	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/42	09/30/42	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/42	12/31/42	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/43	03/31/43	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/43	06/30/43	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/43	09/30/43	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/43	12/31/43	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/44	03/31/44	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/44	06/30/44	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/44	09/30/44	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/44	12/31/44	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/45	03/31/45	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/45	06/30/45	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/45	09/30/45	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/45	12/31/45	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/46	03/31/46	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/46	06/30/46	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/46	09/30/46	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/46	12/31/46	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/47	03/31/47	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/47	06/30/47	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/47	09/30/47	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/47	12/31/47	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/48	03/31/48	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/48	06/30/48	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/48	09/30/48	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/48	12/31/48	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/49	03/31/49	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/49	06/30/49	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/49	09/30/49	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/49	12/31/49	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/50	03/31/50	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/50	06/30/50	0.0000	0.0013	0.0013	0.0006	0.0012
07/01/50	09/30/50	0.0000	0.0013	0.0013	0.0006	0.0012
10/01/50	12/31/50	0.0000	0.0013	0.0013	0.0006	0.0012
01/01/51	03/31/51	0.0000	0.0013	0.0013	0.0006	0.0012
04/01/51	06/30/51	0.0000	0.0013	0.0013	0.0006	0.0012
(8) Relative Weights			1.0000	0.1014	0.0983	

**Notes:**

- (3): Single policy earned premium is earned uniformly through the one year policy term.
- (4): Exhibit 2, (16). Annual values divided by 4.0.
- (7): Loss & LAE Payout = ( 1.000 x (4) + 0.1014 x (5) + 0.0983 x (6) ) / ( 1.000 + 0.1014 + 0.0983 )
- (8): DCC relative weight = 1.000 x 0.2 x 0.508; AO relative weight = 1.000 x 0.2 x 0.492  
 where 0.2 is the LAE factor calculated in Section VI-K, Exhibit 1 and 0.508, 0.492  
 are the DCC and AO relative weights from Section VI-K, Exhibit 1.

VII 000100 STIP

Loss Payment Pattern

Age In Months	Remainder of Industry					AIG					Total				
	Indemnity Unadjusted LDF to Ult =1.0/(2) (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)	Indemnity Unadjusted LDF to Ult (9)	Indemnity % Paid =1.0/(9) (10)	Indemnity Incremental % Paid (10) - 1st Diff (11)		Medical LDF to Ult (12)	Medical %Paid =1.0/(12) (13)	Medical Incremental % Paid (13) - 1st Diff (14)	Indemnity & Medical Incremental % Paid (15)
12	8.370	11.95%	11.95%	2.903	34.44%	34.44%	19.64%	9.604	10.41%	10.41%	3.319	30.13%	30.13%	16.00%	19.20%
24	2.817	35.50%	23.55%	1.504	66.51%	32.07%	26.46%	3.042	32.88%	22.46%	1.610	62.10%	31.97%	25.16%	26.31%
36	1.763	56.73%	21.23%	1.318	75.89%	9.38%	17.18%	1.869	53.49%	20.61%	1.375	72.74%	10.64%	17.79%	17.25%
48	1.415	70.66%	13.93%	1.252	79.88%	3.99%	10.53%	1.472	67.96%	14.47%	1.283	77.96%	5.22%	11.84%	10.69%
60	1.262	79.27%	8.61%	1.219	82.02%	2.15%	6.40%	1.305	76.60%	8.65%	1.246	80.28%	2.32%	6.85%	6.46%
72	1.218	82.12%	2.85%	1.209	82.71%	0.68%	1.233	1.209	81.08%	4.47%	1.219	82.02%	1.74%	3.70%	2.30%
84	1.189	84.09%	1.98%	1.194	83.75%	1.05%	1.66%	1.173	83.78%	2.70%	1.202	83.17%	1.15%	2.26%	1.73%
96	1.165	85.84%	1.74%	1.180	84.76%	1.01%	1.49%	1.173	85.25%	1.48%	1.183	84.51%	1.34%	1.44%	1.49%
108	1.156	86.54%	0.70%	1.168	85.60%	0.84%	0.75%	1.161	86.14%	0.88%	1.166	85.78%	1.28%	1.00%	0.78%
120	1.146	87.28%	0.74%	1.158	86.38%	0.77%	0.75%	1.152	86.78%	0.64%	1.150	86.98%	1.20%	0.80%	0.76%
132	1.138	87.91%	0.63%	1.147	87.20%	0.82%	0.69%	1.145	87.30%	0.52%	1.137	87.94%	0.96%	0.64%	0.69%
144	1.132	88.36%	0.45%	1.134	88.19%	0.99%	0.63%	1.141	87.61%	0.31%	1.126	88.81%	0.87%	0.47%	0.61%
156	1.111	89.99%	1.64%	1.125	88.92%	0.73%	1.33%	1.130	88.52%	0.91%	1.115	89.68%	0.88%	0.90%	1.27%
168	1.108	90.22%	0.32%	1.116	89.58%	0.66%	0.38%	1.122	89.11%	0.59%	1.100	90.87%	1.19%	0.76%	0.42%
180	1.105	90.54%	0.32%	1.105	90.51%	0.93%	0.53%	1.108	90.23%	1.12%	1.086	92.08%	1.21%	1.15%	0.60%
192	1.102	90.71%	0.17%	1.096	91.26%	0.76%	0.37%	1.103	90.65%	0.41%	1.078	92.75%	0.67%	0.48%	0.39%
204	1.100	90.92%	0.22%	1.089	91.86%	0.59%	0.35%	1.090	91.70%	1.06%	1.074	93.10%	0.35%	0.86%	0.41%
216	1.094	91.39%	0.47%	1.080	92.60%	0.75%	0.56%	1.086	92.04%	0.34%	1.067	93.73%	0.62%	0.42%	0.55%
228	1.090	91.75%	0.35%	1.071	93.39%	0.78%	0.50%	1.086	92.06%	0.01%	1.064	93.99%	0.26%	0.09%	0.45%
240	1.088	91.90%	0.15%	1.065	93.92%	0.53%	0.28%	1.085	92.19%	0.14%	1.060	94.32%	0.33%	0.19%	0.27%
252	1.085	92.19%	0.29%	1.060	94.35%	0.44%	0.34%	1.085	92.19%	0.00%	1.060	94.35%	0.04%	0.01%	0.30%
264			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
276			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
288			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
300			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
312			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
324			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
336			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
348			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
360			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
372			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
384			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
396			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
408			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
420			0.56%			0.40%	0.50%		0.56%	0.56%			0.40%	0.51%	0.51%
Total			100.00%			100.00%	100.00%		100.00%	100.00%			100.00%	100.00%	100.00%

Notes:

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

(8) = (4) x 65.79% + (7) x 34.21%, where 65.79% and 34.21% are indemnity and medical estimated ultimate losses respectively, from Section II - E, Exhibit 1, Page 2.

(9), (12): Section II - E, Exhibit 1, Page 4.

(15) = (11) x 71.64% + (14) x 28.36%, where 71.64% and 28.36% are indemnity and medical estimated ultimate losses respectively, from Section II - E, Exhibit 1, Page 3.

(16) = (8) x 87.85% + (17) x 12.15%, where 87.85% and 12.15% are estimated ultimate losses for Remainder of Industry and Company A respectively, from Section II - E, Exhibit 1, Pages 2 and 3.

# VII 000101 STIP

Section VII - Profit  
 Subsection J - Portfolio Rate of Return  
 7/1/2016

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	6.09%	0.03%	35.00%	0.02%
Governments	10.24%	1.14%	35.00%	0.74%
States & Territories	8.87%	1.61%	5.25%	1.53%
Special Revenue	17.29%	1.84%	5.25%	1.75%
Industrials	26.43%	1.93%	35.00%	1.26%
Common Stocks	21.36%	11.0855%	22.00%	8.65%
Real Estate	0.66%	3.98%	35.00%	2.59%
Preferred Stocks	0.94%	5.42%	14.18%	4.65%
Other Assets	8.13%	5.42%	14.18%	4.65%
(6) Total	100.00%	3.98%	21.23%	3.13%
(7) Investment Expenses		0.24%	35.00%	0.16%
(8) Portfolio Rate of Return		3.73%	20.33%	<b>2.97%</b>

Notes:

(2): Page 2, Total US Property/Casualty Industry.

(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:  $r_f + b \times \text{MRP}$  with  $b=1.00$  and three horizons. MRP from Exhibit 4 and  $r_f$  from Exhibit 2,

Page 3, line (2) for short-term, line (7) for intermediate-term and line (10) for long-term horizon.

11.09% = average ( 8.57% + 0.03%, 7.57% + 1.55%, 7% + 2.65% )

Pretax return for Real Estate: 3 month treasury rate, 0.04% Exhibit 2, page 3, line (3) plus the real estate differential, 3.94% from Ibbotson and Siegel, "Real Estate Returns: A Comparison with Other Investments".

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

Pretax return for Other Assets: equal to the pretax return for Preferred Stock.

(4): Governments and Other taxable bonds taxed at Federal Tax Rate of 0.35.

Tax rate for Tax Exempt Bonds =  $0.15 \times 0.35$

Tax rate for Preferred stock =  $(0.30 \times 0.35) + (0.70 \times 0.15 \times 0.35)$

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

Tax rate for Other Assets = Tax rate for Preferred stock =  $(0.30 \times 0.35) + (0.70 \times 0.15 \times 0.35)$

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

(7): Exhibit 5.

(8) = (6) - (7)

## VII 000102 STIP

Section VII - Profit  
 Subsection J - Portfolio Rate of Return  
 7/1/2016

Section VII - J  
 Exhibit 1  
 Page 2

### Asset Distribution for Property-Casualty Industry

Assets (1)	Net Admitted Assets (\$000) (2)	Share = (2) / (4) (3)
Cash and Short Term Investments	94,392,146	6.09%
Bonds:	974,224,710	62.83%
Governments		10.24%
States & Territories		8.87%
Special Revenue		17.29%
Industrials		26.43%
Common Stocks	331,203,550	21.36%
Real Estate	10,220,488	0.66%
Preferred Stocks	14,598,368	0.94%
Other Invested Assets	126,030,904	8.13%
 (4) Total	 1,550,670,166	 100.00%

**Notes:**

Source: Best's Aggregates and Averages, 2015 edition, page 140.

(2): Real estate is sum of: properties occupied by the company, properties held for the production of income and properties held for sale.

None of the values include investments in affiliates.

The Bond Share in total is 62.83%. This is allocated to the subcategories (Governments, States & Territories, Special Revenue and Industrials) by multiplying 62.83% by the adjusted bond weights from Exhibit 3.

## VII 000103 STIP

Section VII - Profit  
 Subsection J - Portfolio Rate of Return  
 7/1/2016

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 for P/C Industry				
Term to Maturity in years	Governments	States and Territories	Special Revenue	Industrials
0.5	4.15%	1.20%	1.96%	4.21%
3	7.51%	4.73%	9.30%	18.97%
7	2.93%	5.20%	8.70%	15.12%
15	0.92%	2.54%	5.13%	1.65%
25	0.77%	0.46%	2.43%	2.12%
Total	16.29%	14.12%	27.51%	42.07%

As of	Term to Maturity in years	Yield Data			
		Governments	States and Territories	Special Revenue	Industrials
Jul-15	0.5	0.12%	0.13%	0.12%	0.30%
	3	1.03%	1.04%	1.09%	1.37%
	7	2.04%	2.05%	2.20%	2.65%
	15	2.55%	2.59%	2.90%	3.34%
	25	2.92%	3.06%	3.52%	3.95%
Aug-15	0.5	0.22%	0.11%	0.10%	0.43%
	3	1.03%	0.97%	0.99%	1.43%
	7	1.91%	1.93%	2.01%	2.61%
	15	2.36%	2.48%	2.73%	3.25%
	25	2.71%	2.88%	3.41%	3.84%
Sep-15	0.5	0.18%	0.13%	0.12%	0.45%
	3	1.01%	0.99%	1.03%	1.43%
	7	1.88%	1.90%	2.02%	2.54%
	15	2.40%	2.47%	2.78%	3.24%
	25	2.79%	2.93%	3.47%	3.87%
		Weighted Yields			
Jul-15	All	1.16%	1.68%	1.92%	1.93%
Aug-15	All	1.14%	1.58%	1.79%	1.95%
Sep-15	All	1.12%	1.58%	1.82%	1.92%
	Average	<b>1.14%</b>	<b>1.61%</b>	<b>1.84%</b>	<b>1.93%</b>

**Notes:**

% of Bonds by Class and by Maturity for P/C Industry are from Exhibit 3.

Yield Data are from Page 2.

Example of Weighted Yield calculation for Jul-15, States and Territories:

$$1.68 = (0.13 \times 1.2 + 1.04 \times 4.73 + 2.05 \times 5.2 + 2.59 \times 2.54 + 3.06 \times 0.46) / 14.12$$

# VII 000104 STIP

Section VII - Profit  
 Subsection J - Portfolio Rate of Return  
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Section VII - J  
 Exhibit 2  
 Page 2

## Calculation of Yield Data

Term to Maturity in Years	Jul-15	Aug-15	Sep-15	Formulas used to derive the yields (reference to data on page 3)
<b>Governments</b>				
0.5	0.12%	0.22%	0.18%	=(4)
3	1.03%	1.03%	1.01%	=(6)
7	2.04%	1.91%	1.88%	=(8)
10	2.32%	2.17%	2.17%	=(9)
20	2.77%	2.55%	2.62%	=(10)
30	3.07%	2.86%	2.95%	=(11)
<b>States and Territories</b>				
0.5	0.13%	0.11%	0.13%	=(4) + 9.5/9.0 x [ (18) - (5) ] - 0.5/9.0 x [ (19) - (9) ]
3	1.04%	0.97%	0.99%	=(6) + 7.0/9.0 x [ (18) - (5) ] + 2.0/9.0 x [ (19) - (9) ]
7	2.05%	1.93%	1.90%	=(8) + 1.0/3.0 x [ (18) - (5) ] + 2.0/3.0 x [ (19) - (9) ]
10	2.32%	2.26%	2.22%	=(19)
20	2.86%	2.70%	2.73%	=(10) + 0.5 x [ (19) - (9) ] + 0.5 x [ (20) - (11) ]
30	3.26%	3.07%	3.12%	=(20)
<b>Special Revenue</b>				
0.5	0.12%	0.10%	0.12%	=(4) + 29.5/29.0 x [ (18) - (5) ] - 0.5/29.0 x [ (17) - (11) ]
3	1.09%	0.99%	1.03%	=(6) + 27.0/29.0 x [ (18) - (5) ] + 2.0/29.0 x [ (17) - (11) ]
7	2.20%	2.01%	2.02%	=(8) + 23.0/29.0 x [ (18) - (5) ] + 6.0/29.0 x [ (17) - (11) ]
10	2.55%	2.37%	2.40%	=(9) + 20.0/29.0 x [ (18) - (5) ] + 9.0/29.0 x [ (17) - (11) ]
20	3.25%	3.08%	3.15%	=(10) + 10.0/29.0 x [ (18) - (5) ] + 19.0/29.0 x [ (17) - (11) ]
30	3.80%	3.73%	3.78%	=(17)
<b>Industrial</b>				
0.5	0.30%	0.43%	0.45%	=(4) + 26.0/27.0 x [ (1) - (3) ] + 1.0/27.0 x [ (15) - (8) ]
3	1.37%	1.43%	1.43%	=(6) + 16.0/27.0 x [ (1) - (3) ] + 11.0/27.0 x [ (15) - (8) ]
7	2.65%	2.61%	2.54%	=(15)
10	3.00%	2.94%	2.90%	=(9) + 20.0/23.0 x [ (15) - (8) ] + 3.0/23.0 x [ (12) - (11) ]
20	3.69%	3.56%	3.59%	=(10) + 10.0/23.0 x [ (15) - (8) ] + 13.0/23.0 x [ (12) - (11) ]
30	4.22%	4.11%	4.16%	=(12)

# VII 000105 STIP

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 Exhibit 2  
 Page 3

## Yield Data

	Jul-15	Aug-15	Sep-15	Average
<b>FEDERAL RESERVE STATISTICAL RELEASE</b>				
Commercial Paper				
(1) 3-month	0.19%	0.26%	0.27%	0.24%
U.S. Govt Securities - Secondary Market				
Treasury Constant Maturities				
(2) 1-month	0.03%	0.04%	0.01%	0.03%
(3) 3-month	0.03%	0.07%	0.02%	0.04%
(4) 6-month	0.12%	0.22%	0.18%	0.17%
(5) 1-year	0.30%	0.38%	0.37%	0.35%
(6) 3-year	1.03%	1.03%	1.01%	1.02%
(7) 5-year	1.63%	1.54%	1.49%	1.55%
(8) 7-year	2.04%	1.91%	1.88%	1.94%
(9) 10-year	2.32%	2.17%	2.17%	2.22%
(10) 20-year	2.77%	2.55%	2.62%	2.65%
(11) 30-year	3.07%	2.86%	2.95%	2.96%
<b>MERGENT BOND RECORD</b>				
Long-Term Corporate Bond Yields (avg maturity at least 20 yrs)				
(12) Aa Industrial	4.22%	4.11%	4.16%	4.16%
<b>YAHOO</b>				
(13) Preferred Stock	5.61%	5.32%	5.32%	5.42%
<b>BONDS ONLINE</b>				
Aa Corporate				
(14) 5-year to maturity	2.21%	2.18%	2.08%	2.16%
(15) 7-year to maturity ( = (14) + 0.4 x [ (16) - (14) ] )	2.65%	2.61%	2.54%	2.60%
(16) 10-year to maturity	3.30%	3.27%	3.22%	3.26%
<b>VALUE LINE INVESTMENT SURVEY (Part II)</b>				
Municipal Bond Yields				
Bond Buyer Indexes				
(17) 20-Bond Index (GOs)	3.80%	3.73%	3.78%	3.77%
General Obligation Bonds (GOs)				
(18) 1-year Aaa	0.31%	0.28%	0.33%	0.31%
(19) 10-year Aaa	2.32%	2.26%	2.22%	2.27%
(20) 25/30-year Aaa	3.26%	3.07%	3.12%	3.15%

**Note:**

Sources: Various issues of Federal Reserve Statistical Release, H.15 , Mergent Bond Record, and Value Line Investment Survey, Part II.

Online data from <http://finance.yahoo.com> and <http://www.bondsonline.com>.

# VII 000106 STIP

Section VII - Profit  
 Subsection J - Portfolio Rate of Return  
 7/1/2016

Section VII - J  
 Exhibit 3

## Bond Distribution by Class and by Maturity for Property-Casualty Industry

2014 Industry Totals (\$000)

Term to Maturity in Years	Governments	States and Territories	Special Revenue	Industrials	Other Bonds	Total Bonds
0.5	40,128,385	11,615,101	18,974,523	40,708,008	4,799,317	116,225,335
3	72,673,686	45,709,216	89,908,930	183,516,623	303,444	392,111,899
7.5	28,350,109	50,283,374	84,132,425	146,233,063	4,246,113	313,245,084
15	8,942,765	24,591,182	49,624,387	15,940,560	252,957	99,351,851
25	7,486,498	4,403,635	23,476,721	20,536,904	4,920,208	60,823,966
Total	157,581,443	136,602,508	266,116,986	406,935,158	14,522,039	981,758,135

% of Bonds by Class, by Maturity for P/C Industry

Term to Maturity in Years	Governments	States and Territories	Special Revenue	Industrials	Other Bonds	Total Bonds
0.5	4.09%	1.18%	1.93%	4.15%	0.49%	11.84%
3	7.40%	4.66%	9.16%	18.69%	0.03%	39.94%
7.5	2.89%	5.12%	8.57%	14.90%	0.43%	31.91%
15	0.91%	2.50%	5.05%	1.62%	0.03%	10.12%
25	0.76%	0.45%	2.39%	2.09%	0.50%	6.20%
Total	16.05%	13.91%	27.11%	41.45%	1.48%	100.00%

% of Bonds (adjusted for removal of Other Bonds category) by Class, by Maturity for P/C Industry

Term to Maturity in Years	Governments	States and Territories	Special Revenue	Industrials	Total Bonds
0.5	4.15%	1.20%	1.96%	4.21%	11.52%
3	7.51%	4.73%	9.30%	18.97%	40.51%
7.5	2.93%	5.20%	8.70%	15.12%	31.95%
15	0.92%	2.54%	5.13%	1.65%	10.25%
25	0.77%	0.46%	2.43%	2.12%	5.78%
Total	16.29%	14.12%	27.51%	42.07%	100.00%

**Notes:**

Source: Best's Aggregates and Averages - Property-Casualty, 2015, pages 199-200.  
 Bonds less than a year adjusted to remove cash and short term investments.



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	4.20	4.15	3.93	8.25	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	18.99	5.87	5.75	3.84	13.12	13.24	15.15
1973	-14.69	6.51	6.58	6.93	-21.20	-21.27	-21.62
1974	-26.47	7.27	7.24	8.00	-33.74	-33.71	-34.47
1975	37.23	7.99	7.35	5.80	29.24	29.88	31.43
1976	23.93	7.89	7.10	5.08	16.04	16.83	18.85

VII 000107 STIP

Market Risk Premium

Year (1)	Large Company Stocks Total Returns (2)	Long-Term Government Bonds Income Returns (3)	Intermediate-Term Government Bonds Income Returns (4)	Short-Term Total Returns (5)	Long-Term Market Risk Premium = (2) - (3) (6)	Intermediate-Term Market Risk Premium = (2) - (4) (7)	Short-Term Market Risk Premium = (2) - (5) (8)
1977	-7.16	7.14	6.49	5.12	-14.30	-13.65	-12.28
1978	6.57	7.90	7.83	7.18	-1.33	-1.26	-0.61
1979	18.61	8.86	9.04	10.38	9.75	9.57	8.23
1980	32.50	9.97	10.55	11.24	22.53	21.95	21.26
1981	-4.92	11.55	12.97	14.71	-16.47	-17.89	-19.63
1982	21.55	13.50	12.81	10.54	8.05	8.74	11.01
1983	22.56	10.38	10.35	8.80	12.18	12.21	13.76
1984	6.27	11.74	11.68	9.85	-5.47	-5.41	-3.58
1985	31.73	11.25	10.29	7.72	20.48	21.44	24.01
1986	18.67	8.98	7.72	6.16	9.69	10.95	12.51
1987	5.25	7.92	7.47	5.47	-2.67	-2.22	-0.22
1988	16.61	8.97	8.24	6.35	7.64	8.37	10.26
1989	31.69	8.81	8.46	8.37	22.88	23.23	23.32
1990	-3.10	8.19	8.15	7.81	-11.29	-11.25	-10.91
1991	30.47	8.22	7.43	5.60	22.25	23.04	24.87
1992	7.62	7.26	6.27	3.51	0.36	1.35	4.11
1993	10.08	7.17	5.53	2.90	2.91	4.55	7.18
1994	1.32	6.59	6.07	3.90	-5.27	-4.75	-2.58
1995	37.58	7.60	6.69	5.60	29.98	30.89	31.98
1996	22.96	6.18	5.82	5.21	16.78	17.14	17.75
1997	33.36	6.64	6.14	5.26	26.72	27.22	28.10
1998	28.58	5.83	5.29	4.86	22.75	23.29	23.72
1999	21.04	5.57	5.30	4.68	15.47	15.74	16.36
2000	-9.10	6.50	6.19	5.89	-15.60	-15.29	-14.99
2001	-11.89	5.53	4.27	3.83	-17.42	-16.16	-15.72
2002	-22.10	5.59	3.98	1.65	-27.69	-26.08	-23.75
2003	28.68	4.80	2.85	1.02	23.88	25.83	27.66
2004	10.88	5.02	3.28	1.20	5.86	7.60	9.68
2005	4.91	4.69	3.92	2.98	0.22	0.99	1.93
2006	15.79	4.68	4.54	4.80	11.11	11.25	10.99
2007	5.49	4.86	4.44	4.66	0.63	1.05	0.83
2008	-37.00	4.45	2.96	1.60	-41.45	-39.96	-38.60
2009	26.46	3.47	2.01	0.10	22.99	24.45	26.36
2010	15.06	4.25	1.92	0.12	10.81	13.14	14.94
2011	2.11	3.81	1.58	0.04	-1.70	0.53	2.07
2012	16.00	2.40	0.58	0.06	13.60	15.42	15.94
2013	32.39	2.86	0.85	0.02	29.53	31.54	32.37
2014	13.69	3.12	1.38	0.02	10.57	12.31	13.67
Average	12.07	5.07	4.50	3.50	7.00	7.57	8.57

Notes:

Source: Ibbotson SBB, 2015 Classic Yearbook.

(2): Table A-1: Large-Capitalization Stocks, Total Returns, pages 196-197.

(3): Table A-7: Long Term Government Bonds Income Returns, pages 208-209.

(4): Table A-11: Intermediate Term Government Bonds, Income Returns, pages 216-217.

(5): Table A-14: US Treasury Bills, Total Returns, pages 222-223.

# VII 000109 STIP

Section VII - Profit  
 Subsection J - Portfolio Rate of Return  
 7/1/2016

Section VII - J  
 Exhibit 5

## Investment Expense to Invested Assets Ratio

Calendar Year (1)	Total Investment Expense Incurred (\$000) (2)	Aggregate Write-ins (\$000) (3)	Total Deductions = (2) + (3) (4)	Total Cash and Invested Assets (\$000) (5)	Ratio = (4) / (5) (6)
2005	2,583,504	598,809	3,182,313	1,170,135,319	0.27%
2006	2,738,201	654,734	3,392,935	1,264,555,809	0.27%
2007	2,829,153	655,075	3,484,228	1,330,400,451	0.26%
2008	2,799,958	281,611	3,081,569	1,246,387,298	0.25%
2009	2,811,669	216,379	3,028,048	1,302,970,319	0.23%
2010	3,065,150	197,863	3,263,013	1,359,025,844	0.24%
2011	3,138,189	186,536	3,324,725	1,374,110,208	0.24%
2012	3,201,888	172,506	3,374,394	1,427,203,029	0.24%
2013	3,243,277	179,579	3,422,856	1,519,998,639	0.23%
2014	3,229,177	296,458	3,525,635	1,567,766,111	0.22%
Average	2,964,017	343,955	3,307,972	1,356,255,303	0.24%

Notes:

Source: Various issues of Best's Aggregates and Averages.

(1) - (4): Exhibit of Net Investment Income, page 150 (calendar year 2014).

(5): Exhibit of Assets, page 140 (calendar year 2014).

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	5.89%	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%

Calculation of Common Stock Total Return Tax Rate

Year (1)	Income Returns (2)	Capital Appreciation Returns (3)
1985	4.72%	26.33%
1986	3.92%	14.62%
1987	3.64%	2.03%
1988	3.99%	12.40%
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	2.48%	29.60%
2014	2.09%	11.39%
Average	4.04%	7.78%

	Dividend	Capital Gains
(4) Weights	34.15%	65.85%
(5) Tax Rate	14.18%	26.07%
(6) Common Stock Tax Rate		<b>22.00%</b>

Notes:

Source: Ibbotson SBB, 2015 Classic Yearbook.

(2): Table A-2: Large-Capitalization Stocks, Income Returns, pages 198-199.

(3): Table A-3: Large-Capitalization Stocks, Capital Appreciation Returns, pages 200-201.

(5) = Dividend Tax Rate =  $0.3 \times 0.35 + 0.7 \times 0.35 \times 0.15$

Capital Gains Tax Rate is from page 2.

Calculation of Capital Gains Tax Rate

(1) Turnover Rate	36.00%
(2) Weighted Average Cost of Capital	7.44%
(3) Marginal Tax Rate	35.00%
(4) Annual Expected Capital Gains Rate	7.78%

Year (5)	Investment Basis (6) <sub>t-1</sub> 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) <sub>t-1</sub> - (9) <sub>t-1</sub> (7)	End of Year (7) x [1.0 + (4)] (8)				
0	1,000,000.00	1,000,000.00	1,077,838.20	388,021.75	28,021.75	9,807.61	9,462.06
1	640,000.00	689,816.45	743,510.52	267,663.79	37,263.79	13,042.33	11,711.75
2	409,600.00	475,846.73	512,885.79	184,638.88	37,182.88	13,014.01	10,877.33
3	262,144.00	328,246.90	353,797.05	127,366.94	32,995.10	11,548.28	8,984.08
4	167,772.16	226,430.11	244,055.03	87,859.81	27,461.83	9,611.64	6,959.82
5	107,374.18	156,195.22	168,353.17	60,607.14	21,952.44	7,683.35	5,178.40
6	68,719.48	107,746.03	116,132.79	41,807.80	17,068.79	5,974.08	3,747.66
7	43,980.47	74,324.98	80,110.31	28,839.71	13,006.74	4,552.36	2,658.10
8	28,147.50	51,270.60	55,261.41	19,894.11	9,761.01	3,416.35	1,856.70
9	18,014.40	35,367.30	38,120.23	13,723.28	7,238.10	2,533.33	1,281.49
10	11,529.22	24,396.95	26,295.96	9,466.55	5,316.03	1,860.61	876.04
11	7,378.70	16,829.41	18,139.39	6,530.18	3,873.85	1,355.85	594.19
12	4,722.37	11,609.21	12,512.85	4,504.62	2,804.57	981.60	400.40
13	3,022.31	8,008.22	8,631.57	3,107.36	2,019.33	706.77	268.33
14	1,934.28	5,524.20	5,954.20	2,143.51	1,447.17	506.51	178.99
15	1,237.94	3,810.69	4,107.30	1,478.63	1,032.97	361.54	118.92
16	792.28	2,628.67	2,833.29	1,019.98	734.76	257.17	78.73
17	507.06	1,813.30	1,954.45	703.60	521.06	182.37	51.97
18	324.52	1,250.85	1,348.21	485.36	368.53	128.99	34.21
19	207.69	862.85	930.02	334.81	260.04	91.01	22.47
20	132.92	595.21	641.54	641.54	508.62	178.02	40.90
Total					250,839.36	87,793.78	65,382.54

(13) Implied Tax Rate on Capital Gains 26.07%

Notes:

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

VII 000112 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	18.02%	16.44%	15.10%	13.96%	12.99%	12.15%	11.43%	10.80%	10.26%	9.79%	9.37%	9.01%	
	0.15	19.64%	18.25%	17.03%	15.97%	15.05%	14.23%	13.52%	12.88%	12.32%	11.81%	11.36%	10.95%	
	0.20	21.15%	19.94%	18.87%	17.91%	17.05%	16.29%	15.60%	14.97%	14.41%	13.89%	13.42%	13.00%	
	0.25	22.42%	21.38%	20.45%	19.59%	18.82%	18.11%	17.47%	16.87%	16.33%	15.82%	15.36%	14.93%	
	0.30	23.42%	22.54%	21.72%	20.98%	20.28%	19.64%	19.05%	18.50%	17.98%	17.50%	17.06%	16.64%	
	0.35	24.20%	23.44%	22.74%	22.08%	21.47%	20.89%	20.35%	19.85%	19.37%	18.92%	18.50%	18.10%	
	0.40	24.80%	24.15%	23.54%	22.96%	22.42%	21.91%	21.42%	20.96%	20.53%	20.12%	19.72%	19.35%	
	0.45	25.28%	24.72%	24.18%	23.68%	23.20%	22.74%	22.31%	21.89%	21.50%	21.12%	20.76%	20.42%	
	0.50	25.67%	25.18%	24.71%	24.27%	23.84%	23.44%	23.05%	22.68%	22.32%	21.98%	21.65%	21.34%	
	0.55	25.99%	25.56%	25.15%	24.76%	24.39%	24.03%	23.68%	23.35%	23.03%	22.72%	22.42%	22.14%	
	0.60	26.25%	25.88%	25.52%	25.18%	24.85%	24.53%	24.22%	23.93%	23.64%	23.36%	23.09%	22.83%	
	0.65	26.48%	26.16%	25.84%	25.54%	25.25%	24.97%	24.70%	24.43%	24.18%	23.93%	23.69%	23.45%	
	0.70	26.67%	26.39%	26.12%	25.86%	25.60%	25.35%	25.11%	24.88%	24.65%	24.43%	24.21%	24.00%	

## VIII 00009 STIP

Section VIII - F-Class Recommendation  
Subsection A - Indicated Rate Change  
7/1/2016

Section VIII-A  
Exhibit 1

### F-Class Rate Review Overall Indicated Rate Change

(1)	5-Year Adjusted Standard Plus ARAP Earned Premium	10,687,920
(2)	5-Year Adjusted Losses, LAE, and LBA	4,649,914
(3)	5-Year Adjusted Loss, LAE, and LBA Ratio = (2) / (1)	43.5%
(4)	Fixed Expense Ratio	5.0%
(5)	Indicated Policy Year 7/1/2016 Loss, LAE, Fixed Expense Ratio = (3) + (4)	48.6%
(6)	Variable Expense Ratio	18.0%
(7)	Profit and Contingencies	0.0%
(8)	Permissible Loss, LAE, LBA, and Fixed Expense Ratio = 1.000 - [ (6) + (7) ]	82.0%
(9)	Indicated Average Rate Change = [ (5) / (8) ] - 1.000	-40.8%
(10)	Rate Changed based on Trended On-Level Expected Loss Ratio	-6.1%
(11)	5-Year Total Claim Count	155
(12)	Credibility of the Indicated Average Rate Change = [ (11) / 4,000 ] <sup>0.5</sup>	19.7%
(13)	Credibility Weighted Average Rate Change = [ (9) x (12) ] + { (10) x [100% - (12)] }	-12.9%
(14)	<b>Selected Average Rate Change</b>	<b>-9.1%</b>

#### Notes:

- (1): Section VIII-B, Exhibit 1.
- (2): Section VIII-C, Exhibit 1, Page 2 and 4.
- (4), (6): Section VI-A, Exhibit 1.
- (7): Section VII-A, Exhibit 1.
- (10): Exhibit 2.
- (11): Unit Statistical Plan Data.



# VIII 000010 STIP

Section VIII - F-Class Recommendation  
 Subsection A - Indicated Rate Change  
 7/1/2016

Section VIII-A  
 Exhibit 2

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

(1)	State Class Expected Loss and LAE Ratio from Prior Revision		75.5%
(2)	Loss Adjustment Expense Ratio from Prior Revision		0.192
(3)	Special Fund Assessment Rate as a % of Federal Indemnity Losses from Prior Revision		15.1%
		<u>Indemnity</u>	<u>Medical</u>
(4)	Federal Indemnity/Medical Losses as % of Total Federal Losses	50.2%	49.8%
(5)	F-Class Expected Loss Ratio from Prior Revision		59.6%
	= (1) / {(4) for Indemnity x [ 1.000 + (2) + (3) ] + (4) for Medical x [ 1.000 + (2) ] }		
(6)	Benefit Level Change Factor	1.007	1.000
(7)	Net Indemnity/Medical Trend	-1.9%	-1.8%
(8)	Years since Prior Revision	2.250	2.250
(9)	Trended On-Level Loss Ratio	28.8%	28.5%
	= (4) x (5) x (6) x [ 1.000 + (7) ] ^ (8)		
(10)	Special Fund Assessment Rate as a % of Federal Indemnity Losses		11.0%
(11)	Loss Adjustment Expense Factor		1.200
(12)	Trended Loss, LAE and LBA Ratio		71.9%
	= [ (9) for indemnity x (10) ] + [ (9) Total x (11) ]		
(13)	Fixed Expense Ratio		5.0%
(14)	Trended Loss, LAE and Fixed Expense Ratio		77.0%
	= (12) + (13)		
(15)	Variable Expense Ratio		18.0%
(16)	Underwriting Profit Provision		0.0%
(17)	Permissible Loss, LAE, LBA, and Fixed Expense Ratio		82.0%
	= 1.000 - [ (15) + (16) ]		
(18)	Rate Changed based on Trended On-Level Expected Loss Ratio from Prior Revision		-6.1%
	= [ (14) / (17) ] - 1.000		

### Notes:

- (1): Section VI-J, Exhibit 1 of 04/01/2014 Stipulation.
- (2), (3), (4): Section VIII-J, Exhibit 1 of 04/01/2014 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  
7/1/2016

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)
2009	1,880,949	1.000	0.997	1.052	1,972,822
2010	2,418,575	1.000	0.997	1.052	2,536,362
2011	2,135,812	1.000	0.997	1.052	2,239,431
2012	1,965,274	1.000	0.997	1.052	2,060,597
2013	1,789,175	1.001	0.997	1.052	1,878,708
Total	10,189,785				10,687,920

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 04/01/2014 Stipulation.

(5): The offset for ARAP from the 04/01/2014 Stipulation.

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

## VIII 000012 STIP

Section VIII - F-Class Recommendation  
 Subsection C - Adjusted Losses  
 7/1/2016

Section VIII-C  
 Exhibit 1  
 Page 1

### Calculation of Adjusted Indemnity and Medical Losses Federal Losses

(A). Unit Statistical Plan Limited Reported Losses

Indemnity	Policy Year				
	2009	2010	2011	2012	2013
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	194,549	111,107	128,844	174,248	195,843
Temporary Total	31,332	39,520	61,103	236,953	169,263
<b>Medical</b>					
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	47,234	98,409	5,367	129,330	270,627
Temporary Total	30,407	59,516	64,766	161,663	102,743
Medical Only	10,371	29,706	8,818	36,972	22,873

(B). Unit Statistical Plan Converted Unlimited Losses

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

Indemnity	Policy Year				
	2009	2010	2011	2012	2013
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	300,947	184,737	212,460	337,068	514,975
Temporary Total	51,743	69,431	103,733	527,254	454,263
<b>Medical</b>					
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	94,536	184,747	20,727	253,163	493,083
Temporary Total	53,332	107,830	113,508	320,945	205,223
Medical Only	13,327	36,695	11,589	51,923	34,413

Note:

(B): Section VIII-G.

# VIII 000013 STIP

Section VIII - F-Class Recommendation  
 Subsection C - Adjusted Losses  
 7/1/2016

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	0.869
Permanent Total	0.833
Permanent Partial	1.020
Temporary Total	1.026
<b>Medical</b>	
Fatal	1.000
Permanent Total	0.833
Permanent Partial	1.020
Temporary Total	1.025
Medical Only	1.000

(D). Adjusted Losses

Indemnity	Policy Year				
	2009	2010	2011	2012	2013
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	294,950	181,055	208,226	330,351	504,713
Temporary Total	50,419	67,654	101,078	513,759	442,636
<b>Medical</b>					
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	92,723	181,204	20,329	248,308	483,626
Temporary Total	52,007	105,150	110,688	312,970	200,123
Medical Only	13,327	36,695	11,589	51,923	34,413
Adjusted Losses, LAE, LBA	4,649,914				

Notes:

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

(D) = (B) / (C)

# VIII 000014 STIP

Section VIII - F-Class Recommendation  
 Subsection C - Adjusted Losses  
 7/1/2016

Section VIII-C  
 Exhibit 1  
 Page 3

## Calculation of Adjusted Indemnity and Medical Losses State Losses

(A). Unit Statistical Plan Limited Reported Losses

Indemnity	Policy Year				
	2009	2010	2011	2012	2013
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
<b>Medical</b>					
Fatal	0	0	0	0	0
Permanent Total	0	0	0	0	0
Permanent Partial	0	0	0	0	0
Temporary Total	0	0	0	0	0
Medical Only	0	0	0	0	0

(B). Unit Statistical Plan Converted Unlimited Losses

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

Indemnity	Policy Year				
	2009	2010	2011	2012	2013
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
<b>Medical</b>					
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 000015 STIP

Section VIII - F-Class Recommendation  
 Subsection C - Adjusted Losses  
 7/1/2016

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	0.869
Permanent Total	0.833
Permanent Partial	1.020
Temporary Total	1.026
<b>Medical</b>	
Fatal	1.000
Permanent Total	0.833
Permanent Partial	1.020
Temporary Total	1.025
Medical Only	1.000

(D). Adjusted Losses

Indemnity	Policy Year				
	2009	2010	2011	2012	2013
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
<b>Medical</b>					
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  
7/1/2016

Section VIII-D  
Exhibit 1

## Proposed Rates and Rating Values to be Effective 7/1/2016

Class Code (1)	Manual Rate (2)	Minimum Premium (3)	Loss Constant (4)	Expected Loss Rate (5)	D-Ratio (6)
6801	8.98	500	0	3.23	0.19
6824	10.26	500	0	3.69	0.19
6826	9.84	500	0	3.54	0.17
6843	14.29	500	0	4.30	0.16
6872	21.87	500	0	6.58	0.18
6874	19.47	500	0	5.86	0.17
7309	21.11	500	0	6.35	0.17
7313	15.29	500	0	4.60	0.14
7317	14.61	500	0	4.39	0.16
7327	33.44	500	0	10.05	0.17
7350	17.29	500	0	6.22	0.17
8709	5.16	340	0	1.55	0.18
8726	5.83	454	0	2.09	0.19
9077	4.77	326	0	2.08	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 000017 STIP

Section VIII - F-Class Recommendation  
 Subsection E - Conversion/Excess Loss Factors  
 7/1/2016

Section VIII-E  
 Exhibit 1  
 Page 1

## Calculation of Indemnity and Medical Conversion Factors Federal Losses

### (A). Benefit Level Adjustment Factors

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

Indemnity	Policy Year				
	2009	2010	2011	2012	2013
Fatal	1.034	1.030	1.026	1.019	1.015
Permanent Total	1.030	1.027	1.023	1.019	1.015
Permanent Partial	1.012	1.012	1.011	1.009	1.007
Temporary Total	1.030	1.027	1.023	1.019	1.015
<b>Medical</b>					
All Injury Types	1.000	1.000	1.000	1.000	1.000

### (B). Loss Development Factors

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

Indemnity	Policy Year				
	2009	2010	2011	2012	2013
Likely	1.131	1.191	1.270	1.521	2.773
Not Likely	1.044	1.058	1.119	1.234	1.760
<b>Medical</b>					
Likely	1.258	1.294	1.346	1.435	1.758
Not Likely	1.029	1.038	1.068	1.069	1.152

### (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				
	2009	2010	2011	2012	2013
All Injury Types	0.921	0.941	0.933	0.955	0.934
<b>Medical</b>					
Lost Time Medical	0.967	1.017	0.992	0.967	0.951
Medical Only	0.750	0.768	0.814	0.862	0.869

### (D). Primary Conversion Factors (PCF)

Indemnity	Policy Year				
	2009	2010	2011	2012	2013
Fatal - LD	1.077	1.154	1.215	1.480	2.630
Fatal - NLD	0.994	1.025	1.070	1.201	1.669
Permanent Total	1.072	1.151	1.212	1.479	2.630
Permanent Partial - LD	1.054	1.134	1.197	1.465	2.609
Permanent Partial - NLD	0.973	1.007	1.055	1.189	1.656
Temporary Total - LD	1.072	1.151	1.212	1.479	2.630
Temporary Total - NLD	0.990	1.022	1.068	1.200	1.669
<b>Medical</b>					
Lost Time Medical -LD	1.216	1.316	1.336	1.388	1.672
Lost Time Medical -NLD	0.995	1.056	1.060	1.034	1.096
Medical - NLD	0.771	0.797	0.869	0.921	1.001

### Notes:

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



## VIII 000018 STIP

Section VIII - F-Class Recommendation  
 Subsection E - Conversion/Excess Loss Factors  
 7/1/2016

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	1.200	1.200

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

	Indemnity	Medical
Loss Based Assessments	0.110	0.000

(C). Investment Income Offset Factor

The following factor is applied to adjust for investment income.

	Investment Income Offset Factor
<b>Indemnity</b>	
Fatal	0.869
Permanent Total	0.833
Permanent Partial	1.020
Temporary Total	1.026
<b>Medical</b>	
Fatal	1.000
Permanent Total	0.833
Permanent Partial	1.020
Temporary Total	1.025
Medical Only	1.000

(D). Secondary Conversion Factors (SCF)

<b>Indemnity</b>	
Fatal	1.138
Permanent Total	1.092
Permanent Partial	1.336
Temporary Total	1.344
<b>Medical</b>	
Fatal	1.200
Permanent Total	0.999
Permanent Partial	1.223
Temporary Total	1.230
Medical Only	1.200

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  
 7/1/2016

Section VIII-E  
 Exhibit 1  
 Page 3

## Calculation of Indemnity and Medical Conversion Factors State Losses

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

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

### (A). Primary State Conversion Factors

Remainder of Industry	Policy Year				
	2009	2010	2011	2012	2013
<b>Indemnity</b>					
Fatal - LD	0.969	1.015	1.068	1.276	1.835
Fatal - NLD	0.972	1.013	1.052	1.200	1.562
Permanent Total	0.968	1.013	1.065	1.270	1.825
Permanent Partial - LD	0.989	1.036	1.085	1.289	1.847
Permanent Partial - NLD	0.992	1.034	1.069	1.211	1.573
Temporary Total - LD	0.954	0.999	1.052	1.259	1.811
Temporary Total - NLD	0.956	0.996	1.037	1.184	1.542
<b>Medical</b>					
Lost Time Medical - LD	0.910	0.944	0.949	0.994	1.101
Lost Time Medical - NLD	0.960	1.007	0.985	0.968	0.989
Medical - NLD	0.745	0.760	0.807	0.863	0.904
<b>Company A</b>					
<b>Indemnity</b>					
Fatal - LD	1.015	1.072	1.152	1.415	2.263
Fatal - NLD	0.979	1.036	1.093	1.296	1.888
Permanent Total	1.014	1.070	1.149	1.409	2.251
Permanent Partial - LD	1.036	1.094	1.171	1.429	2.279
Permanent Partial - NLD	0.999	1.057	1.111	1.309	1.901
Temporary Total - LD	0.999	1.055	1.136	1.397	2.234
Temporary Total - NLD	0.964	1.019	1.077	1.279	1.864
<b>Medical</b>					
Lost Time Medical - LD	0.920	0.954	0.952	0.976	1.137
Lost Time Medical - NLD	0.953	0.990	0.974	0.964	1.018
Medical - NLD	0.739	0.747	0.799	0.859	0.930

### (B). Secondary State Conversion Factors

<b>Indemnity</b>	
Fatal	1.043
Permanent Total	1.000
Permanent Partial	1.224
Temporary Total	1.232
<b>Medical</b>	
Fatal	1.200
Permanent Total	0.999
Permanent Partial	1.223
Temporary Total	1.231
Medical Only	1.200

**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)	
2009	1	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0
	9	0	194,549	0	47,234	241,783	0	189,327	0	46,991	236,318
	5	0	31,332	0	30,407	61,739	0	31,016	0	30,251	61,267
	6	0	0	0	10,371	10,371	0	0	0	8,001	8,001
2010	1	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0
	9	24,326	86,781	21,338	77,071	209,516	27,585	87,418	28,090	81,388	224,481
	5	23,018	16,502	15,356	44,160	99,036	26,485	16,867	20,215	46,633	110,200
	6	0	0	0	29,706	29,706	0	0	0	23,668	23,668
2011	1	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0
	9	0	128,844	0	5,367	134,211	0	135,936	0	5,689	141,625
	5	0	61,103	0	64,766	125,869	0	65,254	0	68,646	133,900
	6	0	0	0	8,818	8,818	0	0	0	7,662	7,662
2012	1	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0
	9	0	174,248	0	129,330	303,578	0	207,132	0	133,686	340,818
	5	156,568	80,385	49,797	111,866	398,616	231,628	96,483	69,098	115,633	512,842
	6	0	0	0	36,972	36,972	0	0	0	34,062	34,062
2013	1	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0
	9	0	195,843	0	270,627	466,470	0	324,348	0	296,500	620,848
	5	0	169,263	0	102,743	272,006	0	282,498	0	112,566	395,064
	6	0	0	0	22,873	22,873	0	0	0	22,896	22,896
All Years, All Injury		203,912	1,138,850	86,491	992,311	2,421,564	285,698	1,436,279	117,403	1,034,272	2,873,652

Notes:  
 (3),(4),(5),(6): Unit Statistical Plan data, excluding Large Deductibles.  
 (8), (9), (10), (11): Limited Incurred Losses x Primary Conversion Factors from Section VIII-E, Exhibit 1, Page 1.  
 (12) = (8) + (9) + (10) + (11)

VIII 000020 STIP

Calculation of Converted Unlimited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely  
 Federal Industry Group  
 All Classes

Policy Year (1)	Injury Type (2)	Adjusted Excess Losses					Converted Unlimited Losses					Exposure (13)
		Indemnity		Medical		Total	Indemnity		Medical		Total	
		Likely (3)	Not Likely (4)	Likely (5)	Not Likely (6)	(7)	Likely (8)	Not Likely (9)	Likely (10)	Not Likely (11)	(12)	
2009	1	0	0	0	0	0	0	0	0	0	0	174,035
	2	0	0	0	0	0	0	0	0	0		
	9	0	35,875	0	30,296	66,171	0	300,947	0	94,536	395,483	
	5	0	7,480	0	13,099	20,579	0	51,743	0	53,332	105,075	
	6	0	0	0	3,108	3,108	0	0	0	13,327	13,327	
2010	1	0	0	0	0	0	0	0	0	0	0	196,389
	2	0	0	0	0	0	0	0	0	0		
	9	5,574	17,664	10,497	31,064	64,799	44,312	140,425	47,200	137,547	369,484	
	5	5,352	2,951	8,129	12,668	29,100	42,792	26,639	34,872	72,958	177,261	
	6	0	0	0	6,919	6,919	0	0	0	36,695	36,695	
2011	1	0	0	0	0	0	0	0	0	0	0	183,131
	2	0	0	0	0	0	0	0	0	0		
	9	0	23,050	0	11,257	34,307	0	212,460	0	20,727	233,187	
	5	0	11,922	0	23,616	35,538	0	103,733	0	113,508	217,241	
	6	0	0	0	1,997	1,997	0	0	0	11,589	11,589	
2012	1	0	0	0	0	0	0	0	0	0	0	179,133
	2	0	0	0	0	0	0	0	0	0		
	9	0	45,100	0	73,287	118,387	0	337,068	0	253,163	590,231	
	5	46,803	17,355	40,004	36,136	140,298	374,243	153,011	134,226	186,719	848,199	
	6	0	0	0	9,217	9,217	0	0	0	51,923	51,923	
2013	1	0	0	0	0	0	0	0	0	0	0	172,165
	2	0	0	0	0	0	0	0	0	0		
	9	0	61,014	0	106,618	167,632	0	514,975	0	493,083	1,008,058	
	5	0	55,466	0	54,243	109,709	0	454,263	0	205,223	659,486	
	6	0	0	0	5,788	5,788	0	0	0	34,413	34,413	
(14) All Years and Injury Types		57,729	277,877	58,630	419,313	813,549	461,347	2,295,264	216,298	1,778,743	4,751,652	904,853
(15) Pure Premium							0.510	2.537	0.239	1.966	5.251	

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 STTP

Calculation of Manual Premium by Extension of Exposures  
 Federal Industry Group  
 All Classes

Class Code	Exposure By Policy Year						Current Rate	Manual Premium					
	2009	2010	2011	2012	2013	Total		2009	2010	2011	2012	2013	Total
	(2)	(3)	(4)	(5)	(6)	(7)		= (2) x (8)	= (3) x (8)	= (4) x (8)	= (5) x (8)	= (6) x (8)	= (7) x (8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
6801	0	936	2,923	0	0	3,859	11.51	0	10,773	33,644	0	0	44,417
6824	33,905	37,433	42,935	50,915	49,392	214,580	9.82	332,947	367,592	421,622	499,985	485,029	2,107,176
6826	18,412	16,580	3,867	237	612	39,708	10.63	195,720	176,245	41,106	2,519	6,506	422,096
6843	0	0	0	0	6,561	6,561	13.25	0	0	0	0	86,933	86,933
6872	12,357	11,986	9,147	9,553	7,712	50,755	28.05	346,614	336,207	256,573	267,962	216,322	1,423,678
6874	1,650	24,396	7,171	2,803	383	36,403	24.97	41,201	609,168	179,060	69,991	9,564	908,983
7309	6,828	5,877	15,897	13,196	13,835	55,633	27.07	184,834	159,090	430,332	357,216	374,513	1,505,985
7313	0	0	0	0	0	0	14.17	0	0	0	0	0	0
7317	3,892	2,289	1,974	319	1,559	10,033	13.54	52,698	30,993	26,728	4,319	21,109	135,847
7327	121	120	150	182	113	686	31.00	3,751	3,720	4,650	5,642	3,503	21,266
7350	11,007	11,242	11,522	11,270	0	45,041	16.03	176,442	180,209	184,698	180,658	0	722,007
8709	2,265	2,783	2,909	5,659	3,682	17,298	6.28	14,224	17,477	18,269	35,539	23,123	108,631
8726	83,598	82,747	84,636	84,999	88,316	424,296	6.37	532,519	527,098	539,131	541,444	562,573	2,702,766
9077	0	0	0	0	0	0	4.42	0	0	0	0	0	0
Total	174,035	196,389	183,131	179,133	172,165	904,853		1,880,949	2,418,575	2,135,812	1,965,274	1,789,175	10,189,785

Notes:  
 (2) - (7): Unit Statistical Plan data.  
 (8): Section VIII-D, Exhibit 1 of the 4/1/2014 Stipulation.

Calculation of Pure Premium Underlying Present Rate Factor

Industry Group (1)	Injury Type (2)	Uncapped Rate Level Factor (3)	Industry Group Pure Premium From Previous Revision (4)	Percent of Pure Premium = $(4) / [\text{Total of (4)}]$ (5)	Expected Loss and LAE Ratio (6)	Loss Based Assessment Change Factor (7)	Federal Losses as a % of Total Losses (8)	Benefit Level Change Factor (9)	Trend (10)	Pure Premium Underlying Present Rate Factor = $(3) \times (5) \times (6) \times (7) \times (9) \times (10)$ (11)
Federal	Indemnity	12.268	2.340	0.526	0.755	0.993	1.000	1.007	0.957	4.662
	Medical	12.268	2.110	0.474	0.755	0.993	1.000	1.000	0.961	4.191
	Total		4.450							

Notes:

- (3): Section VIII-H, Exhibit 1 of the 4/1/2014 Stipulation.
- (4): Section VIII-G of the 4/1/2014 Stipulation.
- (6): Section VI-J, Exhibit 1 of the 4/1/2014 Stipulation.
- (7): Change in load from Section VIII-K, Exhibit 1 and the 4/1/2014 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  
 7/1/2016

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	0.831	1.027	3.872	4.304	8.177
6824	0.767	0.843	3.578	3.531	7.109
6826	0.836	0.872	3.897	3.653	7.550
6843	3.794	1.917	17.686	8.032	25.719
6872	2.358	2.132	10.992	8.936	19.928
6874	1.803	1.449	8.407	6.071	14.478
7309	1.693	1.554	7.892	6.513	14.405
7313	3.387	0.874	15.792	3.662	19.454
7317	5.060	2.526	23.592	10.588	34.180
7327	4.268	3.944	19.900	16.529	36.428
7350	2.433	2.091	11.343	8.765	20.108
8709	0.521	0.540	2.427	2.261	4.688
8726	0.434	0.597	2.025	2.500	4.525
9077	0.906	1.366	4.222	5.726	9.947

Notes:

(2), (3): Section VIII-H, Exhibit 2 of the 04/01/2014 Stipulation.

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

# VIII 00025 STIP

Section VIII - F-Class Recommendation  
 Subsection G - Class Relativities  
 7/1/2016

Section VIII - G  
 Exhibit 1

## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Federal Class Codes		
6801 BOAT BUILDING - WOOD - NOC & DRIVERS: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	936	0	1	0	0	0	659	659	0.000	0.704	0.704
2011	2,923	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>3,859</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>659</b>	<b>659</b>	<b>0.000</b>	<b>0.171</b>	<b>0.171</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.077	.
(14) Massachusetts Credibility:	0.050	0.090	.
(15) Countrywide Pure Premium:	0.202	1.072	1.274
(16) Countrywide Indicated Relativity:	0.066	0.530	.
(17) Countrywide Credibility:	0.100	0.110	.
(18) Countrywide Lost-Time Claims:	4.000	.	.
(19) Pure Premium Underlying Present Rate:	3.872	4.304	8.177
(20) Relativity to Underlying Present Rate:	0.872	1.076	.
(21) Credibility to Underlying Relativity:	0.850	0.800	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	0.748	0.926	.
(24) Balanced Formula Relativity:	0.746	0.890	0.806

Class(es):		Effective: 7/1/2016							Federal Class Codes		
6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	33,905	0	7	0	0	0	6,549	6,549	0.000	0.193	0.193
2010	37,433	1	12	44,312	78,096	47,200	75,659	245,267	3,270	3,282	6,552
2011	42,935	0	5	0	3,912	0	5,539	9,450	0.091	0.129	0.220
2012	50,915	1	3	78,445	0	100,998	7,267	186,710	1,541	2,126	3,667
2013	49,392	0	8	0	627,335	0	428,888	1,056,223	12,701	8,683	21,385
<b>MA Total:</b>	<b>214,580</b>	<b>2</b>	<b>35</b>	<b>122,756</b>	<b>709,344</b>	<b>148,198</b>	<b>523,901</b>	<b>1,504,199</b>	<b>3,878</b>	<b>3,132</b>	<b>7,010</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.273	1.421	.
(14) Massachusetts Credibility:	0.240	0.430	.
(15) Countrywide Pure Premium:	2.837	2.665	5.503
(16) Countrywide Indicated Relativity:	0.925	1.318	.
(17) Countrywide Credibility:	0.380	0.290	.
(18) Countrywide Lost-Time Claims:	138.00	.	.
(19) Pure Premium Underlying Present Rate:	3.578	3.531	7.109
(20) Relativity to Underlying Present Rate:	0.806	0.882	.
(21) Credibility to Underlying Relativity:	0.380	0.280	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	0.963	1.240	.
(24) Balanced Formula Relativity:	0.961	1.192	1.058



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Section VIII - F-Class Recommendation  
 Subsection G - Class Relativities  
 7/1/2016

Section VIII - G  
 Exhibit 2

## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Federal Class Codes		
6826 MARINA & DRIVERS: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	18,412	0	5	0	233,180	0	78,245	311,425	12,665	4,250	16,915
2010	16,580	0	1	0	0	0	8,450	8,450	0,000	0,510	0,510
2011	3,867	0	0	0	0	0	0	0	0,000	0,000	0,000
2012	237	0	0	0	0	0	0	0	0,000	0,000	0,000
2013	612	0	0	0	0	0	0	0	0,000	0,000	0,000
<b>MA Total:</b>	<b>39,707</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>233,180</b>	<b>0</b>	<b>86,695</b>	<b>319,875</b>	<b>5,872</b>	<b>2,183</b>	<b>8,056</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.928	0.990	.
(14) Massachusetts Credibility:	0.130	0.220	.
(15) Countrywide Pure Premium:	4.165	1.832	5.997
(16) Countrywide Indicated Relativity:	1.357	0.906	.
(17) Countrywide Credibility:	0.190	0.200	.
(18) Countrywide Lost-Time Claims:	19.000	.	.
(19) Pure Premium Underlying Present Rate:	3.897	3.653	7.550
(20) Relativity to Underlying Present Rate:	0.877	0.913	.
(21) Credibility to Underlying Relativity:	0.680	0.580	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	1.105	0.928	.
(24) Balanced Formula Relativity:	1.103	0.892	1.014

Class(es):		Effective: 7/1/2016							Federal Class Codes		
6843 SHIP BUILDING-IRON OR STEEL-NOC & DRIVERS: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	0	0	0	0	0	0	0	0	0,000	0,000	0,000
2010	0	0	0	0	0	0	0	0	0,000	0,000	0,000
2011	0	0	0	0	0	0	0	0	0,000	0,000	0,000
2012	0	0	0	0	0	0	0	0	0,000	0,000	0,000
2013	6,561	0	3	0	9,147	0	5,543	14,690	1,394	0,845	2,239
<b>MA Total:</b>	<b>6,561</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>9,147</b>	<b>0</b>	<b>5,543</b>	<b>14,690</b>	<b>1,394</b>	<b>0,845</b>	<b>2,239</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.458	0.383	.
(14) Massachusetts Credibility:	0.110	0.150	.
(15) Countrywide Pure Premium:	6.782	3.849	10.631
(16) Countrywide Indicated Relativity:	2.211	1.903	.
(17) Countrywide Credibility:	0.450	0.430	.
(18) Countrywide Lost-Time Claims:	311.00	.	.
(19) Pure Premium Underlying Present Rate:	17.686	8.032	25.719
(20) Relativity to Underlying Present Rate:	3.982	2.007	.
(21) Credibility to Underlying Relativity:	0.440	0.420	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	2.797	1.719	.
(24) Balanced Formula Relativity:	2.791	1.652	2.313

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Section VIII - F-Class Recommendation  
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Section VIII - G  
 Exhibit 3

## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	12.357	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	11.986	0	5	0	0	0	5.872	5.872	0.000	0.490	0.490
2011	9.147	0	1	0	7.671	0	13.729	21.399	0.839	1.501	2.339
2012	9.553	0	3	0	97.784	0	162.079	259.863	10.236	16.967	27.203
2013	7.712	0	1	0	0	0	242	242	0.000	0.031	0.031
<b>MA Total:</b>	<b>50.755</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>105.454</b>	<b>0</b>	<b>181.922</b>	<b>287.376</b>	<b>2.078</b>	<b>3.584</b>	<b>5.662</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.682	1.626	.
(14) Massachusetts Credibility:	0.210	0.350	.
(15) Countrywide Pure Premium:	4.164	2.733	6.897
(16) Countrywide Indicated Relativity:	1.357	1.351	.
(17) Countrywide Credibility:	0.400	0.330	.
(18) Countrywide Lost-Time Claims:	261.00	.	.
(19) Pure Premium Underlying Present Rate:	10.992	8.936	19.928
(20) Relativity to Underlying Present Rate:	2.475	2.233	.
(21) Credibility to Underlying Relativity:	0.390	0.320	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	1.651	1.729	.
(24) Balanced Formula Relativity:	1.648	1.662	1.654

Class(es):		Effective: 7/1/2016							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)
2009	1.650	0	1	0	0	0	4.904	4.904	0.000	2.971	2.971
2010	24.396	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	7.171	0	1	0	0	0	130	130	0.000	0.018	0.018
2012	2.803	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	383	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>36.403</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5.034</b>	<b>5.034</b>	<b>0.000</b>	<b>0.138</b>	<b>0.138</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.063	.
(14) Massachusetts Credibility:	0.170	0.260	.
(15) Countrywide Pure Premium:	7.717	4.620	12.337
(16) Countrywide Indicated Relativity:	2.515	2.284	.
(17) Countrywide Credibility:	0.220	0.230	.
(18) Countrywide Lost-Time Claims:	26.000	.	.
(19) Pure Premium Underlying Present Rate:	8.407	6.071	14.478
(20) Relativity to Underlying Present Rate:	1.893	1.517	.
(21) Credibility to Underlying Relativity:	0.610	0.510	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	1.708	1.315	.
(24) Balanced Formula Relativity:	1.704	1.264	1.520

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Section VIII - F-Class Recommendation  
 Subsection G - Class Relativities  
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Section VIII - G  
 Exhibit 4

## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Federal Class Codes		
7309 STEVEDORING: NOC - US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	6.828	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	5.877	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	15.897	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	13.196	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	13.835	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>55.634</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.190	0.320	.
(15) Countrywide Pure Premium:	5.820	4.184	10.004
(16) Countrywide Indicated Relativity:	1.897	2.068	.
(17) Countrywide Credibility:	0.410	0.340	.
(18) Countrywide Lost-Time Claims:	123.00	.	.
(19) Pure Premium Underlying Present Rate:	7.892	6.513	14.405
(20) Relativity to Underlying Present Rate:	1.777	1.627	.
(21) Credibility to Underlying Relativity:	0.400	0.340	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	1.489	1.257	.
(24) Balanced Formula Relativity:	1.485	1.208	1.369

Class(es):		Effective: 7/1/2016							Federal Class Codes		
7313 COAL DOCK OPERATION & STEVEDORING: US ACT											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	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:	1.556	0.897	2.453
(16) Countrywide Indicated Relativity:	0.507	0.443	.
(17) Countrywide Credibility:	0.190	0.200	.
(18) Countrywide Lost-Time Claims:	19.000	.	.
(19) Pure Premium Underlying Present Rate:	15.792	3.662	19.454
(20) Relativity to Underlying Present Rate:	3.556	0.915	.
(21) Credibility to Underlying Relativity:	0.810	0.800	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	2.976	0.821	.
(24) Balanced Formula Relativity:	2.970	0.789	2.054

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Section VIII - F-Class Recommendation  
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Section VIII - G  
 Exhibit 5

## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	3,892	0	6	0	43,852	0	44,451	88,302	11,267	11,421	22,687	
2010	2,289	0	0	0	0	0	0	0	0,000	0,000	0,000	
2011	1,974	0	0	0	0	0	0	0	0,000	0,000	0,000	
2012	319	0	1	0	0	0	3,491	3,491	0,000	10,942	10,942	
2013	1,559	0	0	0	0	0	0	0	0,000	0,000	0,000	
<b>MA Total:</b>	<b>10,033</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>43,852</b>	<b>0</b>	<b>47,942</b>	<b>91,793</b>	<b>4,371</b>	<b>4,778</b>	<b>9,149</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.435	2.167	.
(14) Massachusetts Credibility:	0.150	0.190	.
(15) Countrywide Pure Premium:	6.096	2.569	8.665
(16) Countrywide Indicated Relativity:	1.987	1.270	.
(17) Countrywide Credibility:	0.410	0.410	.
(18) Countrywide Lost-Time Claims:	122.00	.	.
(19) Pure Premium Underlying Present Rate:	23.592	10.588	34.180
(20) Relativity to Underlying Present Rate:	5.312	2.646	.
(21) Credibility to Underlying Relativity:	0.440	0.400	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	3.367	1.991	.
(24) Balanced Formula Relativity:	3.360	1.914	2.753

Class(es):		Effective: 7/1/2016							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)	
2009	121	0	0	0	0	0	0	0	0,000	0,000	0,000	
2010	120	0	0	0	0	0	0	0	0,000	0,000	0,000	
2011	150	0	0	0	0	0	0	0	0,000	0,000	0,000	
2012	182	0	0	0	0	0	0	0	0,000	0,000	0,000	
2013	113	0	0	0	0	0	0	0	0,000	0,000	0,000	
<b>MA Total:</b>	<b>685</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0,000</b>	<b>0,000</b>	<b>0,000</b>	

	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:	12.092	6.451	18.543
(16) Countrywide Indicated Relativity:	3.942	3.189	.
(17) Countrywide Credibility:	0.200	0.210	.
(18) Countrywide Lost-Time Claims:	20.000	.	.
(19) Pure Premium Underlying Present Rate:	19.900	16.529	36.428
(20) Relativity to Underlying Present Rate:	4.480	4.130	.
(21) Credibility to Underlying Relativity:	0.750	0.710	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	4.149	3.602	.
(24) Balanced Formula Relativity:	4.140	3.462	3.855

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Section VIII - F-Class Recommendation  
 Subsection G - Class Relativities  
 7/1/2016

Section VIII - G  
 Exhibit 6

## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	11.007	0	3	0	75.658	0	27.046	102.704	6.874	2.457	9.331
2010	11.242	1	1	42.792	66.872	34.872	76.764	221.300	9.755	9.931	19.686
2011	11.522	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	11.270	1	5	295.799	49.461	33.228	27.953	406.440	30.635	5.429	36.064
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>45.040</b>	<b>2</b>	<b>9</b>	<b>338.591</b>	<b>191.991</b>	<b>68.100</b>	<b>131.763</b>	<b>730.444</b>	<b>11.780</b>	<b>4.437</b>	<b>16.218</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.867	2.013	.
(14) Massachusetts Credibility:	0.200	0.330	.
(15) Countrywide Pure Premium:	7.339	3.896	11.235
(16) Countrywide Indicated Relativity:	2.392	1.926	.
(17) Countrywide Credibility:	0.280	0.300	.
(18) Countrywide Lost-Time Claims:	48.000	.	.
(19) Pure Premium Underlying Present Rate:	11.343	8.765	20.108
(20) Relativity to Underlying Present Rate:	2.554	2.190	.
(21) Credibility to Underlying Relativity:	0.520	0.370	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	2.771	2.052	.
(24) Balanced Formula Relativity:	2.765	1.973	2.433

Class(es):		Effective: 7/1/2016							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)
2009	2.265	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	2.783	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	2.909	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	5.659	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	3.682	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>17.297</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.080	0.130	.
(15) Countrywide Pure Premium:	2.378	1.530	3.908
(16) Countrywide Indicated Relativity:	0.775	0.756	.
(17) Countrywide Credibility:	0.200	0.210	.
(18) Countrywide Lost-Time Claims:	21.000	.	.
(19) Pure Premium Underlying Present Rate:	2.427	2.261	4.688
(20) Relativity to Underlying Present Rate:	0.546	0.565	.
(21) Credibility to Underlying Relativity:	0.720	0.660	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	0.548	0.532	.
(24) Balanced Formula Relativity:	0.547	0.511	0.532

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Section VIII - F-Class Recommendation  
 Subsection G - Class Relativities  
 7/1/2016

Section VIII - G  
 Exhibit 7

## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Federal Class Codes			
8726 STEAMSHIP LINE OR AGENCY-PORT EMP: SPRVSR, CAPTNS, ENGRS, STWR												
Converted Unlimited Losses												
Amount												
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2009	83,598	0	0	0	0	0	0	0	0.000	0.000	0.000	
2010	82,747	0	9	0	22,096	0	79,797	101,893	0.267	0.964	1.231	
2011	84,636	0	18	0	304,611	0	126,426	431,037	3.599	1.494	5.093	
2012	84,999	0	27	0	342,834	0	291,016	633,849	4.033	3.424	7.457	
2013	88,316	0	24	0	332,755	0	298,045	630,800	3.768	3.375	7.143	
<b>MA Total:</b>	<b>424,296</b>	<b>0</b>	<b>78</b>	<b>0</b>	<b>1,002,295</b>	<b>0</b>	<b>795,284</b>	<b>1,797,578</b>	<b>2.362</b>	<b>1.874</b>	<b>4.237</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.775	0.850	.
(14) Massachusetts Credibility:	0.250	0.490	.
(15) Countrywide Pure Premium:	1.648	0.906	2.555
(16) Countrywide Indicated Relativity:	0.537	0.448	.
(17) Countrywide Credibility:	0.230	0.240	.
(18) Countrywide Lost-Time Claims:	28.000	.	.
(19) Pure Premium Underlying Present Rate:	2.025	2.500	4.525
(20) Relativity to Underlying Present Rate:	0.456	0.625	.
(21) Credibility to Underlying Relativity:	0.520	0.270	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	0.554	0.693	.
(24) Balanced Formula Relativity:	0.553	0.666	0.601

Class(es):		Effective: 7/1/2016							Federal Class Codes			
9077 UNITED STATES ARMED SERVICE RISK-ALL EMPLOYEES & DRIVERS												
Converted Unlimited Losses												
Amount												
		Claim Count		Indemnity		Medical			MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000	
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000	
2011	0	0	0	0	0	0	0	0	0.000	0.000	0.000	
2012	0	0	0	0	0	0	0	0	0.000	0.000	0.000	
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000	
<b>MA Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

	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	23.861	23.861
(16) Countrywide Indicated Relativity:	0.000	11.795	.
(17) Countrywide Credibility:	0.060	0.060	.
(18) Countrywide Lost-Time Claims:	1.000	.	.
(19) Pure Premium Underlying Present Rate:	4.222	5.726	9.947
(20) Relativity to Underlying Present Rate:	0.951	1.431	.
(21) Credibility to Underlying Relativity:	0.940	0.940	.
(22) Industry Group Converted Pure Premium:	3.046	2.205	5.251
(23) Formula Relativity:	0.893	2.053	.
(24) Balanced Formula Relativity:	0.892	1.973	1.346

## VIII 000032 STIP

Section VIII - F-Class Recommendation  
Subsection H - Proposed Rates  
7/1/2016

Section VIII-H  
Exhibit 1

### Calculation of Federal Industry Group Rate Change and Limits

(1) Industry Group Differential	1.000
(2) Experience and Benefit Level Change - Overall	-9.1%
(3) Target Rate Change = (1) x [ 1.000 + (2) ] - 1.000	-9.1%
(4) Benefit Level Change - Overall	0.4%
(5) Experience Change - Overall = {(1.000 + (2)) / [1.000 + (4)]} - 1.000	-9.5%
(6) Experience Change - by Group = {(1) x [1.000 + (5)]} - 1.000	-9.5%
(7) 0.75 Experience Change - by Group = 0.75 x (6)	-7.1%
(8) Maximum Rate Change = (4) + (7) + 15.0%	8.3%
(9) Minimum Rate Change = (4) + (7) - 15.0%	-21.7%
(10) Present Average Rate	11.790
(11) Uncapped Rate Level Factor = [ 1.000 + (3) ] x (6)	10.717
(12) Capped Rate Level Factor	10.198

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.

(10): Rates by class consistent with the 04/01/14 stipulation, weighted by five years of exposure.

(12): 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 VIII - F-Class Recommendation  
 Subsection H - Proposed Rates  
 7/1/2016

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	0.746	0.890	0.806	10.717	8.64
6824	0.961	1.192	1.058	10.717	11.34
6826	1.103	0.892	1.014	10.717	10.87
6843	2.791	1.652	2.313	10.717	24.79
6872	1.648	1.662	1.654	10.717	17.72
6874	1.704	1.264	1.520	10.717	16.29
7309	1.485	1.208	1.369	10.717	14.67
7313	2.970	0.789	2.054	10.717	22.02
7317	3.360	1.914	2.753	10.717	29.50
7327	4.140	3.462	3.855	10.717	41.32
7350	2.765	1.973	2.433	10.717	26.07
8709	0.547	0.511	0.532	10.717	5.70
8726	0.553	0.666	0.601	10.717	6.44
9077	0.892	1.973	1.346	10.717	14.42

Notes:

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

(5): Exhibit 1.



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Section VIII - F-Class Recommendation  
Subsection H - Proposed Rates  
7/1/2016

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	12.05	8.64	9.44
6824	10.28	11.34	10.79
6826	11.13	10.87	10.35
6843	13.87	24.79	15.02
6872	29.36	17.72	22.99
6874	26.14	16.29	20.47
7309	28.34	14.67	22.19
7313	14.84	22.02	16.07
7317	14.18	29.50	15.35
7327	32.46	41.32	35.15
7350	16.78	26.07	18.17
8709	6.58	5.70	5.43
8726	6.67	6.44	6.13
9077	4.63	14.42	5.01

Notes:

(2): from Section VIII-H, Exhibit 3 of the 04/01/14 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).

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Section VIII - F-Class Recommendation  
Subsection H - Proposed Rates  
7/1/2016

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	10,668,212	9,697,408	-9.1%	-9.1%	10.20

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 000036 STIP

## Pricing Example for Class 6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT

Calculation of MA Indicated Relativity:

		(A). Federal Benefits - Limited Losses (Unit Statistical Plan data, Excluding Large Deductibles)							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2009	0	0	0	0	0	0	0	
	2010	0	0	0	24,326	45,455	0	2,751	
	2011	0	0	0	0	0	0	2,267	
	2012	0	0	0	0	0	32,818	0	
	2013	0	0	0	0	111,778	0	122,362	
Medical	2009	0	0	0	0	0	0	0	5,491
	2010	0	0	0	21,338	33,603	0	2,183	8,866
	2011	0	0	0	0	0	0	729	3,019
	2012	0	0	0	0	0	43,559	0	5,102
	2013	0	0	0	0	170,000	0	52,472	1,807

		(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	2009	1.077	0.994	1.072	1.054	0.973	1.072	0.990	
	2010	1.154	1.025	1.151	1.134	1.007	1.151	1.022	
	2011	1.215	1.070	1.212	1.197	1.055	1.212	1.068	
	2012	1.480	1.201	1.479	1.465	1.189	1.479	1.200	
	2013	2.630	1.669	2.630	2.609	1.656	2.630	1.669	
Medical	2009	1.216	0.995	1.216	1.216	0.995	1.216	0.995	0.771
	2010	1.316	1.056	1.316	1.316	1.056	1.316	1.056	0.797
	2011	1.336	1.060	1.336	1.336	1.060	1.336	1.060	0.869
	2012	1.388	1.034	1.388	1.388	1.034	1.388	1.034	0.921
	2013	1.672	1.096	1.672	1.672	1.096	1.672	1.096	1.001

		(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	2009	0	0	0	0	0	0	0	
	2010	0	0	0	27,585	45,789	0	2,812	
	2011	0	0	0	0	0	0	2,421	
	2012	0	0	0	0	0	48,551	0	
	2013	0	0	0	0	185,122	0	204,221	
Medical	2009	0	0	0	0	0	0	0	4,236
	2010	0	0	0	28,090	35,485	0	2,305	7,064
	2011	0	0	0	0	0	0	773	2,623
	2012	0	0	0	0	0	60,442	0	4,700
	2013	0	0	0	0	186,253	0	57,489	1,809

# VIII 000037 STIP

Section VIII - F-Class Recommendation  
 Subsection I - Pricing Example  
 7/1/2016

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	2009	0	0	0	0	0	0	0	
	2010	0	0	0	7,963	13,217	0	812	
	2011	0	0	0	0	0	0	699	
	2012	0	0	0	0	0	14,015	0	
	2013	0	0	0	0	53,437	0	58,950	
Medical	2009	0	0	0	0	0	0	0	1,223
	2010	0	0	0	8,109	10,243	0	665	2,039
	2011	0	0	0	0	0	0	223	757
	2012	0	0	0	0	0	17,447	0	1,357
	2013	0	0	0	0	53,764	0	16,595	522

(E). Federal Adjusted Excess Losses									
Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only	
	LD	NLD		LD	NLD	LD	NLD		
Indemnity	2009	0	0	0	0	0	0	0	
	2010	0	0	0	5,574	9,252	0	568	
	2011	0	0	0	0	0	0	489	
	2012	0	0	0	0	0	9,810	0	
	2013	0	0	0	0	37,406	0	41,265	
Medical	2009	0	0	0	0	0	0	0	1,223
	2010	0	0	0	10,497	14,208	0	909	2,039
	2011	0	0	0	0	0	0	433	757
	2012	0	0	0	0	0	21,652	0	1,357
	2013	0	0	0	0	69,795	0	34,280	522

(F). Federal Secondary Conversion Factors					
	Fatal	Permanent Total	Permanent Partial	Temporary Total	Medical Only
Indemnity	1.138	1.092	1.336	1.344	
Medical	1.200	0.999	1.223	1.230	1.200

(G). Federal Converted Unlimited Losses									
Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only	
	LD	NLD		LD	NLD	LD	NLD		
Indemnity	2009	0	0	0	0	0	0	0	
	2010	0	0	0	44,312	73,553	0	4,543	
	2011	0	0	0	0	0	0	3,912	
	2012	0	0	0	0	0	78,445	0	
	2013	0	0	0	0	297,374	0	329,961	
Medical	2009	0	0	0	0	0	0	0	6,549
	2010	0	0	0	47,200	60,784	0	3,954	10,921
	2011	0	0	0	0	0	0	1,483	4,056
	2012	0	0	0	0	0	100,998	0	7,267
	2013	0	0	0	0	313,190	0	112,901	2,796

(H). Total Federal Converted Unlimited Losses				
Policy Year	Indemnity		Medical	
	LD	NLD	LD	NLD
2009	0	0	0	6,549
2010	44,312	78,096	47,200	75,659
2011	0	3,912	0	5,539
2012	78,445	0	100,998	7,267
2013	0	627,335	0	428,888
Total	122,756	709,344	148,198	523,901

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 00039 STIP

Section VIII - F-Class Recommendation  
 Subsection I - Pricing Example  
 7/1/2016

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	2009	0	0	0	0	0	0	0	
	2010	0	0	0	0	0	0	0	
	2011	0	0	0	0	0	0	0	
	2012	0	0	0	0	0	0	0	
	2013	0	0	0	0	0	0	0	
Medical	2009	0	0	0	0	0	0	0	0
	2010	0	0	0	0	0	0	0	0
	2011	0	0	0	0	0	0	0	0
	2012	0	0	0	0	0	0	0	0
	2013	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	2009	0	0	0	0	0	0	0	
	2010	0	0	0	0	0	0	0	
	2011	0	0	0	0	0	0	0	
	2012	0	0	0	0	0	0	0	
	2013	0	0	0	0	0	0	0	
Medical	2009	0	0	0	0	0	0	0	0
	2010	0	0	0	0	0	0	0	0
	2011	0	0	0	0	0	0	0	0
	2012	0	0	0	0	0	0	0	0
	2013	0	0	0	0	0	0	0	0

		(F). State Secondary Conversion Factors				
		Fatal	Permanent Total	Permanent Partial	Temporary Total	Medical Only
Indemnity		1.043	1.000	1.224	1.232	
Medical		1.200	0.999	1.223	1.231	1.200

		(G). State Converted Unlimited Losses							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2009	0	0	0	0	0	0	0	
	2010	0	0	0	0	0	0	0	
	2011	0	0	0	0	0	0	0	
	2012	0	0	0	0	0	0	0	
	2013	0	0	0	0	0	0	0	
Medical	2009	0	0	0	0	0	0	0	0
	2010	0	0	0	0	0	0	0	0
	2011	0	0	0	0	0	0	0	0
	2012	0	0	0	0	0	0	0	0
	2013	0	0	0	0	0	0	0	0

		(H). Total State Converted Unlimited Losses			
Policy Year	Indemnity		Medical		
	LD	NLD	LD	NLD	
2009	0	0	0	0	
2010	0	0	0	0	
2011	0	0	0	0	
2012	0	0	0	0	
2013	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 000040 STIP

Section VIII - F-Class Recommendation  
 Subsection I - Pricing Example  
 7/1/2016

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)
2009	33,905	0	6,549
2010	37,433	122,408	122,859
2011	42,935	3,912	5,539
2012	50,915	78,445	108,265
2013	49,392	627,335	428,888
Total	214,580	832,100	672,099
(5)	Indicated Pure Premium	3.878	3.132
(6)	Federal Class Codes Industry Group Pure Premium	3.046	2.205
(7)	MA Indicated Relativity	1.273	1.421

Notes:

- (2): Unit Statistical Plan data, excluding Large Deductibles
- (3), (4): Converted Unlimited Losses from Pages 2 & 4.
- (5): Totals of (3) and (4), divided by Total of (2), respectively.
- (6): Section VIII-F, Exhibit 1, Page 2.
- (7) = (5) / (6)

# VIII 000041 STIP

## Pricing Example for Class 6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT

Calculation of Countrywide Relativity

State (1)	State Code (2)	Losses				Lost-Time Claims		Payroll (9)
		Indemnity		Medical		Likely (7)	Not Likely (8)	
		Likely (3)	Not Likely (4)	Likely (5)	Not Likely (6)			
Alabama	1	6,931	26,764	269,002	24,713	1	1	3,362,659
Arizona	2	0	8,284	0	18,814	0	1	490,520
Arkansas	3	0	0	0	0	0	0	127,669
Colorado	5	0	0	0	0	0	0	0
Connecticut	6	0	0	0	3,870	0	0	762,236
D.C.	8	0	0	0	0	0	0	0
Florida	9	46,530	43,651	177,823	157,060	2	6	15,582,773
Georgia	10	0	1,305	0	3,057	0	1	2,429,099
Idaho	11	0	0	0	0	0	0	6,993
Illinois	12	0	32,563	0	99,835	0	2	940,878
Indiana	13	0	0	0	0	0	0	204,728
Iowa	14	0	0	0	613	0	0	811,435
Kansas	15	0	0	0	0	0	0	0
Kentucky	16	0	143,340	0	192,137	0	4	1,846,813
Louisiana	17	126,646	92,863	247,659	128,677	3	4	9,217,107
Maine	18	33,227	107,626	0	334,128	1	14	31,263,628
Maryland	19	0	57,208	0	19,407	0	1	3,991,698
Minnesota	22	0	0	0	0	0	0	0
Mississippi	23	3,706	117,015	33,641	250,265	1	10	21,538,411
Missouri	24	0	0	0	0	0	0	600,972
Montana	25	0	0	0	0	0	0	0
Nebraska	26	0	0	0	0	0	0	0
Nevada	27	0	0	0	0	0	0	41,518
New Hampshire	28	0	527	0	5,798	0	1	678,162
New Mexico	30	0	0	0	0	0	0	0
North Carolina	32	122,389	362,084	37,620	280,293	1	4	4,059,527
Oklahoma	35	5,149	22,545	9,409	20,769	1	2	855,977
Oregon	36	409,906	137,421	202,058	234,508	2	13	7,987,297
Rhode Island	38	138,959	634,653	68,783	510,012	1	30	12,125,770
South Carolina	39	38,042	0	48,133	343	1	0	3,299,613
South Dakota	40	0	0	0	0	0	0	0
Tennessee	41	0	34,064	0	22,666	0	1	106,694
Utah	43	0	0	0	0	0	0	0
Vermont	44	0	0	0	0	0	0	41,600
Virginia	45	0	4,294	0	52,589	0	1	4,831,682
West Virginia	47	0	0	0	0	0	0	0
Hawaii	52	0	216,982	0	432,123	0	4	5,709,005
Alaska	54	165,804	460,425	149,795	1,853,946	2	22	21,457,777
<b>Total</b>		<b>1,097,289</b>	<b>2,503,614</b>	<b>1,243,923</b>	<b>4,645,623</b>	<b>16</b>	<b>122</b>	<b>154,372,241</b>

Notes:

(3) - (9): Data are total for latest three policy years. See Section IX-D, Exhibit 3.  
 (7), (8): Used in calculating countrywide credibilities.



# VIII 000042 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	0.728	0.401	0.729	3.498	
Arizona	2	2.296	0.817	3.878	3.132	
Arkansas	3	0.000	0.000	0.000	0.000	
Colorado	5	0.000	0.000	0.000	0.000	
Connecticut	6	45.667	2.799	0.000	1.421	
D.C.	8	0.000	18.690	0.000	0.000	
Florida	9	2.950	1.027	1.707	2.207	
Georgia	10	2.956	1.419	0.159	0.179	
Idaho	11	0.000	0.027	0.000	0.000	
Illinois	12	1.222	0.379	4.229	4.016	
Indiana	13	8.327	1.746	0.000	0.000	
Iowa	14	2.677	1.112	0.000	0.084	
Kansas	15	0.000	0.000	0.000	0.000	
Kentucky	16	0.999	0.624	7.754	6.488	
Louisiana	17	0.808	0.674	1.923	2.751	
Maine	18	7.507	2.913	3.382	3.113	
Maryland	19	4.444	2.711	6.369	1.318	
Minnesota	22	0.000	0.000	0.000	0.000	
Mississippi	23	6.156	1.332	3.450	1.756	
Missouri	24	0.778	1.053	0.000	0.000	
Montana	25	0.000	0.000	0.000	0.000	
Nebraska	26	0.007	0.008	0.000	0.000	
Nevada	27	0.000	0.000	0.000	0.000	
New Hampshire	28	2.060	0.456	0.160	0.390	
New Mexico	30	0.000	5.886	0.000	0.000	
North Carolina	32	0.389	0.459	4.643	3.592	
Oklahoma	35	0.893	0.591	2.890	2.082	
Oregon	36	0.765	0.806	5.244	4.407	
Rhode Island	38	0.302	0.359	1.926	1.715	
South Carolina	39	0.454	0.382	0.523	0.562	
South Dakota	40	0.000	0.000	0.000	0.000	
Tennessee	41	0.144	0.194	4.595	4.112	
Utah	43	0.000	0.000	0.000	0.000	
Vermont	44	0.000	0.735	0.000	0.000	
Virginia	45	3.287	1.258	0.292	1.370	
West Virginia	47	0.000	0.000	0.000	0.000	
Hawaii	52	0.811	0.651	3.083	4.928	
Alaska	54	0.914	0.354	2.668	3.308	
(8)	Average of (5), (6) weighted by Payroll from Page 1, respectively			2.837	2.665	5.503
(9)	CW Federal Class Codes Pure Premium			3.068	2.023	5.091
(10)	CW Relativity = (8) / (9)			0.925	1.318	1.081
(11)	CW Relativity, balanced to unity			0.925	1.318	

**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 00043 STIP

Section VIII - F-Class Recommendation  
 Subsection I - Pricing Example  
 7/1/2016

Section VIII-I  
 Exhibit 3

### Pricing Example for Class 6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT

Calculation of Credibility and Balanced Formula Relativity:

- (1) MA Indicated Relativity
- (2) Countrywide Indicated Relativity
- (3) Relativity to Underlying Present Rate

Injury Type	
Indemnity	Medical
1.273	1.421
0.925	1.318
0.806	0.882

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)]<sup>0.4</sup>}

Injury Type	
Indemnity	Medical
0.767	0.843
4.662	4.191
3.578	3.531
767,695	757,739
27,200,000	6,400,000
24%	43%

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)]<sup>0.4</sup>, 0.5 x [100% - (9)] }
- (13) Credibility to Underlying = 100% - (9) - (12)
- (14) Formula Relativity = [(1) x (9)] + [(2) x (12)] + [(3) x (13)]
- (15) Off Balance Factor

Injury Type	
Indemnity	Medical
138	138
1,150	1,000
38%	29%
38%	28%
0.963	1.240
1.002	1.040

- (16) Balanced Formula Relativity

Injury Type		
Indemnity	Medical	Total
0.961	1.192	1.058

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 000044 STIP

Section VIII - F-Class Recommendation  
Subsection I - Pricing Example  
7/1/2016

Section VIII-I  
Exhibit 4

### Pricing Example for Class 6824 BOAT BUILDING OR REPAIRING & DRIVERS: US ACT

Calculation of Proposed Average Rate and Proposed Manual Rate:

(1) Present Average Rate	10.28
(2) Total Balanced Formula Relativity	1.058
(3) Capped Rate Level Factor	10.198
(4) Maximum Average Rate	11.13
(5) Minimum Average Rate	8.05
(6) Proposed Average Capped Rate = (2) x (3), Subject to Caps (4), (5)	10.79
(7) Offset for Merit Rating	0.997
(8) Offset for ARAP	1.052
(9) Offset for Construction Classification Premium Adjustment Program	1.000
(10) Provision for Insolvency Fund Assessment Recoupment	-0.0023
(11) Proposed Manual Rate = { (6) / [ (7) x (8) x (9) ] } x { 1.000 / [ 1.000 - (10) ] }	10.26
(12) Minimum Premium	500
(13) Loss Constant	0
(14) Expected Loss Rate	3.69
(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 prog

(12) = { [ (11) x 35.0 ] + (13) + Expense Constant } subject to a maximum of \$500

Where Expense Constant = 159 if (11) x 35 + (13) < 200,

= 250 if (11) x 35 + (13) >= 200 and < 1000

or = 338 if (11) x 35 + (13) >= 1000.

(13): No loss constant for Federal classes.

(14) = (6) x Ratio of Experience Rating ELR to Average Rate, from Section X-C, Exhibit 1.

Class 6824 is in Hazard Group F.

(15): See text of Section X for an explanation of the calculation of D-Ratios.

## VIII 00045 STIP

Section VIII - F-Class Recommendation  
Subsection J - U.S.L.H. & H.W. Coverage Percentage  
7/1/2016

Section VIII-J  
Exhibit 1

### Calculation of USLH & HW Compensation Coverage Percentage

(1)	Benefits Differential Underlying Current USLH & HW Coverage Percentage	1.195
(2)	State Benefit Level Adjustments Since Last Approval	1.012
(3)	Federal Benefit Level Adjustments Since Last Approval	1.004
(4)	Revised Benefits Differential = (1) x [ (3) / (2) ]	1.186
(5)	Federal Indemnity Losses as % of Total Federal Losses	55.5%
(6)	Expected Loss Ratio for State Classes	64.2%
(7)	Fixed Expense Ratio	5.0%
(8)	Special Fund Assessment Rate as % of Federal Indemnity Losses	0.110
(9)	Loss Adjustment Expense Factor (Applies to Losses)	1.200
(10)	USLH & HW Coverage Percentage for Manual Rates	1.231
(11)	USLH & HW Coverage Percentage for Expected Loss Rates	1.175

#### Notes:

(1): Section VIII-J, Exhibit 1 of 4/1/2014 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 000046 STIP

Section VIII - F-Class Recommendation  
Subsection K - Federal Tax Multiplier  
7/1/2016

Section VIII-K  
Exhibit 1

### Calculation of Federal Tax Multiplier

(1)	State Tax Multiplier	1.032
(2)	Loading for Taxes and Residual Market Subsidy = $1.0 - [ 1.0 / (1) ]$	3.1%
(3)	Expected Loss Ratio (no LAE)	63.7%
(4)	Federal Special Funds Assessment	11.0%
(5)	Federal Indemnity Losses as % of Total Losses	55.5%
(6)	Loading for Federal Funds Assessment = $(3) \times (4) \times (5)$	3.9%
(7)	Federal Tax Multiplier = $1.0 / [ 1.0 - (2) - (6) ]$	1.076

Notes:

(1),(3): Section XII-A, Exhibit 4.

(4): NCCI Tax and Assessment Directory.

(5): Based on ratio of federal indemnity losses to state and federal total losses from Section VIII-C, Exhibit 1, Pages 1 and 3.

# IX 00023 STIP

Section IX - Classification Pricing  
 Subsection A - Summary  
 7/1/2016

Section IX - A  
 Exhibit 1  
 Page 1

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

Draft *Proposed Effective July 1, 2016* Page RA-1

## RATES

**LEGEND**

- |  |   |
|--|---|
| (a) Rate for each individual risk must be obtained by Home Office from the MA Bureau.<br>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.<br>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	2.44	264.	20.	1748	3.19	271.	--	2288	2.69	253.	--	2923	1.54	213.	--
0008	2.41	263.	20.	1852	5.80	453.	--	2302	2.78	256.	--	2942	1.76	221.	--
0016	4.32	330.	20.	1853	1.58	214.	--	2305	2.51	247.	--	3018	3.41	278.	--
0034	4.31	330.	20.	1860	1.96	228.	--	2362	1.76	221.	--	3022	3.46	280.	--
0035	2.29	259.	20.	1924	1.95	227.	--	2380	2.41	243.	--	3027	4.68	323.	--
0036	4.31	330.	20.	1925	4.38	312.	--	2402	2.27	238.	--	3028	3.21	271.	--
0037	2.41	263.	20.	2001	3.42	279.	--	2413	3.53	283.	--	3030	6.16	466.	--
0042	4.09	322.	20.	2002	2.77	256.	--	2416	2.53	248.	--	3040	5.98	459.	--
0046	2.21	256.	20.	2003	3.42	279.	--	2417	3.57	284.	--	3041	4.74	325.	--
0050	6.25	500.	50.	2014	3.48	281.	--	2501	2.03	230.	--	3042	5.83	454.	--
0059D	0.28	.	.	2021	2.78	256.	--	2503	1.10	198.	--	3064	2.84	258.	--
0065D	0.12	.	.	2039	2.81	257.	--	2534	2.03	230.	--	3066	2.84	258.	--
0066D	0.10	.	.	2041	2.57	249.	--	2570	4.94	332.	--	3076	2.30	240.	--
0067D	0.10	.	.	2070	4.07	301.	--	2576	2.40	243.	--	3081D	6.11	464.	--
0079	3.01	284.	20.	2081	3.93	297.	--	2578	2.40	243.	--	3082D	6.11	464.	--
0083	4.38	332.	20.	2089	2.52	247.	--	2585	3.23	272.	--	3085D	4.40	313.	--
0106	13.63	500.	20.	2095	3.45	280.	--	2586	1.64	216.	--	3110	8.21	500.	--
0113	4.31	330.	20.	2101	2.52	247.	--	2587	3.16	290.	20.	3111	2.14	234.	--
0170	4.31	330.	20.	2105	(a)	(a)	(a)	2623	4.35	311.	--	3113	1.63	216.	--
0251	3.16	290.	20.	2111	2.16	235.	--	2640	1.82	223.	--	3114	2.69	253.	--
0771b	1.12	.	.	2114	2.52	247.	--	2651	1.82	223.	--	3118	1.63	216.	--
0908	86.00	150.	--	2115	3.84	293.	--	2660	1.73	220.	--	3119	0.82	188.	--
0909	159.00	223.	--	2121	1.60	215.	--	2683	1.65	217.	--	3120	1.47	210.	--
0912	317.00	381.	--	2130	2.00	229.	--	2688	2.39	243.	--	3122	1.94	227.	--
0913	171.00	235.	--	2131	2.34	241.	--	2702	15.55	500.	20.	3127	0.90	191.	--
0917	3.25	293.	20.	2143	2.29	239.	--	2710	6.89	491.	--	3131	1.59	215.	--
0918	0.58	199.	20.	2150	5.05	336.	--	2731	3.48	281.	--	3132	3.37	277.	--
1430	8.71	500.	--	2156	5.86	455.	--	2741	6.06	462.	--	3145	1.56	214.	--
1438	3.22	272.	--	2157	4.25	308.	--	2747	5.74	451.	--	3146	1.76	221.	--
1463	8.98	500.	--	2172	2.08	232.	--	2790	1.71	219.	--	3169	3.21	271.	--
1624D	4.64	341.	20.	2174	3.37	277.	--	2802	4.42	314.	--	3179	1.26	203.	--
1655	4.72	344.	20.	2211	6.35	472.	--	2835	1.89	225.	--	3180	2.64	251.	--
1701	3.60	285.	--	2220	2.78	256.	--	2836	2.38	242.	--	3188	2.54	248.	--
1710D	4.64	341.	20.	2260	6.76	487.	--	2841	3.71	289.	--	3200	2.36	242.	--
1747	3.01	264.	--	2286	2.78	256.	--	2883	3.09	267.	--	3220	2.53	248.	--

b Non-Ratable Code and Rate to be used with class code 4771.

# IX 00024 STIP

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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
3223	(a)	(a)	(a)	3808	2.92	261.	--	4410	3.43	279.	--	5160	3.37	327.	50.
3227	3.21	271.	--	3821	4.02	320.	20.	4417	4.34	311.	--	5183	3.45	330.	50.
3241	1.95	227.	--	3826	3.08	267.	--	4432	1.03	195.	--	5188	4.94	473.	50.
3255	2.57	249.	--	3830	1.65	217.	--	4439	3.11	268.	--	5190	2.61	300.	50.
3257	2.58	249.	--	3841	1.36	207.	--	4452	3.36	277.	--	5191	0.92	211.	20.
3270	2.04	230.	--	4000	4.29	329.	20.	4459	2.73	255.	--	5192	3.14	289.	20.
3300	5.28	344.	--	4021	3.87	294.	--	4470	2.17	235.	--	5213	15.46	500.	50.
3305	(a)	(a)	(a)	4024	2.92	261.	--	4484	2.09	232.	--	5215	5.65	498.	50.
3315	3.33	276.	--	4034	5.93	458.	--	4493	2.51	247.	--	5221	6.77	500.	50.
3336	3.62	286.	--	4036	2.25	238.	--	4511	0.28	189.	20.	5222	10.40	500.	50.
3365	7.75	500.	50.	4038	2.45	245.	--	4512	0.12	183.	20.	5223	4.30	451.	50.
3372	2.38	242.	--	4053	1.78	221.	--	4557	1.88	225.	--	5348	5.12	479.	50.
3373	3.54	283.	--	4061	2.25	238.	--	4558	1.35	206.	--	5402	9.21	500.	50.
3381	2.55	248.	--	4062	2.25	238.	--	4561	3.11	268.	--	5403	11.00	500.	50.
3383	1.40	208.	--	4112	0.64	181.	--	4583	3.35	276.	--	5437	5.52	493.	50.
3385	0.76	186.	--	4113	1.78	221.	--	4611	1.20	201.	--	5443	4.22	357.	50.
3400	3.21	271.	--	4114	2.10	233.	--	4635	3.83	293.	--	5445	6.90	500.	50.
3507	2.77	256.	--	4130	3.79	292.	--	4653	2.37	242.	--	5462	7.70	500.	50.
3515	2.59	250.	--	4133	1.71	219.	--	4665	6.46	476.	--	5472	9.27	500.	50.
3548	1.65	217.	--	4150	0.76	186.	--	4692	0.62	181.	--	5473	10.25	500.	50.
3558	0.79	187.	--	4239	2.56	249.	--	4693	0.92	191.	--	5474	5.66	498.	50.
3559	1.65	217.	--	4243	3.53	283.	--	4720	1.85	224.	--	5478	5.59	496.	50.
3571	0.93	192.	--	4244	2.88	260.	--	4740	1.15	199.	--	5479	8.90	500.	50.
3574	1.65	217.	--	4250	2.17	235.	--	4741	2.52	247.	--	5480	4.64	462.	50.
3612	1.89	225.	--	4251	1.99	229.	--	4771c	7.52	500.	--	5506	6.85	500.	50.
3620	5.36	347.	--	4273	2.33	241.	--	4777	3.35	276.	--	5507	7.64	500.	50.
3629	1.65	217.	--	4279	2.75	255.	--	4825	0.68	183.	--	5508D	6.52	500.	50.
3632	1.65	217.	--	4282	0.75	185.	--	4828	0.96	193.	--	5509	3.71	339.	50.
3634	1.61	215.	--	4283	2.23	237.	--	4829	0.96	193.	--	5538	4.58	460.	50.
3635	2.90	261.	--	4299	1.87	224.	--	4902	1.76	221.	--	5545	37.05	500.	50.
3638	1.65	217.	--	4301	5.25	343.	--	4923	0.99	194.	--	5547	13.68	500.	50.
3642	1.07	196.	--	4304	3.99	299.	--	5020	5.01	475.	50.	5606	1.87	274.	50.
3643	1.59	215.	--	4307	1.64	216.	--	5022	9.70	500.	50.	5610	6.49	500.	50.
3647	2.10	233.	--	4308	1.21	201.	--	5037	22.67	500.	50.	5645	8.11	500.	50.
3648	1.33	206.	--	4350	0.57	179.	--	5040	59.07	500.	50.	5651	8.11	500.	50.
3681	0.82	188.	--	4351	0.82	188.	--	5057	26.45	500.	50.	5701	25.39	500.	50.
3685	0.64	181.	--	4352	1.14	199.	--	5059	26.45	500.	50.	5703	21.41	500.	50.
3724	4.99	475.	50.	4360	0.99	194.	--	5069	26.45	500.	50.	5705	12.07	500.	50.
3726	12.36	500.	50.	4361	0.62	201.	20.	5102	6.12	500.	50.	6003	10.46	500.	50.
3807	3.21	271.	--	4362	0.60	200.	20.	5146	6.38	500.	50.	6005	6.52	500.	50.

c For Non-Ratable portion of Rate, refer to class code 0771.

# IX 00025 STIP

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

Draft

*Proposed Effective July 1, 2016*

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RATES															
CLASS CODE	MIN RATE	LOSS PREM	LOSS CONST	CLASS CODE	MIN RATE	LOSS PREM	LOSS CONST	CLASS CODE	MIN RATE	LOSS PREM	LOSS CONST	CLASS CODE	MIN RATE	LOSS PREM	LOSS CONST
6204	7.78	500.	50.	7230	7.96	500.	20.	8002	1.76	241.	20.	8381	1.94	247.	20.
6217	4.53	459.	50.	7231	8.08	500.	20.	8006	1.43	229.	20.	8385	2.66	272.	20.
6229	4.56	460.	50.	7309F	21.11	500.	--	8008	0.80	207.	20.	8392	1.58	234.	20.
6233	4.23	357.	50.	7313F	15.29	500.	--	8010	1.42	229.	20.	8393	2.19	256.	20.
6251D	6.35	500.	50.	7317F	14.61	500.	--	8013	0.41	193.	20.	8500	6.82	500.	20.
6252D	9.36	500.	50.	7327F	33.44	500.	--	8017	1.07	216.	20.	8601	0.27	188.	20.
6306	9.10	500.	50.	7333M	7.53	.	--	8018	3.01	284.	20.	8709F	5.16	340.	--
6319	4.48	457.	50.	7335M	8.85	.	--	8021	2.96	283.	20.	8710	2.78	276.	20.
6325	4.79	468.	50.	7337M	11.10	.	--	8031	2.12	253.	20.	8719	2.78	276.	20.
6400	6.00	500.	50.	7350F	17.29	500.	--	8032	1.54	233.	20.	8720	0.90	211.	20.
6504	2.52	247.	--	7360	5.59	466.	20.	8033	1.93	247.	20.	8721	0.21	186.	20.
6702M	(a)	.	--	7370	4.05	321.	20.	8034	3.23	292.	20.	8726F	5.83	454.	--
6703M	(a)	.	--	7380	6.08	483.	20.	8039	1.26	223.	20.	8734M	0.44	.	--
6704M	(a)	.	--	7382	3.72	309.	20.	8044	3.96	318.	20.	8737M	0.35	.	--
6801F	8.98	500.	--	7394M	9.68	.	--	8046	2.05	251.	20.	8738M	0.55	.	--
6811	7.29	500.	20.	7395M	12.37	.	--	8048	2.70	274.	20.	8742	0.16	185.	20.
6824F	10.26	500.	--	7398M	15.51	.	--	8050	1.46	230.	20.	8745	4.19	326.	20.
6826F	9.84	500.	--	7403	5.25	454.	20.	8058	2.44	264.	20.	8747	0.95	212.	20.
6834	2.48	266.	20.	7405d	1.13	232.	20.	8103	2.69	273.	20.	8748	0.58	199.	20.
6836	3.11	288.	20.	7420	7.48	500.	20.	8105	5.19	452.	20.	8800	0.97	213.	20.
6843F	14.29	500.	--	7421	1.78	241.	20.	8106	6.27	489.	20.	8803	0.04	180.	20.
6854	11.61	500.	20.	7422	1.78	241.	20.	8107	3.09	287.	20.	8805M	0.18	.	--
6872F	21.87	500.	--	7425	3.05	286.	20.	8111	2.64	271.	20.	8810	0.07	181.	20.
6874F	19.47	500.	--	7431e	1.34	241.	20.	8116	3.09	287.	20.	8814M	0.14	.	--
6882	17.77	500.	20.	7445f	0.37	.	.	8203	6.38	493.	20.	8815M	0.23	.	--
6884	15.82	500.	20.	7453g	0.44	.	.	8204	4.23	327.	20.	8820	0.09	182.	20.
7016M	1.88	.	--	7502	2.97	283.	20.	8215	3.75	310.	20.	8824	1.80	242.	20.
7024M	2.35	.	--	7515	2.17	255.	20.	8227	4.70	465.	50.	8826	1.80	242.	20.
7038M	3.55	.	--	7520	3.16	290.	20.	8232	5.53	464.	20.	8829	2.07	251.	20.
7046M	5.06	.	--	7538	6.00	500.	50.	8233	6.82	500.	20.	8831	0.97	213.	20.
7047M	2.95	.	--	7539	1.28	224.	20.	8235	4.32	330.	20.	8832	0.28	189.	20.
7050M	5.57	.	--	7580	3.15	289.	20.	8263	5.41	459.	20.	8833	1.32	225.	20.
7090M	4.44	.	--	7590	4.91	351.	20.	8264	5.75	471.	20.	8835	2.03	250.	20.
7098M	5.95	.	--	7600	3.97	318.	20.	8265	6.82	500.	20.	8837	(a)	(a)	(a)
7099M	7.46	.	--	7601	5.38	488.	50.	8279	5.53	464.	20.	8868	0.79	207.	20.
7133	(a)	(a)	(a)	7610	0.23	187.	20.	8291	4.15	324.	20.	8901	0.07	181.	20.
7151M	8.26	.	--	7704	2.30	260.	20.	8292	2.99	284.	20.	9014	3.01	284.	20.
7152M	12.95	.	--	7720	1.71	239.	20.	8293	9.44	500.	20.	9015	3.17	290.	20.
7153M	10.33	.	--	7855	5.18	481.	50.	8350	5.70	470.	20.	9016	2.01	249.	20.
7219	9.77	500.	20.	8001	1.85	244.	20.	8380	3.08	287.	20.	9019	2.81	277.	20.

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 000027 STIP

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	2.037	1.080	0.627	0.770	0.983
	Medical	2.037	0.644	0.373	0.770	0.586
	Total		1.724			
Construction	Indemnity	5.475	3.094	0.665	0.770	2.805
	Medical	5.475	1.555	0.335	0.770	1.410
	Total		4.649			
Office and Clerical	Indemnity	0.168	0.084	0.594	0.770	0.077
	Medical	0.168	0.057	0.406	0.770	0.052
	Total		0.141			
Goods and Services	Indemnity	1.832	0.951	0.613	0.770	0.865
	Medical	1.832	0.600	0.387	0.770	0.546
	Total		1.552			
Miscellaneous	Indemnity	5.139	2.823	0.644	0.770	2.547
	Medical	5.139	1.563	0.356	0.770	1.410
	Total		4.385			

Notes:

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

# IX 000028 STIP

Section IX - Classification Pricing  
 Subsection B - Conversion/Excess Loss Factors  
 7/1/2016

Section IX - B  
 Exhibit 1  
 Page 1

## Calculation of Indemnity and Medical Conversion Factors

**(A). Benefit Level Adjustment Factors**

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

Indemnity	Policy Year				
	2009	2010	2011	2012	2013
Fatal	1.033	1.033	1.030	1.025	1.023
Permanent Total	1.031	1.032	1.027	1.020	1.017
Permanent Partial	1.054	1.055	1.046	1.035	1.030
Temporary Total	1.016	1.017	1.015	1.011	1.010

Medical	2009	2010	2011	2012	2013
All Injury Types	1.002	1.000	1.000	1.000	1.000

**(B). Loss Development Factors**

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

Indemnity	Remainder of Industry				
	Policy Year				
	2009	2010	2011	2012	2013
Likely	1.019	1.044	1.112	1.304	1.921
Not Likely	1.022	1.042	1.095	1.226	1.635

Medical	2009	2010	2011	2012	2013
Likely	0.939	0.928	0.956	1.028	1.158
Not Likely	0.991	0.990	0.992	1.001	1.040

Indemnity	AIG				
	Policy Year				
	2009	2010	2011	2012	2013
Likely	1.068	1.103	1.200	1.446	2.369
Not Likely	1.030	1.065	1.138	1.325	1.976

Medical	2009	2010	2011	2012	2013
Likely	0.949	0.938	0.959	1.009	1.195
Not Likely	0.984	0.974	0.982	0.996	1.071

**(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				
	2009	2010	2011	2012	2013
All Injury Types	0.921	0.941	0.933	0.955	0.934

Medical	2009	2010	2011	2012	2013
Lost Time Medical	0.967	1.017	0.992	0.967	0.951
Medical Only	0.750	0.768	0.814	0.862	0.869

**Notes:**

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

(B): Development to 10th report (Exhibit 2, Page 1) x Development from 10th to ultimate. The 10th to ultimate development factor was calculated using data from Financial Aggregate Policy Year Call (Call 2) and Large Loss & Catastrophe Call (Call 7).

(C): Exhibit 3. Frequency x Severity Trends / Wage Trends

# IX 000029 STIP

Section IX - Classification Pricing  
 Subsection B - Conversion/Excess Loss Factors  
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Section IX - B  
 Exhibit 1  
 Page 2

## Calculation of Indemnity and Medical Conversion Factors

### (D). Primary Conversion Factors (PCF)

Remainder of Industry					
	Policy Year				
Indemnity	2009	2010	2011	2012	2013
Fatal - LD	0.969	1.015	1.068	1.276	1.835
Fatal - NLD	0.972	1.013	1.052	1.200	1.562
Permanent Total	0.968	1.013	1.065	1.270	1.825
Permanent Partial - LD	0.989	1.036	1.085	1.289	1.847
Permanent Partial - NLD	0.992	1.034	1.069	1.211	1.573
Temporary Total - LD	0.954	0.999	1.052	1.259	1.811
Temporary Total - NLD	0.956	0.996	1.037	1.184	1.542

Medical					
Lost Time Medical -LD	0.910	0.944	0.949	0.994	1.101
Lost Time Medical -NLD	0.960	1.007	0.985	0.968	0.989
Medical - NLD	0.745	0.760	0.807	0.863	0.904

AIG					
	Policy Year				
Indemnity	2009	2010	2011	2012	2013
Fatal - LD	1.015	1.072	1.152	1.415	2.263
Fatal - NLD	0.979	1.036	1.093	1.296	1.888
Permanent Total	1.014	1.070	1.149	1.409	2.251
Permanent Partial - LD	1.036	1.094	1.171	1.429	2.279
Permanent Partial - NLD	0.999	1.057	1.111	1.309	1.901
Temporary Total - LD	0.999	1.055	1.136	1.397	2.234
Temporary Total - NLD	0.964	1.019	1.077	1.279	1.864

Medical					
Lost Time Medical -LD	0.920	0.954	0.952	0.976	1.137
Lost Time Medical -NLD	0.953	0.990	0.974	0.964	1.018
Medical - NLD	0.739	0.747	0.799	0.859	0.930

Notes:

(D) = (A) x (B) x (C)

# IX 000030 STIP

Section IX - Classification Pricing  
Subsection B - Conversion/Excess Loss Factors  
7/1/2016

Section IX - B  
Exhibit 1  
Page 3

## Calculation of Indemnity and Medical Conversion Factors

### (A). Loss Adjustment Expense Factor

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

	Indemnity	Medical
Loss Adjustment Expense	1.200	1.200

### (B). Investment Income Offset Factor

The following factor is applied to adjust for investment income.

	Investment Income Offset Factor
<b>Indemnity</b>	
Fatal	0.869
Permanent Total	0.833
Permanent Partial	1.020
Temporary Total	1.026
<b>Medical</b>	
Fatal	1.000
Permanent Total	0.833
Permanent Partial	1.020
Temporary Total	1.025
Medical Only	1.000

### (C). Secondary Conversion Factors

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

<b>Indemnity</b>	
Fatal	1.043
Permanent Total	1.000
Permanent Partial	1.224
Temporary Total	1.232
<b>Medical</b>	
Fatal	1.200
Permanent Total	0.999
Permanent Partial	1.223
Temporary Total	1.231
Medical Only	1.200

#### 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)

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Section IX - Classification Pricing  
 Subsection B - Conversion/Excess Loss Factors  
 7/1/2016

Section IX - B  
 Exhibit 2  
 Page 1

## Summary of Development Factors Remainder of 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
		<u>(1) Indemnity Losses</u>								
2Yr Weighted Average		1.473	1.173	1.065	1.024	1.007	1.004	1.004	1.005	1.002
Cumulative		1.924	1.306	1.114	1.046	1.021	1.014	1.010	1.006	1.002
		<u>(2) Medical Losses</u>								
2Yr Weighted Average		1.126	1.075	1.030	0.988	1.002	0.993	0.992	0.993	1.003
Cumulative		1.211	1.075	1.000	0.971	0.982	0.980	0.987	0.995	1.003
		<u>(3) Claim Counts</u>								
2Yr Weighted Average		1.022	1.008	1.007	1.007	0.998	1.001	0.999	1.000	1.000
Cumulative		1.043	1.021	1.013	1.006	0.998	1.001	1.000	1.001	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>								
2Yr Weighted Average		1.334	1.119	1.052	1.019	1.007	1.006	1.004	1.000	1.004
Cumulative		1.636	1.226	1.096	1.042	1.022	1.015	1.008	1.004	1.004
		<u>(5) Medical Losses</u>								
2Yr Weighted Average		1.038	1.009	1.002	0.998	0.996	0.998	1.003	0.999	1.002
Cumulative		1.047	1.008	0.999	0.997	0.998	1.002	1.004	1.001	1.002
		<u>(6) Claim Counts</u>								
2Yr Weighted Average		1.016	1.005	1.002	1.001	1.001	1.000	1.000	1.000	1.000
Cumulative		1.026	1.010	1.005	1.003	1.001	1.000	1.000	1.000	1.000

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

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## Summary of Development Factors AIG

		Likely to Develop								
		Development Factors From:								
		18-30	30-42	42-54	54-66	66-78	78-90	90-102	102-114	114-126
		<b>(1) Indemnity Losses</b>								
5Yr Weighted Average		1.638	1.205	1.088	1.033	1.016	1.000	1.006	1.001	1.002
Cumulative		2.273	1.388	1.151	1.058	1.025	1.009	1.009	1.003	1.002
		<b>(2) Medical Losses</b>								
5Yr Weighted Average		1.184	1.052	1.023	0.988	0.984	0.972	0.982	0.989	0.995
Cumulative		1.164	0.983	0.934	0.913	0.925	0.939	0.966	0.984	0.995
		<b>(3) Claim Counts</b>								
5Yr Weighted Average		1.023	1.009	1.007	0.999	1.002	1.001	1.000	1.001	1.001
Cumulative		1.043	1.020	1.010	1.003	1.004	1.002	1.001	1.001	1.001
		Not-Likely to Develop								
		Development Factors From:								
		18-30	30-42	42-54	54-66	66-78	78-90	90-102	102-114	114-126
		<b>(4) Indemnity Losses</b>								
5Yr Weighted Average		1.492	1.164	1.069	1.035	1.007	1.003	1.004	1.000	1.002
Cumulative		1.949	1.306	1.123	1.051	1.015	1.009	1.006	1.002	1.002
		<b>(5) Medical Losses</b>								
5Yr Weighted Average		1.074	1.015	1.009	0.990	0.993	0.997	0.993	0.999	0.996
Cumulative		1.064	0.990	0.976	0.968	0.978	0.985	0.988	0.995	0.996
		<b>(6) Claim Counts</b>								
5Yr Weighted Average		1.019	1.005	1.003	1.002	1.000	1.001	1.000	1.000	1.000
Cumulative		1.030	1.011	1.006	1.003	1.001	1.001	1.000	1.000	1.000

Notes:  
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 (4), (5), (6): Page 6.

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## Calculation of Likely to Develop Development Factors Remainder of Industry

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		
2012	62,928,194	93,251,050	1.482	40,357,299	45,616,637	1.130	1,404	1,448	1.031
2011	54,650,319	79,937,617	1.463	34,671,280	38,854,106	1.121	1,276	1,290	1.011
Weighted Average			1.473			1.126			1.022
2011	83,950,299	97,727,592	1.164	40,800,688	44,705,682	1.096	1,330	1,348	1.014
2010	75,087,419	88,791,682	1.183	38,889,245	40,992,509	1.054	1,340	1,344	1.003
Weighted Average			1.173			1.075			1.008
2010	92,300,360	96,044,683	1.041	42,678,392	43,063,125	1.009	1,369	1,383	1.010
2009	90,876,512	99,074,411	1.090	40,196,625	42,313,556	1.053	1,277	1,281	1.003
Weighted Average			1.065			1.030			1.007
2009	103,867,515	105,934,584	1.020	43,833,329	43,776,938	0.999	1,298	1,301	1.002
2008	93,891,810	96,575,466	1.029	42,319,567	41,374,190	0.978	1,310	1,326	1.012
Weighted Average			1.024			0.988			1.007
2008	97,733,075	98,641,150	1.009	41,858,252	40,795,044	0.975	1,334	1,331	0.998
2007	93,519,867	93,940,116	1.004	42,297,398	43,508,645	1.029	1,363	1,360	0.998
Weighted Average			1.007			1.002			0.998
2007	98,179,942	98,217,757	1.000	44,397,226	44,400,461	1.000	1,375	1,377	1.001
2006	94,940,220	95,656,108	1.008	43,007,611	42,433,753	0.987	1,449	1,449	1.000
Weighted Average			1.004			0.993			1.001
2006	96,355,282	96,709,620	1.004	43,361,379	42,872,166	0.989	1,452	1,451	0.999
2005	90,842,441	91,207,498	1.004	44,105,499	43,867,021	0.995	1,544	1,543	0.999
Weighted Average			1.004			0.992			0.999
2005	91,207,498	91,877,003	1.007	43,867,021	44,132,733	1.006	1,543	1,546	1.002
2004	107,243,260	107,505,289	1.002	46,201,641	45,265,797	0.980	1,748	1,746	0.999
Weighted Average			1.005			0.993			1.000
2004	108,149,973	108,207,473	1.001	45,425,156	45,829,324	1.009	1,748	1,750	1.001
2003	107,601,626	107,887,046	1.003	49,144,838	48,978,169	0.997	1,975	1,974	0.999
Weighted Average			1.002			1.003			1.000

Note:  
 Unit Statistical Plan data, excluding Large Deductibles.



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## Calculation of Likely to Develop Development Factors AIG

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		
2012	7,780,547	12,485,794	1.605	4,701,318	5,891,369	1.253	193	193	1.000
2011	14,391,984	22,338,422	1.552	8,982,929	10,282,600	1.145	336	344	1.024
2010	13,890,482	22,933,362	1.651	7,721,224	9,044,687	1.171	370	380	1.027
2009	10,068,275	18,058,829	1.794	7,157,015	8,505,257	1.188	246	252	1.024
2008	16,359,653	26,562,518	1.624	9,710,367	11,600,971	1.195	356	366	1.028
Weighted Average			1.638			1.184			1.023
	30	42		30	42		30	42	
2011	22,882,851	27,658,568	1.209	10,439,979	11,252,759	1.078	350	351	1.003
2010	23,398,598	29,527,996	1.262	9,078,000	9,684,789	1.067	387	392	1.013
2009	18,325,045	22,555,446	1.231	8,562,801	8,627,026	1.008	258	261	1.012
2008	27,526,296	32,455,974	1.179	11,669,437	12,073,318	1.035	372	374	1.005
2007	37,377,524	43,892,669	1.174	15,403,930	16,401,133	1.065	595	602	1.012
Weighted Average			1.205			1.052			1.009
	42	54		42	54		42	54	
2010	30,132,433	31,393,276	1.042	9,737,338	9,851,938	1.012	400	403	1.008
2009	23,284,285	24,946,179	1.071	8,919,511	8,942,300	1.003	265	270	1.019
2008	32,762,041	35,090,352	1.071	12,256,283	12,381,930	1.010	376	376	1.000
2007	45,292,003	50,504,023	1.115	16,578,980	16,420,447	0.990	607	613	1.010
2006	55,516,234	61,532,223	1.108	23,553,006	25,051,849	1.064	770	774	1.005
Weighted Average			1.088			1.023			1.007
	54	66		54	66		54	66	
2009	26,200,586	26,397,421	1.008	9,539,765	9,193,914	0.964	275	275	1.000
2008	36,279,697	37,808,547	1.042	12,846,590	12,593,570	0.980	384	383	0.997
2007	51,234,527	52,666,248	1.028	16,699,358	16,529,288	0.990	617	618	1.002
2006	61,955,490	63,376,696	1.023	24,855,294	24,283,090	0.977	775	775	1.000
2005	68,229,993	71,619,789	1.050	27,819,248	28,036,805	1.008	888	885	0.997
Weighted Average			1.033			0.988			0.999
	66	78		66	78		66	78	
2008	39,190,446	39,527,214	1.009	12,881,521	12,921,703	1.003	390	392	1.005
2007	53,659,625	54,334,272	1.013	16,895,438	16,849,817	0.997	625	627	1.003
2006	64,275,234	65,160,242	1.014	24,377,645	24,309,545	0.997	778	778	1.000
2005	70,888,105	71,289,253	1.006	27,854,390	27,106,378	0.973	884	887	1.003
2004	65,897,335	68,195,684	1.035	28,793,294	27,886,493	0.969	938	939	1.001
Weighted Average			1.016			0.984			1.002
	78	90		78	90		78	90	
2007	54,334,272	54,731,410	1.007	16,849,817	16,528,691	0.981	627	626	0.998
2006	66,414,918	65,907,521	0.992	25,133,229	24,965,179	0.993	784	785	1.001
2005	72,291,096	72,116,232	0.998	27,795,386	27,226,019	0.980	893	894	1.001
2004	68,163,333	68,490,750	1.005	27,918,844	26,807,550	0.960	939	940	1.001
2003	60,270,656	60,171,264	0.998	24,948,458	23,666,487	0.949	934	936	1.002
Weighted Average			1.000			0.972			1.001
	90	102		90	102		90	102	
2006	65,922,928	65,993,971	1.001	24,988,283	25,231,344	1.010	786	786	1.000
2005	72,725,882	73,525,819	1.011	27,583,002	27,359,553	0.992	896	894	0.998
2004	68,251,462	68,798,336	1.008	26,786,058	26,161,421	0.977	941	941	1.000
2003	59,893,520	60,105,803	1.004	23,574,350	21,904,520	0.929	936	936	1.000
2002	39,798,453	39,996,398	1.005	15,876,027	15,981,750	1.007	716	716	1.000
Weighted Average			1.006			0.982			1.000
	102	114		102	114		102	114	
2005	74,525,394	74,476,433	0.999	27,816,337	27,058,736	0.973	897	899	1.002
2004	70,479,555	70,477,945	1.000	26,960,002	26,607,245	0.987	946	946	1.000
2003	59,750,489	59,988,892	1.004	21,759,834	21,860,197	1.005	935	935	1.000
2002	39,832,465	40,134,674	1.008	16,064,035	15,795,902	0.983	715	715	1.000
2001	27,246,262	27,036,081	0.992	8,148,293	8,345,489	1.024	416	416	1.000
Weighted Average			1.001			0.989			1.001
	114	126		114	126		114	126	
2004	70,477,945	70,512,451	1.000	26,607,245	26,304,493	0.989	946	946	1.000
2003	60,570,364	60,711,073	1.002	22,043,712	22,177,008	1.006	937	939	1.002
2002	40,780,517	40,843,002	1.002	15,895,102	15,533,478	0.977	718	718	1.000
2001	25,970,181	25,985,358	1.001	8,116,252	8,440,274	1.040	413	413	1.000
2000	19,407,338	19,594,457	1.010	6,380,743	6,196,184	0.971	272	272	1.000
Weighted Average			1.002			0.995			1.001

Note:  
 Unit Statistical Plan data, excluding Large Deductibles.

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## Calculation of Not-Likely to Develop Development Factors Remainder of Industry

Policy Year		Not-Likely to Develop								
		Indemnity Losses			Medical Losses			Claim Counts		
		Evaluated at month	Link Ratio	Link Ratio	Evaluated at month	Link Ratio	Link Ratio	Evaluated at month	Link Ratio	Link Ratio
		18	30			18		30		
	2012	119,710,897	161,235,451	1.347	113,701,129	117,878,252	1.037	11,263	11,441	1.016
	2011	116,441,844	153,852,701	1.321	108,866,273	113,221,098	1.040	10,725	10,903	1.017
	Weighted Average			1.334			1.038			1.016
		30	42		30	42		30	42	
	2011	149,840,019	167,626,378	1.119	111,274,516	111,261,300	1.000	10,863	10,923	1.006
	2010	131,698,517	147,367,161	1.119	100,725,255	102,684,777	1.019	10,439	10,484	1.004
	Weighted Average			1.119			1.009			1.005
		42	54		42	54		42	54	
	2010	143,858,483	151,713,236	1.055	100,998,894	101,420,644	1.004	10,459	10,484	1.002
	2009	137,704,816	144,389,150	1.049	99,170,905	99,247,049	1.001	9,663	9,681	1.002
	Weighted Average			1.052			1.002			1.002
		54	66		54	66		54	66	
	2009	139,596,047	140,972,277	1.010	97,727,275	97,547,512	0.998	9,664	9,670	1.001
	2008	130,984,879	134,863,524	1.030	90,607,737	90,485,162	0.999	9,905	9,924	1.002
	Weighted Average			1.019			0.998			1.001
		66	78		66	78		66	78	
	2008	133,705,915	135,036,244	1.010	90,001,100	88,632,876	0.985	9,916	9,925	1.001
	2007	130,077,173	130,696,656	1.005	90,757,525	91,438,009	1.007	10,347	10,358	1.001
	Weighted Average			1.007			0.996			1.001
		78	90		78	90		78	90	
	2007	126,456,830	127,218,805	1.006	90,549,428	90,199,712	0.996	10,343	10,348	1.000
	2006	120,664,296	121,445,789	1.006	83,217,746	83,260,108	1.001	10,190	10,188	1.000
	Weighted Average			1.006			0.998			1.000
		90	102		90	102		90	102	
	2006	120,746,615	121,551,760	1.007	82,332,482	82,278,624	0.999	10,185	10,186	1.000
	2005	118,513,487	118,761,410	1.002	79,809,036	80,328,014	1.007	10,981	10,986	1.000
	Weighted Average			1.004			1.003			1.000
		102	114		102	114		102	114	
	2005	118,761,410	118,846,342	1.001	80,328,014	80,384,592	1.001	10,986	10,990	1.000
	2004	124,262,713	124,252,916	1.000	83,057,174	82,801,468	0.997	11,635	11,631	1.000
	Weighted Average			1.000			0.999			1.000
		114	126		114	126		114	126	
	2004	123,608,233	123,994,755	1.003	82,642,108	82,848,647	1.002	11,629	11,629	1.000
	2003	124,876,285	125,386,731	1.004	87,067,928	87,237,002	1.002	13,430	13,429	1.000
	Weighted Average			1.004			1.002			1.000

Note:  
 Unit Statistical Plan data, excluding Large Deductibles.

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## Calculation of Not-Likely to Develop Development Factors AIG

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	
2012	15,424,642	23,195,495	1.504	13,838,853	14,778,840	1.068	1,358	1,390	1.024
2011	21,563,755	32,467,884	1.506	19,733,818	21,353,729	1.082	2,110	2,145	1.017
2010	24,337,100	38,320,952	1.575	22,387,324	24,116,617	1.077	2,461	2,508	1.019
2009	21,260,206	30,833,824	1.450	20,307,061	21,416,671	1.055	2,028	2,067	1.019
2008	29,372,492	42,224,106	1.438	26,197,446	28,426,204	1.085	2,663	2,708	1.017
Weighted Average			1.492			1.074			1.019
	30	42		30	42		30	42	
2011	31,923,455	36,915,593	1.156	21,196,350	21,605,687	1.019	2,139	2,152	1.006
2010	37,855,716	42,902,172	1.133	24,083,304	24,823,321	1.031	2,501	2,515	1.006
2009	30,567,608	36,411,763	1.191	21,359,127	21,460,387	1.005	2,061	2,072	1.005
2008	41,260,328	48,717,826	1.181	28,357,738	27,976,880	0.987	2,702	2,719	1.006
2007	38,807,248	44,969,780	1.159	29,643,692	30,627,031	1.033	3,375	3,388	1.004
Weighted Average			1.164			1.015			1.005
	42	54		42	54		42	54	
2010	42,297,735	44,229,792	1.046	24,770,772	24,797,061	1.001	2,507	2,512	1.002
2009	35,682,924	36,695,879	1.028	21,167,902	21,974,806	1.038	2,068	2,077	1.004
2008	48,411,759	51,439,955	1.063	27,793,915	27,688,035	0.996	2,717	2,731	1.005
2007	43,570,446	47,868,274	1.099	30,449,184	30,106,043	0.989	3,383	3,395	1.004
2006	42,492,835	46,810,924	1.102	30,178,761	30,939,609	1.025	3,519	3,526	1.002
Weighted Average			1.069			1.009			1.003
	54	66		54	66		54	66	
2009	35,441,472	36,110,344	1.019	21,377,341	20,711,802	0.969	2,072	2,074	1.001
2008	50,250,610	51,315,909	1.021	27,223,375	27,053,406	0.994	2,723	2,728	1.002
2007	47,137,770	49,100,842	1.042	29,827,132	29,640,713	0.994	3,391	3,399	1.002
2006	46,387,657	47,447,803	1.023	31,136,164	30,879,792	0.992	3,525	3,529	1.001
2005	49,502,851	52,649,488	1.064	33,082,381	32,890,310	0.994	3,816	3,821	1.001
Weighted Average			1.035			0.990			1.002
	66	78		66	78		66	78	
2008	49,934,010	50,273,982	1.007	26,765,455	26,703,357	0.998	2,721	2,725	1.001
2007	48,107,465	48,133,533	1.001	29,274,563	29,056,724	0.993	3,392	3,388	0.999
2006	46,549,265	46,960,539	1.009	30,785,237	30,492,150	0.990	3,526	3,533	1.002
2005	53,381,172	53,632,254	1.005	33,072,725	32,768,091	0.991	3,822	3,822	1.000
2004	46,949,198	47,575,102	1.013	29,798,895	29,607,097	0.994	3,570	3,569	1.000
Weighted Average			1.007			0.993			1.000
	78	90		78	90		78	90	
2007	48,133,533	48,170,567	1.001	29,056,724	28,995,395	0.998	3,388	3,388	1.000
2006	45,705,863	45,589,141	0.997	29,668,466	29,504,653	0.994	3,527	3,529	1.001
2005	52,630,412	52,568,005	0.999	32,079,082	32,292,130	1.007	3,816	3,817	1.000
2004	47,607,453	47,950,882	1.007	29,574,746	29,070,260	0.983	3,569	3,572	1.001
2003	35,536,083	36,031,725	1.014	21,252,812	21,318,777	1.003	3,005	3,008	1.001
Weighted Average			1.003			0.997			1.001
	90	102		90	102		90	102	
2006	45,573,734	45,776,591	1.004	29,481,549	29,253,634	0.992	3,528	3,528	1.000
2005	51,958,354	52,009,264	1.001	31,935,148	31,836,852	0.997	3,815	3,816	1.000
2004	48,190,170	48,123,497	0.999	29,091,752	29,170,995	1.003	3,571	3,570	1.000
2003	36,309,469	36,468,690	1.004	21,410,914	21,083,388	0.985	3,008	3,008	1.000
2002	31,032,636	31,478,566	1.014	17,621,457	17,281,908	0.981	2,709	2,709	1.000
Weighted Average			1.004			0.993			1.000
	102	114		102	114		102	114	
2005	51,009,689	50,951,879	0.999	31,380,068	31,446,084	1.002	3,813	3,815	1.001
2004	46,442,279	46,656,949	1.005	28,372,413	28,559,550	1.007	3,565	3,565	1.000
2003	36,824,004	36,648,947	0.995	21,228,074	21,349,177	1.006	3,009	3,011	1.001
2002	31,642,499	31,930,538	1.009	17,199,623	16,924,984	0.984	2,710	2,712	1.001
2001	22,173,694	21,872,038	0.986	10,566,451	10,324,448	0.977	1,777	1,777	1.000
Weighted Average			1.000			0.999			1.000
	114	126		114	126		114	126	
2004	46,656,949	46,931,935	1.006	28,559,550	28,497,607	0.998	3,565	3,565	1.000
2003	36,067,475	36,133,693	1.002	21,165,662	21,069,028	0.995	3,009	3,008	1.000
2002	31,284,695	31,260,735	0.999	16,825,784	16,873,374	1.003	2,709	2,709	1.000
2001	22,937,939	22,939,725	1.000	10,553,684	10,597,884	1.004	1,780	1,780	1.000
2000	21,084,783	21,090,976	1.000	8,735,304	8,477,343	0.970	1,299	1,299	1.000
Weighted Average			1.002			0.996			1.000

Note:  
 Unit Statistical Plan data, excluding Large Deductibles.

# IX 000037 STIP

Section IX - Classification Pricing  
 Subsection B - Conversion/Excess Loss Factors  
 7/1/2016

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						
2009	1,101.70	26,192	12,890	790	180.09	407.93
2010	1,144.80	25,262	12,072	797	189.89	410.14
2011	1,174.21	27,108	13,166	816	183.07	387.56
2012	1,190.50	27,750	14,162	847	177.10	357.69
2013	1,225.60	29,747	15,098	898	173.88	344.48

(2) Trend to PY 2013						
2009	1.112	1.136	1.171	1.137	0.966	0.844
2010	1.071	1.178	1.251	1.126	0.916	0.840
2011	1.044	1.097	1.147	1.100	0.950	0.889
2012	1.029	1.072	1.066	1.060	0.982	0.963
2013	1.000	1.000	1.000	1.000	1.000	1.000

(3) Projected Trend from PY 2013 to Prospective Effective Period						
Selected Annual Trend	2.4%	2.6%	3.1%	2.9%	-2.1%	-4.4%
Trend Factor	1.085	1.093	1.113	1.105	0.927	0.853

(4) Trend Factors from PY 2013 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
2009	1.207	1.242	1.304	1.255	0.895	0.721
2010	1.161	1.288	1.392	1.244	0.849	0.717
2011	1.132	1.200	1.277	1.215	0.880	0.759
2012	1.117	1.172	1.187	1.171	0.910	0.822
2013	1.085	1.093	1.113	1.105	0.927	0.853

**Notes:**

- (1): Weekly Wage from Section V-G, Exhibit 2.  
 Indemnity Severity from Section V-C, Exhibit 1, Page 1.  
 Lost Time Medical Severity from Section V-D, Exhibit 1, Page 1.  
 Medical Only Severity from Section V-D, Exhibit 2, Page 1.  
 Lost Time Claim Frequency from Section V-B, Exhibit 1, Page 1.  
 Medical Only Claim Frequency from Section V-B, Exhibit 2, Page 1.
- (2) = (1) / (1) for Policy Year 2013
- (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 2013 to midpoint of policy effective period 7/1/2016 - 6/30/2017, which is 3.5 years.
- (4) = (2) x (3)

# IX 000038 STIP

Section IX - Classification Pricing  
 Subsection B - Conversion/Excess Loss Factors  
 7/1/2016

Section IX - B  
 Exhibit 4

## Calculation of Investment Income Offset Factor

### Indemnity

Injury Type (1)	Loss Flow Discounted at 0.90% Post-Chapter 398 (2)	Injury Type Weights At Ultimate (3)	Investment Income Offset Factor (4)
Fatal	0.835	1.79%	0.869
Permanent Total	0.801	6.09%	0.833
Permanent Partial	0.980	41.07%	1.020
Temporary Total	0.986	15.79%	1.026
Total Indemnity			0.961

### Medical

Injury Type (5)	Loss Flow Discounted at 0.90% Post-Chapter 398 (6)	Injury Type Weights At Ultimate (7)	Investment Income Offset Factor (8)
Fatal	0.835	0.28%	1.000
Permanent Total	0.801	3.51%	0.833
Permanent Partial	0.980	15.76%	1.020
Temporary Total	0.986	10.95%	1.025
Medical Only		4.77%	1.000
Total Medical			0.961

**Notes:**

(2), (6): Loss Flows are from the 8/1/99 rate filing, Section VIII - E, Exhibits 12 and 16. The discount rate is calculated by multiplying the pre-tax rate of return on governments (Section VII-J, Exhibit 1, Page 1) times the complement of the federal tax rate on investment income (Section VII-J, Exhibit 1, Page 1) [1.14% x (1.000 - 21.23%)] = 0.9%

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

(4)= (2) / 0.961, which is the weighted average of (2) and (3).

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

(8)= (6) / 0.961, 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 000039 STIP

Section IX - Classification Pricing  
Subsection B - Conversion/Excess Loss Factors  
7/1/2016

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	0.098	1.109
B	0.111	1.125
C	0.137	1.159
D	0.178	1.217
E	0.195	1.242
F	0.224	1.289
G	0.336	1.506

**Note:**

(2) = Excess Ratio for Accident Limit of \$500,000 x 0.985, where Excess Ratio from Section XII-F, Exhibit 3, Page 1 and 0.985 is the factor to convert the per occurrence claims to per claim basis.

Calculation of Converted Limited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely  
 Manufacturing Industry Group, Industry Code 1  
 All Classes

Policy Year (1)	Injury Type (2)	Limited Losses					Converted Limited Losses				
		Indemnity		Medical		Total (7)	Indemnity		Medical		Total (12)
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)			Likely (8)	Not-Likely (9)	Likely (10)	
2009	Fatal	15,000	687,187	1,109	147,416	850,712	14,542	667,716	1,009	141,551	824,818
	Permanent Total	3,113,045	0	904,723	0	4,017,768	3,035,148	0	825,937	0	3,861,085
	Permanent Partial	8,611,365	14,131,191	3,718,892	5,654,219	32,115,667	8,576,961	14,031,157	3,384,602	5,421,634	31,414,354
	Temporary Total	3,714,852	7,499,423	1,337,092	6,832,943	19,384,310	3,544,001	7,172,224	1,216,251	6,559,253	18,491,729
	Medical Only	0	0	0	3,636,202	3,636,202	0	0	0	2,705,117	2,705,117
2010	Fatal	28,500	644,362	700	55,350	728,912	28,922	652,447	661	55,740	737,770
	Permanent Total	3,552,041	0	1,509,563	0	5,061,604	3,598,572	0	1,425,639	0	5,024,211
	Permanent Partial	8,276,217	17,945,243	3,610,634	7,861,377	37,693,471	8,659,206	18,649,953	3,415,203	7,881,969	38,606,331
	Temporary Total	3,878,197	10,276,781	2,759,822	7,549,282	24,464,082	3,873,114	10,246,368	2,606,388	7,597,653	24,323,523
	Medical Only	0	0	0	3,869,446	3,869,446	0	0	0	2,933,639	2,933,639
2011	Fatal	98,500	310,144	0	0	408,644	113,507	326,277	0	0	439,784
	Permanent Total	2,434,029	0	1,236,721	0	3,670,750	2,661,189	0	1,174,743	0	3,835,932
	Permanent Partial	11,392,697	18,239,993	4,133,615	8,051,954	41,818,259	12,595,424	19,632,200	3,926,580	7,916,023	44,070,227
	Temporary Total	4,434,415	9,478,496	2,688,226	8,269,209	24,870,346	4,666,536	9,837,522	2,551,311	8,140,444	25,195,813
	Medical Only	0	0	0	4,010,541	4,010,541	0	0	0	3,234,089	3,234,089
2012	Fatal	0	1,373,241	0	97,004	1,470,245	0	1,647,285	0	93,933	1,741,218
	Permanent Total	993,472	0	351,689	0	1,345,161	1,261,908	0	349,733	0	1,611,641
	Permanent Partial	8,388,626	14,949,308	4,234,316	6,992,242	34,564,492	11,071,998	18,262,646	4,196,915	6,765,273	40,296,832
	Temporary Total	4,202,315	10,495,350	2,385,988	7,972,836	25,056,489	5,292,672	12,436,994	2,372,720	7,719,725	27,822,111
	Medical Only	0	0	0	3,586,121	3,586,121	0	0	0	3,093,741	3,093,741
2013	Fatal	0	801,745	0	2,175	803,920	0	1,252,535	0	2,150	1,254,685
	Permanent Total	328,026	0	218,101	0	546,127	598,624	0	240,165	0	838,789
	Permanent Partial	2,802,019	8,021,782	1,268,615	5,175,669	17,268,085	5,185,711	12,779,552	1,397,433	5,127,248	24,489,944
	Temporary Total	4,660,264	10,838,019	2,440,786	9,359,564	27,298,633	8,751,434	16,989,497	2,695,692	9,271,984	37,708,607
	Medical Only	0	0	0	3,698,422	3,698,422	0	0	0	3,347,673	3,347,673
(13) All Years, All Injury Types		70,923,580	125,692,265	32,800,592	92,821,972	322,238,409	83,529,469	144,584,373	31,780,982	88,008,839	347,903,663

Notes:  
 (3), (4), (5), (6): From Unit Statistical Plan data, excluding Large Deductibles.  
 (7)= (3) + (4) + (5) + (6)  
 (8)= (3) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (9)= (4) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (10)= (5) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (11)= (6) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (12)= (8) + (9) + (10) +(11)

IX 000040 STIP

Calculation of Converted Unlimited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely  
 Manufacturing Industry Group, Industry Code 1  
 All Classes

Policy Year (1)	Injury Type (2)	Adjusted Excess Losses					Converted Unlimited Losses					Exposure (13)
		Indemnity		Medical		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)
2009	Fatal	2,204	62,686	1,163	49,320	115,373	17,462	761,631	2,606	229,045	1,010,744	49,717,443
	Permanent Total	312,106	0	252,255	0	564,361	3,347,780	0	1,077,538	0	4,425,318	
	Permanent Partial	986,210	1,696,989	960,311	1,667,680	5,311,190	11,709,139	19,257,529	5,315,846	8,673,523	44,956,037	
	Temporary Total	401,356	835,401	390,628	1,474,226	3,101,611	4,858,786	9,861,550	1,977,392	9,885,836	26,583,564	
	Medical Only	0	0	0	442,547	442,547	0	0	0	3,777,197	3,777,197	
2010	Fatal	2,528	64,158	1,166	35,996	103,848	32,794	747,245	2,192	110,082	892,313	56,343,856
	Permanent Total	412,305	0	419,946	0	832,251	4,011,507	0	1,844,465	0	5,855,972	
	Permanent Partial	1,038,370	2,191,836	1,041,424	2,286,663	6,558,293	11,873,704	25,518,669	5,452,524	12,440,958	55,285,855	
	Temporary Total	432,919	1,193,347	585,461	1,774,176	3,985,903	5,302,965	14,088,237	3,927,825	11,532,782	34,851,809	
	Medical Only	0	0	0	487,839	487,839	0	0	0	4,105,774	4,105,774	
2011	Fatal	12,613	36,257	5,406	15,539	69,815	131,513	378,035	6,487	18,647	534,682	60,816,782
	Permanent Total	308,325	0	351,291	0	659,616	2,969,981	0	1,525,108	0	4,495,089	
	Permanent Partial	1,603,187	2,492,507	1,430,279	2,483,027	8,009,000	17,384,768	27,089,473	6,553,926	12,722,866	63,751,033	
	Temporary Total	500,443	1,176,142	605,946	1,878,303	4,160,834	6,363,238	13,563,546	3,885,256	12,328,866	36,140,906	
	Medical Only	0	0	0	538,220	538,220	0	0	0	4,526,770	4,526,770	
2012	Fatal	0	201,902	0	108,950	310,852	0	1,928,252	0	243,460	2,171,712	59,887,657
	Permanent Total	160,482	0	130,475	0	290,957	1,422,614	0	479,917	0	1,902,531	
	Permanent Partial	1,290,151	2,223,297	1,205,288	2,105,316	6,824,052	15,136,205	25,082,972	6,609,402	10,852,849	57,681,428	
	Temporary Total	650,678	1,431,871	696,211	1,879,138	4,657,898	7,319,353	17,079,783	3,776,564	11,812,164	39,987,864	
	Medical Only	0	0	0	518,790	518,790	0	0	0	4,335,038	4,335,038	
2013	Fatal	0	148,408	0	63,942	212,350	0	1,460,843	0	79,310	1,540,153	59,683,715
	Permanent Total	53,049	0	53,816	0	106,865	651,775	0	293,802	0	945,577	
	Permanent Partial	527,512	1,566,691	443,551	1,563,368	4,101,122	6,995,265	17,565,527	2,252,378	8,185,729	34,998,899	
	Temporary Total	1,058,561	2,043,321	901,184	2,457,578	6,460,644	12,081,205	23,439,296	4,426,243	14,434,160	54,380,904	
	Medical Only	0	0	0	555,926	555,926	0	0	0	4,684,319	4,684,319	
(14) All Years, All Injury Types		9,752,999	17,364,813	9,475,801	22,386,544	58,980,157	111,610,054	197,822,588	49,409,471	134,979,375	493,821,488	286,449,454
(15) Pure Premium							0.390	0.691	0.172	0.471	1.724	

Notes:  
 (3) , (4) = 0.7 x [ Excess Factor - 1.0 ] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Indemnity Converted Limited Losses from Page 1, Columns (8) and (9).  
 (5), (6) = [ Excess Factor - 1.0 ] x Medical Converted Limited Losses + 0.3 x [ Excess Factor - 1.0 ] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Medical Converted Limited Losses from Page 1, Columns (10) and (11).  
 (7) = (3) + (4) + (5) + (6)  
 (8), (9), (10), (11): (Converted Limited Losses from Page 1 + Adjusted Excess Losses) x Secondary Conversion Factors from Section IX - B, Exhibit 1, Page 3.  
 (12) = (8) + (9) + (10) + (11)  
 (13): Unit Statistical Plan data, excluding Large Deductibles.  
 (15): Pure Premium calculated as the All Years, All Injury Types Converted Unlimited Losses divided by the All Years, All Injury Types Exposure.

IX 000041 STIP



Calculation of Converted Limited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely  
 Construction Industry Group, Industry Code 2  
 All Classes

Policy Year (1)	Injury Type (2)	Limited Losses				Converted Limited Losses					
		Indemnity		Medical		Total (7)	Indemnity		Medical		Total (12)
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)		Likely (8)	Not-Likely (9)	Likely (10)	Not-Likely (11)	
2009	Fatal	520,861	1,656,419	284,039	108,557	2,569,876	515,106	1,609,515	261,137	104,219	2,489,977
	Permanent Total	11,804,867	0	3,103,909	0	14,908,776	11,501,779	0	2,828,896	0	14,330,675
	Permanent Partial	23,547,346	38,640,900	7,972,975	14,973,302	85,134,523	23,630,822	38,410,042	7,268,084	14,346,693	83,655,641
	Temporary Total	7,387,926	14,135,138	2,985,373	9,213,547	33,721,984	7,048,146	13,520,592	2,715,566	8,842,167	32,126,471
	Medical Only	0	0	0	3,197,265	3,197,265	0	0	0	2,377,259	2,377,259
2010	Fatal	5,000	1,071,072	0	45,188	1,121,260	5,360	1,095,631	0	45,466	1,146,457
	Permanent Total	6,416,277	0	3,136,383	0	9,552,660	6,565,430	0	2,964,334	0	9,529,764
	Permanent Partial	22,632,408	41,246,124	7,938,993	13,045,702	84,863,227	23,889,594	42,887,950	7,518,963	13,089,562	87,386,069
	Temporary Total	7,013,046	15,808,026	3,182,638	10,385,058	36,388,768	7,003,853	15,764,674	3,005,698	10,451,177	36,225,402
	Medical Only	0	0	0	3,393,358	3,393,358	0	0	0	2,572,512	2,572,512
2011	Fatal	101,519	1,409,737	0	81,544	1,592,800	108,417	1,503,694	0	80,299	1,692,410
	Permanent Total	5,308,957	0	2,125,943	0	7,434,900	5,652,831	0	2,017,665	0	7,670,496
	Permanent Partial	21,542,173	40,586,183	8,329,563	14,508,600	84,966,519	23,761,331	43,756,508	7,908,529	14,258,820	89,685,188
	Temporary Total	7,704,846	19,645,656	3,359,074	11,300,116	42,009,692	8,108,159	20,390,785	3,187,992	11,124,328	42,811,264
	Medical Only	0	0	0	3,247,812	3,247,812	0	0	0	2,618,764	2,618,764
2012	Fatal	0	2,843,048	0	252,264	3,095,312	0	3,410,406	0	244,279	3,654,685
	Permanent Total	4,128,298	0	2,355,408	0	6,483,706	5,294,785	0	2,339,763	0	7,634,548
	Permanent Partial	22,323,394	36,079,632	8,528,382	14,378,945	81,310,353	29,252,058	44,257,098	8,465,355	13,914,924	95,889,435
	Temporary Total	8,048,627	18,452,275	3,648,813	12,461,228	42,610,943	10,136,969	21,898,928	3,628,523	12,065,498	47,729,918
	Medical Only	0	0	0	3,486,849	3,486,849	0	0	0	3,008,238	3,008,238
2013	Fatal	0	3,097,824	0	134,251	3,232,075	0	5,060,836	0	133,856	5,194,692
	Permanent Total	1,363,132	0	1,148,887	0	2,512,019	2,487,620	0	1,265,112	0	3,752,732
	Permanent Partial	8,119,875	18,850,826	4,729,830	10,660,265	42,360,796	15,074,145	30,135,867	5,209,128	10,559,202	60,978,342
	Temporary Total	8,959,740	22,246,454	5,286,489	16,624,959	53,117,642	16,600,378	35,175,408	5,840,270	16,483,091	74,099,147
	Medical Only	0	0	0	3,374,679	3,374,679	0	0	0	3,059,517	3,059,517
(13) All Years, All Injury Types		166,928,292	275,769,314	68,116,699	144,873,489	655,687,794	196,636,783	318,877,934	66,425,015	139,379,871	721,319,603

Notes:  
 (3), (4), (5), (6): From Unit Statistical Plan data, excluding Large Deductibles.  
 (7)= (3) + (4) + (5) + (6)  
 (8)= (3) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (9)= (4) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (10)= (5) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (11)= (6) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (12)= (8) + (9) + (10) + (11)

IX 000042 STTP

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)	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)		
2009	Fatal	104,083	383,959	119,987	195,165	803,194	645,664	2,078,708	457,349	359,260	3,540,981	42,031,184
	Permanent Total	2,457,525	0	1,917,460	0	4,374,985	13,961,497	0	4,743,477	0	18,704,974	
	Permanent Partial	5,080,713	7,972,361	4,432,837	7,624,937	25,110,848	35,154,381	56,790,576	14,315,659	26,881,505	133,142,121	
	Temporary Total	1,356,759	2,640,659	1,345,812	3,629,738	8,972,968	10,350,807	19,902,903	4,997,848	15,347,672	50,599,230	
	Medical Only	0	0	0	675,346	675,346	0	0	0	3,663,126	3,663,126	
2010	Fatal	1,898	351,108	814	163,887	517,707	7,568	1,508,597	976	251,223	1,768,364	44,623,282
	Permanent Total	1,251,102	0	1,407,821	0	2,658,923	7,817,761	0	4,369,504	0	12,187,265	
	Permanent Partial	4,921,471	8,644,198	4,408,329	7,415,447	25,389,445	35,276,244	63,095,919	14,592,615	25,087,145	138,051,923	
	Temporary Total	1,451,926	3,109,390	1,491,619	4,341,087	10,394,022	10,413,461	23,243,787	5,534,307	18,203,059	57,394,614	
	Medical Only	0	0	0	728,991	728,991	0	0	0	3,961,803	3,961,803	
2011	Fatal	21,907	294,011	9,389	149,184	474,491	135,896	1,874,569	11,266	275,379	2,297,110	47,995,428
	Permanent Total	1,324,268	0	1,219,958	0	2,544,226	6,978,195	0	3,235,660	0	10,213,855	
	Permanent Partial	5,067,130	9,247,885	4,548,608	8,279,416	27,143,039	35,297,545	64,898,536	15,240,862	27,574,728	143,011,671	
	Temporary Total	1,636,129	4,141,287	1,622,155	5,001,949	12,401,520	12,000,285	30,211,736	5,919,268	19,844,667	67,975,956	
	Medical Only	0	0	0	737,145	737,145	0	0	0	4,027,091	4,027,091	
2012	Fatal	0	693,630	0	378,017	1,071,647	0	4,279,512	0	746,755	5,026,267	51,917,395
	Permanent Total	1,171,042	0	1,288,389	0	2,459,431	6,466,843	0	3,625,951	0	10,092,794	
	Permanent Partial	5,900,439	9,028,875	4,892,759	7,894,641	27,716,714	43,040,688	65,243,302	16,343,176	26,683,224	151,310,390	
	Temporary Total	2,177,552	4,572,828	2,110,684	5,490,206	14,351,270	15,165,579	32,600,495	7,062,552	21,603,692	76,432,318	
	Medical Only	0	0	0	841,297	841,297	0	0	0	4,619,442	4,619,442	
2013	Fatal	0	1,189,752	0	552,161	1,741,913	0	6,517,843	0	823,220	7,341,063	56,229,925
	Permanent Total	471,671	0	542,303	0	1,013,974	2,959,756	0	1,806,319	0	4,766,075	
	Permanent Partial	2,974,431	6,156,005	2,712,886	5,771,001	17,614,323	22,098,661	44,435,738	9,692,301	19,979,419	96,206,119	
	Temporary Total	3,340,703	7,120,322	3,105,248	7,848,271	21,414,544	24,557,839	52,088,036	11,008,172	29,941,679	117,595,726	
	Medical Only	0	0	0	871,230	871,230	0	0	0	4,716,897	4,716,897	
(14) All Years, All Injury Types		40,710,749	65,546,270	37,177,058	68,589,116	212,023,193	282,328,670	468,770,257	122,957,262	254,590,986	1,128,647,175	242,797,212
(15) Pure Premium							1.163	1.931	0.506	1.049	4.649	

Notes:  
 (3) , (4) = 0.7 x [ Excess Factor - 1.0 ] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Indemnity Converted Limited Losses from Page 1, Columns (8) and (9).  
 (5), (6) = [ Excess Factor - 1.0 ] x Medical Converted Limited Losses + 0.3 x [ Excess Factor - 1.0 ] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Medical Converted Limited Losses from Page 1, Columns (10) and (11).  
 (7) = (3) + (4) + (5) + (6)  
 (8), (9), (10), (11): (Converted Limited Losses from Page 1 + Adjusted Excess Losses) x Secondary Conversion Factors from Section IX - B, Exhibit 1, Page 3.  
 (12) = (8) + (9) + (10) + (11)  
 (13): Unit Statistical Plan data, excluding Large Deductibles.  
 (15): Pure Premium calculated as the All Years, All Injury Types Converted Unlimited Losses divided by the All Years, All Injury Types Exposure.

IX 000043 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)	
2009	Fatal	388,211	287,500	693	563	676,967	376,350	279,354	630	541	656,875
	Permanent Total	2,922,611	0	886,688	0	3,809,299	2,828,730	0	806,553	0	3,635,283
	Permanent Partial	8,786,886	11,640,726	3,273,287	6,299,050	29,999,949	8,879,927	11,575,336	2,990,578	6,035,092	29,480,933
	Temporary Total	3,354,941	8,072,905	1,866,937	7,855,886	21,150,669	3,200,643	7,722,768	1,698,210	7,538,646	20,160,267
	Medical Only	0	0	0	5,340,841	5,340,841	0	0	0	3,970,191	3,970,191
2010	Fatal	717,760	426,740	1,452	4,667	1,150,619	728,379	432,318	1,372	4,663	1,166,732
	Permanent Total	1,818,339	0	1,063,373	0	2,881,712	1,855,563	0	1,005,205	0	2,860,768
	Permanent Partial	10,325,023	12,046,485	3,262,232	5,583,657	31,217,397	10,913,079	12,556,682	3,089,230	5,587,948	32,146,939
	Temporary Total	5,279,163	9,867,225	3,182,269	8,189,686	26,518,343	5,272,243	9,843,005	3,005,350	8,238,817	26,359,415
	Medical Only	0	0	0	5,988,799	5,988,799	0	0	0	4,536,464	4,536,464
2011	Fatal	100	831,661	0	50,847	882,608	107	890,609	0	50,047	940,763
	Permanent Total	1,583,053	0	577,786	0	2,160,839	1,685,591	0	548,359	0	2,233,950
	Permanent Partial	12,448,879	12,032,880	5,212,870	6,562,127	36,256,756	13,846,550	12,989,396	4,952,061	6,440,223	38,228,230
	Temporary Total	5,189,928	8,098,588	2,662,358	7,365,828	23,316,702	5,461,596	8,414,718	2,526,761	7,250,180	23,653,255
	Medical Only	0	0	0	5,597,123	5,597,123	0	0	0	4,511,579	4,511,579
2012	Fatal	0	0	0	0	0	0	0	0	0	0
	Permanent Total	654,723	0	243,651	0	898,374	831,629	0	242,296	0	1,073,925
	Permanent Partial	7,352,125	11,651,469	3,926,889	5,822,886	28,753,369	9,701,043	14,303,689	3,886,573	5,633,167	33,524,472
	Temporary Total	5,688,456	8,762,411	2,393,564	8,609,848	25,454,279	7,164,415	10,390,525	2,380,254	8,336,481	28,271,675
	Medical Only	0	0	0	5,585,134	5,585,134	0	0	0	4,818,406	4,818,406
2013	Fatal	0	1,052,284	0	19,804	1,072,088	0	1,643,942	0	19,585	1,663,527
	Permanent Total	311,672	0	47,811	0	359,483	568,780	0	52,648	0	621,428
	Permanent Partial	4,501,101	6,636,216	2,685,528	4,677,265	18,500,110	8,444,700	10,632,527	2,970,162	4,637,908	26,685,297
	Temporary Total	5,409,685	8,977,119	4,144,073	9,296,853	27,827,730	10,099,690	14,025,379	4,587,043	9,215,541	37,927,653
	Medical Only	0	0	0	6,062,658	6,062,658	0	0	0	5,488,024	5,488,024
(13) All Years, All Injury Types		76,732,656	100,384,209	35,431,461	98,913,522	311,461,848	91,859,015	115,700,248	34,743,285	92,313,503	334,616,051

Notes:  
 (3), (4), (5), (6): From Unit Statistical Plan data, excluding Large Deductibles.  
 (7)= (3) + (4) + (5) + (6)  
 (8)= (3) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (9)= (4) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (10)= (5) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (11)= (6) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (12)= (8) + (9) + (10) + (11)

IX 000044 STIP

Calculation of Converted Unlimited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely  
 Office and Clerical Industry Group, Industry Code 3  
 All Classes

Policy Year (1)	Injury Type (2)	Adjusted Excess Losses					Converted Unlimited Losses					Exposure (13)
		Indemnity		Medical		Total	Indemnity		Medical		Total	
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	(7)	Likely (8)	Not-Likely (9)	Likely (10)	Not-Likely (11)	(12)	
2009	Fatal	57,867	31,043	24,900	13,390	127,200	452,782	323,668	30,637	16,717	823,804	584,743,169
	Permanent Total	319,672	0	275,777	0	595,449	3,148,896	0	1,081,673	0	4,230,569	
	Permanent Partial	967,535	1,321,331	881,887	1,546,324	4,717,077	12,057,225	15,790,669	4,737,823	9,275,592	41,861,309	
	Temporary Total	383,183	906,237	445,183	1,651,001	3,385,604	4,413,554	10,626,792	2,637,616	11,308,592	28,986,554	
	Medical Only	0	0	0	631,114	631,114	0	0	0	5,521,566	5,521,566	
2010	Fatal	80,940	60,082	34,906	26,632	202,560	843,924	513,453	43,534	37,554	1,438,465	642,829,769
	Permanent Total	227,135	0	267,258	0	494,393	2,083,025	0	1,271,691	0	3,354,716	
	Permanent Partial	1,260,160	1,462,618	1,028,320	1,560,472	5,311,570	14,904,904	17,165,219	5,037,675	8,745,837	45,853,635	
	Temporary Total	584,999	1,085,322	726,006	1,775,513	4,171,840	7,213,310	13,458,454	4,591,730	12,323,430	37,586,924	
	Medical Only	0	0	0	731,253	731,253	0	0	0	6,321,260	6,321,260	
2011	Fatal	12	104,493	5	51,270	155,780	124	1,037,649	6	121,580	1,159,359	686,497,533
	Permanent Total	158,315	0	138,402	0	296,717	1,844,196	0	686,344	0	2,530,540	
	Permanent Partial	1,755,292	1,519,396	1,649,314	1,744,604	6,668,606	19,102,883	17,764,553	8,076,547	10,013,844	54,957,827	
	Temporary Total	600,764	923,377	645,559	1,512,539	3,682,239	7,465,918	11,500,049	3,903,792	10,783,223	33,652,982	
	Medical Only	0	0	0	730,619	730,619	0	0	0	6,290,637	6,290,637	
2012	Fatal	0	0	0	0	0	0	0	0	0	0	702,275,923
	Permanent Total	92,414	0	78,070	0	170,484	924,188	0	320,172	0	1,244,360	
	Permanent Partial	1,164,537	1,591,225	1,167,885	1,596,455	5,520,102	13,303,806	19,461,719	6,183,949	8,845,184	47,794,658	
	Temporary Total	833,069	1,177,881	744,634	1,837,988	4,593,572	9,849,061	14,246,723	3,845,424	12,520,494	40,461,702	
	Medical Only	0	0	0	789,787	789,787	0	0	0	6,729,831	6,729,831	
2013	Fatal	0	198,483	0	88,173	286,656	0	1,921,200	0	129,309	2,050,509	732,531,158
	Permanent Total	96,445	0	54,087	0	150,532	665,329	0	106,670	0	771,999	
	Permanent Partial	1,004,346	1,188,444	954,222	1,274,223	4,421,235	11,569,405	14,473,587	4,801,344	7,233,282	38,077,618	
	Temporary Total	1,189,698	1,607,663	1,274,933	2,177,276	6,249,570	13,903,106	19,252,404	7,213,628	14,019,768	54,388,906	
	Medical Only	0	0	0	887,817	887,817	0	0	0	7,651,010	7,651,010	
(14) All Years, All Injury Types		10,776,383	13,177,595	10,391,348	20,626,450	54,971,776	123,745,636	157,536,139	54,570,255	137,888,710	473,740,740	3,348,877,552
(15) Pure Premium							0.037	0.047	0.016	0.041	0.141	

Notes:  
 (3) , (4) = 0.7 x [ Excess Factor - 1.0 ] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Indemnity Converted Limited Losses from Page 1, Columns (8) and (9).  
 (5), (6) = [ Excess Factor - 1.0 ] x Medical Converted Limited Losses + 0.3 x [ Excess Factor - 1.0 ] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Medical Converted Limited Losses from Page 1, Columns (10) and (11).  
 (7) = (3) + (4) + (5) + (6)  
 (8), (9), (10), (11): (Converted Limited Losses from Page 1 + Adjusted Excess Losses) x Secondary Conversion Factors from Section IX - B, Exhibit 1, Page 3.  
 (12) = (8) + (9) + (10) + (11)  
 (13): Unit Statistical Plan data, excluding Large Deductibles.  
 (15): Pure Premium calculated as the All Years, All Injury Types Converted Unlimited Losses divided by the All Years, All Injury Types Exposure.

IX 000045 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)	
2009	Fatal	418,243	1,049,186	418,371	93,504	1,979,304	409,220	1,019,511	384,709	89,771	1,903,211
	Permanent Total	10,391,406	0	5,286,815	0	15,678,221	10,106,055	0	4,816,211	0	14,922,266
	Permanent Partial	22,612,463	36,235,257	9,357,302	14,883,637	83,088,659	22,643,023	36,001,090	8,536,838	14,258,468	81,439,419
	Temporary Total	10,948,961	20,932,083	5,723,061	17,247,390	54,851,495	10,445,403	20,021,044	5,205,832	16,553,891	52,226,170
	Medical Only	0	0	0	9,605,602	9,605,602	0	0	0	7,144,394	7,144,394
2010	Fatal	463,654	1,035,944	21,183	16,741	1,537,522	479,989	1,060,172	20,204	16,581	1,576,946
	Permanent Total	5,572,348	0	2,970,977	0	8,543,325	5,681,475	0	2,807,547	0	8,489,022
	Permanent Partial	25,597,143	34,375,236	9,800,080	15,156,511	84,928,970	27,014,342	35,766,628	9,285,028	15,173,132	87,239,130
	Temporary Total	9,511,383	19,707,696	4,256,184	17,043,730	50,518,993	9,498,916	19,659,520	4,019,559	17,146,848	50,324,843
	Medical Only	0	0	0	9,772,094	9,772,094	0	0	0	7,405,324	7,405,324
2011	Fatal	238,648	3,102,769	36,000	40,600	3,418,017	275,008	3,279,694	34,262	39,961	3,628,925
	Permanent Total	4,542,452	0	1,913,136	0	6,455,588	4,912,619	0	1,815,939	0	6,728,558
	Permanent Partial	25,079,561	35,585,658	11,426,938	16,454,787	88,546,944	27,819,704	38,390,066	10,852,784	16,153,923	93,216,477
	Temporary Total	10,773,415	23,681,812	6,119,706	19,687,254	60,262,187	11,337,354	24,583,096	5,808,021	19,378,746	61,107,217
	Medical Only	0	0	0	10,345,575	10,345,575	0	0	0	8,339,764	8,339,764
2012	Fatal	320,770	406,288	7,959	8,570	743,587	409,451	494,779	7,915	8,294	920,439
	Permanent Total	3,357,563	0	2,213,404	0	5,570,967	4,264,777	0	2,201,096	0	6,465,873
	Permanent Partial	17,374,983	30,395,343	7,998,513	16,197,328	71,966,167	22,762,083	37,298,162	7,926,966	15,669,275	83,656,486
	Temporary Total	10,346,114	23,367,249	6,030,599	20,770,320	60,514,282	13,030,576	27,709,148	5,997,064	20,109,712	66,846,500
	Medical Only	0	0	0	10,079,121	10,079,121	0	0	0	8,693,707	8,693,707
2013	Fatal	0	783,828	0	100,164	883,992	0	1,224,543	0	99,055	1,323,598
	Permanent Total	488,554	0	260,898	0	749,452	891,577	0	287,291	0	1,178,868
	Permanent Partial	11,244,067	17,983,911	7,213,279	11,087,989	47,529,246	21,183,436	28,582,891	7,975,154	10,980,375	68,721,856
	Temporary Total	10,670,793	26,381,875	7,505,267	24,933,529	69,491,464	19,887,952	41,906,259	8,305,956	24,765,850	94,866,017
	Medical Only	0	0	0	10,307,920	10,307,920	0	0	0	9,346,558	9,346,558
(13) All Years, All Injury Types		179,952,521	275,024,135	88,559,672	223,832,366	767,368,694	213,052,960	316,996,603	86,288,376	211,373,629	827,711,568

Notes:  
 (3), (4), (5), (6): From Unit Statistical Plan data, excluding Large Deductibles.  
 (7)= (3) + (4) + (5) + (6)  
 (8)= (3) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (9)= (4) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (10)= (5) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (11)= (6) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (12)= (8) + (9) + (10) +(11)

IX 000046 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)		
2009	Fatal	32,063	104,478	61,776	54,744	253,061	460,151	1,172,048	535,782	173,417	2,341,398	133,901,374
	Permanent Total	1,193,838	0	1,310,195	0	2,504,033	11,301,669	0	6,122,690	0	17,424,359	
	Permanent Partial	2,717,606	4,449,722	2,634,854	4,376,550	14,178,732	31,051,533	49,527,941	13,668,165	22,799,278	117,046,917	
	Temporary Total	1,213,557	2,349,751	1,375,276	3,706,973	8,645,557	14,358,243	27,550,081	8,098,577	24,932,606	74,939,507	
	Medical Only	0	0	0	1,094,794	1,094,794	0	0	0	9,887,025	9,887,025	
2010	Fatal	63,301	137,276	31,447	61,465	293,489	566,519	1,248,647	61,982	93,655	1,970,803	145,766,704
	Permanent Total	683,003	0	799,755	0	1,482,758	6,365,478	0	3,605,114	0	9,970,592	
	Permanent Partial	3,189,081	4,317,349	2,897,788	4,465,334	14,869,552	36,981,046	49,078,789	14,905,241	24,026,962	124,992,038	
	Temporary Total	1,169,143	2,263,553	1,193,926	3,797,529	8,424,151	13,137,927	26,998,701	6,415,609	25,773,724	72,325,961	
	Medical Only	0	0	0	1,140,394	1,140,394	0	0	0	10,254,862	10,254,862	
2011	Fatal	24,036	390,104	14,579	175,814	604,533	311,830	3,826,707	58,610	258,930	4,456,077	154,115,063
	Permanent Total	643,472	0	600,720	0	1,244,192	5,556,964	0	2,415,193	0	7,972,157	
	Permanent Partial	3,267,555	4,369,502	3,213,581	4,485,572	15,336,210	38,063,214	52,354,779	17,209,695	25,251,684	132,879,372	
	Temporary Total	1,294,550	2,822,987	1,483,805	4,387,087	9,988,429	15,556,442	33,751,137	8,973,172	29,245,749	87,526,500	
	Medical Only	0	0	0	1,272,490	1,272,490	0	0	0	11,534,704	11,534,704	
2012	Fatal	45,497	38,755	20,755	17,527	122,534	474,400	556,346	34,404	30,985	1,096,135	155,928,317
	Permanent Total	576,789	0	696,513	0	1,273,302	4,842,327	0	2,895,851	0	7,738,178	
	Permanent Partial	2,763,451	4,230,881	2,584,309	4,370,553	13,949,194	31,253,443	50,848,126	12,860,169	24,518,014	119,479,752	
	Temporary Total	1,607,592	3,228,799	1,707,192	4,688,102	11,231,685	18,027,196	38,100,700	9,480,700	30,515,685	96,124,281	
	Medical Only	0	0	0	1,329,657	1,329,657	0	0	0	12,028,037	12,028,037	
2013	Fatal	0	163,931	0	85,761	249,692	0	1,447,841	0	221,779	1,669,620	166,043,991
	Permanent Total	109,674	0	99,367	0	209,041	1,001,409	0	386,423	0	1,387,832	
	Permanent Partial	2,604,907	3,412,152	2,556,905	3,323,887	11,897,851	29,126,427	39,174,704	12,885,597	17,500,753	98,687,481	
	Temporary Total	2,295,619	4,804,346	2,342,625	6,111,749	15,554,339	27,319,511	57,525,042	13,103,927	37,997,344	135,945,824	
	Medical Only	0	0	0	1,435,735	1,435,735	0	0	0	12,938,751	12,938,751	
(14) All Years, All Injury Types		25,494,734	37,083,586	25,625,368	50,381,717	138,585,405	285,755,729	433,161,589	133,716,901	319,983,944	1,172,618,163	755,755,449
(15) Pure Premium							0.378	0.573	0.177	0.423	1.552	

Notes:  
 (3) , (4) = 0.7 x [ Excess Factor - 1.0 ] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Indemnity Converted Limited Losses from Page 1, Columns (8) and (9).  
 (5), (6) = [ Excess Factor - 1.0 ] x Medical Converted Limited Losses + 0.3 x [ Excess Factor - 1.0 ] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Medical Converted Limited Losses from Page 1, Columns (10) and (11).  
 (7) = (3) + (4) + (5) + (6)  
 (8), (9), (10), (11): (Converted Limited Losses from Page 1 + Adjusted Excess Losses) x Secondary Conversion Factors from Section IX - B, Exhibit 1, Page 3.  
 (12) = (8) + (9) + (10) + (11)  
 (13): Unit Statistical Plan data, excluding Large Deductibles.  
 (15): Pure Premium calculated as the All Years, All Injury Types Converted Unlimited Losses divided by the All Years, All Injury Types Exposure.

IX 000047 STIP

Calculation of Converted Limited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely  
 Miscellaneous Industry Group, Industry Code 0  
 All Classes

Policy Year (1)	Injury Type (2)	Limited Losses					Converted Limited Losses				
		Indemnity		Medical		Total	Indemnity		Medical		Total
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	(7)	Likely (8)	Not-Likely (9)	Likely (10)	Not-Likely (11)	(12)
2009	Fatal	0	757,411	0	27,111	784,522	0	736,696	0	26,015	762,711
	Permanent Total	2,885,320	0	1,219,014	0	4,104,334	2,819,187	0	1,109,118	0	3,928,305
	Permanent Partial	10,439,159	12,252,341	4,171,660	5,576,556	32,439,716	10,526,290	12,188,733	3,807,123	5,338,306	31,860,452
	Temporary Total	2,005,971	7,080,690	934,014	4,751,162	14,771,837	1,913,714	6,775,300	849,601	4,557,095	14,095,710
	Medical Only	0	0	0	2,058,511	2,058,511	0	0	0	1,529,419	1,529,419
2010	Fatal	0	671,470	0	82,248	753,718	0	691,504	0	82,827	774,331
	Permanent Total	3,826,928	0	2,103,123	0	5,930,051	3,907,975	0	1,988,646	0	5,896,621
	Permanent Partial	13,087,232	18,582,236	4,210,438	8,617,757	44,497,663	14,004,354	19,446,443	4,000,405	8,603,595	46,054,797
	Temporary Total	2,960,878	8,468,031	1,175,960	5,553,601	18,158,470	2,956,997	8,464,172	1,110,582	5,579,015	18,110,766
	Medical Only	0	0	0	2,462,730	2,462,730	0	0	0	1,861,109	1,861,109
2011	Fatal	0	402,016	0	1,822	403,838	0	425,556	0	1,775	427,331
	Permanent Total	2,055,127	0	643,156	0	2,698,283	2,268,974	0	610,779	0	2,879,753
	Permanent Partial	12,437,753	16,880,927	5,948,528	7,072,485	42,339,693	14,074,221	18,395,470	5,654,842	6,926,867	45,051,400
	Temporary Total	2,706,695	9,103,808	1,097,229	6,003,820	18,911,552	2,848,378	9,482,684	1,041,346	5,904,924	19,277,332
	Medical Only	0	0	0	2,450,593	2,450,593	0	0	0	1,972,382	1,972,382
2012	Fatal	202,757	498,164	53,558	1,836	756,315	258,812	645,846	53,260	1,769	959,687
	Permanent Total	1,190,209	0	243,685	0	1,433,894	1,511,804	0	242,330	0	1,754,134
	Permanent Partial	9,552,983	11,222,156	4,869,539	5,277,622	30,922,300	12,763,436	14,085,487	4,806,525	5,097,062	36,752,510
	Temporary Total	6,381,342	8,053,158	3,564,962	6,432,546	24,432,008	8,037,081	9,607,961	3,545,138	6,226,561	27,416,741
	Medical Only	0	0	0	2,221,531	2,221,531	0	0	0	1,915,433	1,915,433
2013	Fatal	0	1,005,186	0	73,355	1,078,541	0	1,655,940	0	72,542	1,728,482
	Permanent Total	257,287	0	424,451	0	681,738	469,531	0	467,390	0	936,921
	Permanent Partial	6,855,660	8,996,404	3,228,796	5,759,123	24,839,983	13,095,465	14,633,487	3,567,073	5,723,624	37,019,649
	Temporary Total	6,329,276	12,353,853	4,559,612	10,274,771	33,517,512	12,488,743	20,178,430	5,067,040	10,235,400	47,969,613
	Medical Only	0	0	0	2,850,616	2,850,616	0	0	0	2,587,716	2,587,716
(13) All Years, All Injury Types		83,174,577	116,327,851	38,447,725	77,549,796	315,499,949	103,944,962	137,413,709	37,921,198	74,243,436	353,523,305

Notes:  
 (3), (4), (5), (6): From Unit Statistical Plan data, excluding Large Deductibles.  
 (7)= (3) + (4) + (5) + (6)  
 (8)= (3) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (9)= (4) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (10)= (5) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (11)= (6) x Primary Conversion Factors from Section IX - B, Exhibit 1  
 (12)= (8) + (9) + (10) +(11)

IX 000048 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			Converted Unlimited Losses					Exposure (13)
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Total (7)	Likely (8)	Not-Likely (9)	Likely (10)	Not-Likely (11)	Total (12)	
2009	Fatal	0	129,292	0	61,044	190,336	0	903,015	0	104,472	1,007,487	18,738,916
	Permanent Total	480,108	0	475,779	0	955,887	3,299,813	0	1,583,936	0	4,883,749	
	Permanent Partial	1,758,063	1,993,516	1,656,959	2,104,075	7,512,613	15,040,952	17,364,733	6,685,109	9,105,488	48,196,282	
	Temporary Total	317,856	1,163,643	348,602	1,566,286	3,396,387	2,748,223	9,776,968	1,474,484	7,535,308	21,534,983	
	Medical Only	0	0	0	329,066	329,066	0	0	0	2,230,182	2,230,182	
2010	Fatal	0	115,858	0	69,716	185,574	0	841,883	0	183,052	1,024,935	23,932,770
	Permanent Total	671,639	0	787,743	0	1,459,382	4,580,334	0	2,774,705	0	7,355,039	
	Permanent Partial	2,298,618	3,371,190	1,913,940	3,553,768	11,137,516	19,961,345	27,937,892	7,235,990	14,874,100	70,009,327	
	Temporary Total	472,758	1,383,527	441,706	1,887,348	4,185,339	4,223,812	12,127,638	1,910,213	9,187,954	27,449,617	
	Medical Only	0	0	0	403,730	403,730	0	0	0	2,717,807	2,717,807	
2011	Fatal	0	85,852	0	37,306	123,158	0	533,274	0	46,898	580,172	25,270,197
	Permanent Total	389,292	0	287,535	0	676,827	2,658,684	0	897,769	0	3,556,453	
	Permanent Partial	2,263,703	3,053,407	2,249,804	2,922,408	10,489,322	20,004,141	26,261,988	9,671,052	12,050,236	67,987,417	
	Temporary Total	491,434	1,539,484	452,299	2,008,182	4,491,399	4,113,045	13,574,019	1,838,048	9,737,707	29,262,819	
	Medical Only	0	0	0	436,232	436,232	0	0	0	2,890,337	2,890,337	
2012	Fatal	43,885	109,513	31,710	47,363	232,471	315,640	787,656	101,964	58,958	1,264,218	25,829,084
	Permanent Total	252,345	0	165,256	0	417,601	1,764,427	0	407,338	0	2,171,765	
	Permanent Partial	2,221,805	2,390,665	2,116,693	2,270,207	8,999,370	18,347,917	20,173,387	8,470,310	9,013,591	56,005,205	
	Temporary Total	1,245,556	1,515,568	1,356,389	2,048,164	6,165,677	11,431,753	13,698,848	6,031,720	10,182,707	41,345,028	
	Medical Only	0	0	0	414,140	414,140	0	0	0	2,795,488	2,795,488	
2013	Fatal	0	305,108	0	151,058	456,166	0	2,044,897	0	268,321	2,313,218	27,335,058
	Permanent Total	94,874	0	175,577	0	270,451	564,494	0	642,576	0	1,207,070	
	Permanent Partial	2,159,161	2,573,678	1,728,760	2,502,883	8,964,482	18,677,752	21,068,438	6,479,263	10,064,837	56,290,290	
	Temporary Total	2,112,926	3,416,669	2,122,452	3,909,347	11,561,394	17,982,246	29,057,836	8,847,243	17,406,237	73,293,562	
	Medical Only	0	0	0	516,250	516,250	0	0	0	3,724,759	3,724,759	
(14) All Years, All Injury Types		17,274,023	23,146,970	16,311,204	27,238,573	83,970,770	145,714,578	196,152,472	65,051,720	124,178,439	531,097,209	121,106,025
(15) Pure Premium							1.203	1.620	0.537	1.025	4.385	

Notes:  
 (3) , (4) = 0.7 x [ Excess Factor - 1.0 ] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Indemnity Converted Limited Losses from Page 1, Columns (8) and (9).  
 (5), (6) = [ Excess Factor - 1.0 ] x Medical Converted Limited Losses + 0.3 x [ Excess Factor - 1.0 ] x Indemnity Converted Limited Losses. Excess Factor from Section IX-B, Exhibit 5 and Medical Converted Limited Losses from Page 1, Columns (10) and (11).  
 (7) = (3) + (4) + (5) + (6)  
 (8), (9), (10), (11): (Converted Limited Losses from Page 1 + Adjusted Excess Losses) x Secondary Conversion Factors from Section IX - B, Exhibit 1, Page 3.  
 (12) = (8) + (9) + (10) + (11)  
 (13): Unit Statistical Plan data, excluding Large Deductibles.  
 (15): Pure Premium calculated as the All Years, All Injury Types Converted Unlimited Losses divided by the All Years, All Injury Types Exposure.

IX 000049 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)	
2009	Fatal	1,342,315	4,437,703	704,212	377,151	6,861,381	1,315,218	4,312,792	647,485	362,097	6,637,592
	Permanent Total	31,117,249	0	11,401,149	0	42,518,398	30,290,899	0	10,386,715	0	40,677,614
	Permanent Partial	73,997,219	112,900,415	28,494,116	47,386,764	262,778,514	74,257,023	112,206,358	25,987,225	45,400,193	257,850,799
	Temporary Total	27,412,651	57,720,239	12,846,477	45,900,928	143,880,295	26,151,907	55,211,928	11,685,460	44,051,052	137,100,347
	Medical Only	0	0	0	23,838,421	23,838,421	0	0	0	17,726,380	17,726,380
2010	Fatal	1,214,914	3,849,588	23,335	204,194	5,292,031	1,242,650	3,932,072	22,237	205,277	5,402,236
	Permanent Total	21,185,933	0	10,783,419	0	31,969,352	21,609,015	0	10,191,371	0	31,800,386
	Permanent Partial	79,918,023	124,195,324	28,822,377	50,265,004	283,200,728	84,480,575	129,307,656	27,308,829	50,336,206	291,433,266
	Temporary Total	28,642,667	64,127,759	14,556,873	48,721,357	156,048,656	28,605,123	63,977,739	13,747,577	49,013,510	155,343,949
	Medical Only	0	0	0	25,486,427	25,486,427	0	0	0	19,309,048	19,309,048
2011	Fatal	438,767	6,056,327	36,000	174,813	6,705,907	497,039	6,425,830	34,262	172,082	7,129,213
	Permanent Total	15,923,618	0	6,496,742	0	22,420,360	17,181,204	0	6,167,485	0	23,348,689
	Permanent Partial	82,901,063	123,325,641	35,051,514	52,649,953	293,928,171	92,097,230	133,163,640	33,294,796	51,695,856	310,251,522
	Temporary Total	30,809,299	70,008,360	15,926,593	52,626,227	169,370,479	32,422,023	72,708,805	15,115,431	51,798,622	172,044,881
	Medical Only	0	0	0	25,651,644	25,651,644	0	0	0	20,676,578	20,676,578
2012	Fatal	523,527	5,120,741	61,517	359,674	6,065,459	668,263	6,198,316	61,175	348,275	7,276,029
	Permanent Total	10,324,265	0	5,407,837	0	15,732,102	13,164,903	0	5,375,218	0	18,540,121
	Permanent Partial	64,992,111	104,297,908	29,557,639	48,669,023	247,516,681	85,550,618	128,207,082	29,282,334	47,079,701	290,119,735
	Temporary Total	34,666,854	69,130,443	18,023,926	56,246,778	178,068,001	43,661,713	82,043,556	17,923,699	54,457,977	198,086,945
	Medical Only	0	0	0	24,958,756	24,958,756	0	0	0	21,529,525	21,529,525
2013	Fatal	0	6,740,867	0	329,749	7,070,616	0	10,837,796	0	327,188	11,164,984
	Permanent Total	2,748,671	0	2,100,148	0	4,848,819	5,016,132	0	2,312,606	0	7,328,738
	Permanent Partial	33,522,722	60,489,139	19,126,048	37,360,311	150,498,220	62,983,457	96,764,324	21,118,950	37,028,357	217,895,088
	Temporary Total	36,029,758	80,797,320	23,936,227	70,489,676	211,252,981	67,828,197	128,274,973	26,496,001	69,971,866	292,571,037
	Medical Only	0	0	0	26,294,295	26,294,295	0	0	0	23,829,488	23,829,488
(13) All Years, All Injury Types		577,711,626	893,197,774	263,356,149	637,991,145	2,372,256,694	689,023,189	1,033,572,867	257,158,856	605,319,278	2,585,074,190

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

IX 000050 STIP

Calculation of Converted Unlimited Losses by Indemnity Likely/Not-Likely and Medical Likely/Not-Likely  
 All Industry Groups  
 All Classes

Policy Year (1)	Injury Type (2)	Adjusted Excess Losses				Converted Unlimited Losses						Exposure (13)
		Indemnity		Medical		Indemnity		Medical		Total		
		Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Total (7)	Likely (8)	Not-Likely (9)	Likely (10)	Not-Likely (11)	Total (12)	
2009	Fatal	196,217	711,458	207,826	373,663	1,489,164	1,576,059	5,239,070	1,026,374	882,911	8,724,414	829,132,086
	Permanent Total	4,763,249	0	4,231,466	0	8,994,715	35,059,655	0	14,609,314	0	49,668,969	
	Permanent Partial	11,510,127	17,433,919	10,566,848	17,319,566	56,830,460	105,013,230	158,731,448	44,722,602	76,735,386	385,202,666	
	Temporary Total	3,672,711	7,895,691	3,905,501	12,028,224	27,502,127	36,729,613	77,718,294	19,185,917	69,010,014	202,643,838	
	Medical Only	0	0	0	3,172,867	3,172,867	0	0	0	25,079,096	25,079,096	
2010	Fatal	148,667	728,482	68,333	357,696	1,303,178	1,450,805	4,859,825	108,684	675,566	7,094,880	913,496,382
	Permanent Total	3,245,184	0	3,682,523	0	6,927,707	24,858,105	0	13,865,479	0	38,723,584	
	Permanent Partial	12,707,700	19,987,191	11,289,801	19,281,684	63,266,376	118,997,243	182,796,488	47,224,045	85,175,002	434,192,778	
	Temporary Total	4,111,745	9,035,139	4,438,718	13,575,653	31,161,255	40,291,475	89,916,817	22,379,684	77,020,949	229,608,925	
	Medical Only	0	0	0	3,492,207	3,492,207	0	0	0	27,361,506	27,361,506	
2011	Fatal	58,568	910,717	29,379	429,113	1,427,777	579,363	7,650,234	76,369	721,434	9,027,400	974,695,003
	Permanent Total	2,823,672	0	2,597,906	0	5,421,578	20,008,020	0	8,760,074	0	28,768,094	
	Permanent Partial	13,956,867	20,682,697	13,091,586	19,915,027	67,646,177	129,852,551	188,369,329	56,752,082	87,613,358	462,587,320	
	Temporary Total	4,523,320	10,603,277	4,809,764	14,788,060	34,724,421	45,498,928	102,600,487	24,519,536	81,940,212	254,559,163	
	Medical Only	0	0	0	3,714,706	3,714,706	0	0	0	29,269,539	29,269,539	
2012	Fatal	89,382	1,043,800	52,465	551,857	1,737,504	790,040	7,551,766	136,368	1,080,158	9,558,332	995,838,375
	Permanent Total	2,253,072	0	2,358,703	0	4,611,775	15,420,399	0	7,729,229	0	23,149,628	
	Permanent Partial	13,340,383	19,464,943	11,966,934	18,237,172	63,009,432	121,082,059	180,809,506	50,467,006	79,912,862	432,271,433	
	Temporary Total	6,514,447	11,926,947	6,615,110	15,943,598	41,000,102	61,792,942	115,726,549	30,196,960	86,634,742	294,351,193	
	Medical Only	0	0	0	3,893,671	3,893,671	0	0	0	30,507,836	30,507,836	
2013	Fatal	0	2,005,682	0	941,095	2,946,777	0	13,392,624	0	1,521,939	14,914,563	1,041,823,847
	Permanent Total	825,713	0	925,150	0	1,750,863	5,842,763	0	3,235,790	0	9,078,553	
	Permanent Partial	9,270,357	14,896,970	8,396,324	14,435,362	46,999,013	88,467,510	136,717,994	36,110,883	62,964,020	324,260,407	
	Temporary Total	9,997,507	18,992,321	9,746,442	22,504,221	61,240,491	95,843,907	181,362,614	44,599,213	113,799,188	435,604,922	
	Medical Only	0	0	0	4,266,958	4,266,958	0	0	0	33,715,736	33,715,736	
(14) All Years, All Injury Types		104,008,888	156,319,234	98,980,779	189,222,400	548,531,301	949,154,667	1,453,443,045	425,705,609	971,621,454	3,799,924,775	4,754,985,693
(15) Pure Premium							0.200	0.306	0.090	0.204	0.799	

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 - Classification Pricing  
Subsection D - Credibility/Countrywide Data  
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Section IX - D  
Exhibit 1  
Page 1

## MA Full Credibility Standard and Partial Credibility

		Indemnity	Medical
(1)	Average Claim Cost (See Page 2)	32,000	16,000
(2)	Claims	850	400
(3)	Full Credibility Standard =(1) x (2)	27,200,000	6,400,000

Partial Credibility Z is given in terms of E, the expected losses and F, the criterion for full credibility by the formula:

$$Z=(E / F)^{0.4}$$

## Credibility of Countrywide Data

		Indemnity	Medical
(4)	Number of Countrywide Claims	1,150	1,000

### Notes:

Partial Credibility is determined from the full credibility standard and the observed number of countrywide claims using the same formula as is done for the Massachusetts data.

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

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Section IX - Classification Pricing  
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 Exhibit 1  
 Page 2

## Selection of Average Massachusetts Claim Costs

Policy Year 2013

	Injury Type				
	1	2	9	5	6
	Indemnity				
(1) Losses Developed to Ultimate	16,102,244	16,090,121	193,545,351	243,046,015	
(2) On-Level Factor	1.023	1.017	1.030	1.010	
(3) On-Level Ultimate Losses = (1) x (2)	16,469,607	16,364,781	199,278,158	245,369,059	
	Medical				
(4) Losses Developed to Ultimate	390,708	30,821,813	74,876,243	113,108,334	28,286,409
(5) On-Level Factor	1.000	1.000	1.000	1.000	1.000
(6) On-Level Ultimate Losses = (4) x (5)	390,708	30,821,813	74,876,243	113,108,334	28,286,409
	Claim Count				
(7) Claim Count Developed to Fifth Report	34	15	2,125	12,840	
Summary:					
(8) Ultimate Losses			Indemnity 477,481,605		
(9) Ultimate Claim Count			15,015		
(10) Average Claim Cost = (8) / (9)			31,800		
(11) Selected Average Claim Cost			32,000		
(12) Ultimate Losses			Medical 247,483,506		
(13) Ultimate Claim Count			15,015		
(14) Average Claim Cost = (12) / (13)			16,482		
(15) Selected Average Claim Cost			16,000		

**Notes:**

- (1), (4) : Unit Statistical Plan Data, developed to Ultimate using development factors from Section X-A, Exhibit 5, Pages 2 and 5.
- (2), (5): Section IV-A, Exhibit 1.
- (7) : Unit Statistical Plan Data, developed to fifth report using development factors from Section IX-B, Exhibit 2, Page 1.
- (8) = Sum of (3)
- (9), (13) = Sum of (7)
- (12) = Sum of (6)

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Section IX - Classification Pricing  
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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	2.211	0.443
		Construction	2	2.305	0.440
		Office and Clerical	3	1.116	0.278
		Goods and Services	9	1.650	0.352
		Miscellaneous	0	2.144	0.488
Arizona	2	Manufacturing	1	3.091	0.540
		Construction	2	2.224	0.468
		Office and Clerical	3	1.864	0.376
		Goods and Services	9	2.307	0.456
		Miscellaneous	0	2.320	0.559
Arkansas	3	Manufacturing	1	3.500	0.790
		Construction	2	3.813	0.885
		Office and Clerical	3	3.637	0.923
		Goods and Services	9	3.474	0.832
		Miscellaneous	0	3.788	1.084
Colorado	5	Manufacturing	1	1.376	0.500
		Construction	2	1.700	0.628
		Office and Clerical	3	1.161	0.419
		Goods and Services	9	1.280	0.458
		Miscellaneous	0	1.521	0.583
Connecticut	6	Manufacturing	1	0.639	0.292
		Construction	2	0.697	0.322
		Office and Clerical	3	0.503	0.275
		Goods and Services	9	0.676	0.300
		Miscellaneous	0	0.717	0.382
D.C.	8	Manufacturing	1	0.465	0.345
		Construction	2	1.220	0.812
		Office and Clerical	3	1.269	1.194
		Goods and Services	9	1.306	1.200
		Miscellaneous	0	1.267	1.027
Florida	9	Manufacturing	1	1.879	0.462
		Construction	2	1.834	0.416
		Office and Clerical	3	1.089	0.295
		Goods and Services	9	1.738	0.436
		Miscellaneous	0	2.006	0.501
Georgia	10	Manufacturing	1	1.411	0.747
		Construction	2	1.024	0.516
		Office and Clerical	3	1.263	0.649
		Goods and Services	9	1.127	0.637
		Miscellaneous	0	1.412	0.772
Idaho	11	Manufacturing	1	1.635	0.383
		Construction	2	1.943	0.471
		Office and Clerical	3	1.054	0.215
		Goods and Services	9	1.561	0.387
		Miscellaneous	0	2.388	0.583

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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)
Illinois	12	Manufacturing	1	0.790	0.375
		Construction	2	0.839	0.477
		Office and Clerical	3	0.667	0.395
		Goods and Services	9	0.891	0.434
		Miscellaneous	0	0.866	0.495
Indiana	13	Manufacturing	1	3.694	0.705
		Construction	2	5.003	0.959
		Office and Clerical	3	1.637	0.468
		Goods and Services	9	2.960	0.596
		Miscellaneous	0	3.986	0.800
Iowa	14	Manufacturing	1	0.988	0.316
		Construction	2	1.424	0.476
		Office and Clerical	3	0.595	0.249
		Goods and Services	9	1.207	0.427
		Miscellaneous	0	1.776	0.592
Kansas	15	Manufacturing	1	1.422	0.424
		Construction	2	2.344	0.682
		Office and Clerical	3	1.362	0.528
		Goods and Services	9	1.580	0.538
		Miscellaneous	0	1.023	0.987
Kentucky	16	Manufacturing	1	2.521	0.791
		Construction	2	2.203	0.637
		Office and Clerical	3	1.455	0.519
		Goods and Services	9	1.904	0.656
		Miscellaneous	0	1.810	0.578
Louisiana	17	Manufacturing	1	1.371	0.465
		Construction	2	1.796	0.602
		Office and Clerical	3	0.829	0.320
		Goods and Services	9	1.359	0.484
		Miscellaneous	0	1.518	0.589
Maine	18	Manufacturing	1	1.099	0.531
		Construction	2	1.333	0.596
		Office and Clerical	3	0.890	0.293
		Goods and Services	9	1.095	0.494
		Miscellaneous	0	1.444	0.635
Maryland	19	Manufacturing	1	1.279	0.595
		Construction	2	1.542	0.603
		Office and Clerical	3	1.147	0.698
		Goods and Services	9	1.344	0.636
		Miscellaneous	0	1.305	0.652
Minnesota	22	Manufacturing	1	1.252	0.559
		Construction	2	1.890	0.714
		Office and Clerical	3	1.176	0.474
		Goods and Services	9	1.593	0.612
		Miscellaneous	0	2.013	0.763
Mississippi	23	Manufacturing	1	1.451	0.521
		Construction	2	1.697	0.541
		Office and Clerical	3	0.698	0.271
		Goods and Services	9	1.468	0.526
		Miscellaneous	0	1.599	0.650

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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)
Missouri	24	Manufacturing	1	1.391	0.465
		Construction	2	1.697	0.581
		Office and Clerical	3	0.890	0.420
		Goods and Services	9	1.357	0.471
		Miscellaneous	0	1.526	0.603
Montana	25	Manufacturing	1	0.526	0.203
		Construction	2	1.204	0.355
		Office and Clerical	3	0.430	0.121
		Goods and Services	9	1.222	0.326
		Miscellaneous	0	1.743	0.508
Nebraska	26	Manufacturing	1	1.704	0.473
		Construction	2	2.038	0.552
		Office and Clerical	3	1.108	0.342
		Goods and Services	9	2.019	0.491
		Miscellaneous	0	1.955	0.558
Nevada	27	Manufacturing	1	1.045	0.171
		Construction	2	1.529	0.619
		Office and Clerical	3	0.558	0.237
		Goods and Services	9	1.401	0.518
		Miscellaneous	0	1.388	0.540
New Hampshire	28	Manufacturing	1	1.580	0.267
		Construction	2	1.547	0.316
		Office and Clerical	3	1.849	0.320
		Goods and Services	9	1.426	0.273
		Miscellaneous	0	2.465	0.487
New Mexico	30	Manufacturing	1	1.644	0.511
		Construction	2	1.791	0.493
		Office and Clerical	3	0.658	0.201
		Goods and Services	9	1.392	0.378
		Miscellaneous	0	1.447	0.425
North Carolina	32	Manufacturing	1	1.236	0.671
		Construction	2	1.055	0.520
		Office and Clerical	3	0.708	0.483
		Goods and Services	9	1.052	0.568
		Miscellaneous	0	1.052	0.657
Oklahoma	35	Manufacturing	1	0.878	0.383
		Construction	2	1.333	0.532
		Office and Clerical	3	0.411	0.209
		Goods and Services	9	0.858	0.371
		Miscellaneous	0	1.152	0.485
Oregon	36	Manufacturing	1	1.614	0.631
		Construction	2	1.780	0.704
		Office and Clerical	3	1.056	0.391
		Goods and Services	9	1.457	0.552
		Miscellaneous	0	1.911	0.812
Rhode Island	38	Manufacturing	1	0.487	0.544
		Construction	2	0.953	0.833
		Office and Clerical	3	0.574	0.570
		Goods and Services	9	0.619	0.603
		Miscellaneous	0	0.948	0.815

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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)
South Carolina	39	Manufacturing	1	1.060	0.673
		Construction	2	0.881	0.471
		Office and Clerical	3	0.453	0.371
		Goods and Services	9	0.962	0.568
		Miscellaneous	0	1.036	0.629
South Dakota	40	Manufacturing	1	3.125	0.522
		Construction	2	2.138	0.442
		Office and Clerical	3	1.517	0.319
		Goods and Services	9	3.035	0.560
		Miscellaneous	0	3.740	0.744
Tennessee	41	Manufacturing	1	1.646	0.469
		Construction	2	2.045	0.497
		Office and Clerical	3	0.921	0.323
		Goods and Services	9	2.166	0.548
		Miscellaneous	0	2.196	0.625
Utah	43	Manufacturing	1	4.652	0.733
		Construction	2	3.626	0.579
		Office and Clerical	3	2.377	0.430
		Goods and Services	9	3.175	0.571
		Miscellaneous	0	3.593	0.806
Vermont	44	Manufacturing	1	1.105	0.455
		Construction	2	1.128	0.509
		Office and Clerical	3	0.355	0.241
		Goods and Services	9	0.818	0.402
		Miscellaneous	0	0.675	0.532
Virginia	45	Manufacturing	1	3.033	0.651
		Construction	2	2.225	0.577
		Office and Clerical	3	2.622	0.743
		Goods and Services	9	2.137	0.582
		Miscellaneous	0	2.305	0.666
West Virginia	47	Manufacturing	1	1.348	0.579
		Construction	2	3.103	0.904
		Office and Clerical	3	0.967	0.434
		Goods and Services	9	2.050	0.709
		Miscellaneous	0	1.591	0.414
Hawaii	52	Manufacturing	1	1.224	0.500
		Construction	2	1.812	0.970
		Office and Clerical	3	0.677	0.394
		Goods and Services	9	0.977	0.543
		Miscellaneous	0	1.533	0.753
Alaska	54	Manufacturing	1	1.098	0.218
		Construction	2	2.293	0.392
		Office and Clerical	3	0.475	0.092
		Goods and Services	9	1.776	0.265
		Miscellaneous	0	2.743	0.367

**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  
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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	5/1/2011	- 4/30/2012	5/1/2010	- 4/30/2011	5/1/2009	- 4/30/2010
Arizona	2	3/1/2011	- 2/29/2012	3/1/2010	- 2/28/2011	3/1/2009	- 2/28/2010
Arkansas	3	2/1/2012	- 1/31/2013	2/1/2011	- 1/31/2012	2/1/2010	- 1/31/2011
Colorado	5	3/1/2011	- 2/29/2012	3/1/2010	- 2/28/2011	3/1/2009	- 2/28/2010
Connecticut	6	8/1/2011	- 7/31/2012	8/1/2010	- 7/31/2011	8/1/2009	- 7/31/2010
D.C.	8	2/1/2011	- 1/31/2012	2/1/2010	- 1/31/2011	2/1/2009	- 1/31/2010
Florida	9	1/1/2011	- 12/31/2011	1/1/2010	- 12/31/2010	1/1/2009	- 12/31/2009
Georgia	10	7/1/2011	- 6/30/2012	7/1/2010	- 6/30/2011	7/1/2009	- 6/30/2010
Idaho	11	7/1/2011	- 6/30/2012	7/1/2010	- 6/30/2011	7/1/2009	- 6/30/2010
Illinois	12	4/1/2011	- 3/31/2012	4/1/2010	- 3/31/2011	4/1/2009	- 3/31/2010
Indiana	13	7/1/2011	- 6/30/2012	7/1/2010	- 6/30/2011	7/1/2009	- 6/30/2010
Iowa	14	3/1/2011	- 2/29/2012	3/1/2010	- 2/28/2011	3/1/2009	- 2/28/2010
Kansas	15	7/1/2011	- 6/30/2012	7/1/2010	- 6/30/2011	7/1/2009	- 6/30/2010
Kentucky	16	5/1/2011	- 4/30/2012	5/1/2010	- 4/30/2011	5/1/2009	- 4/30/2010
Louisiana	17	9/1/2011	- 8/31/2012	9/1/2010	- 8/31/2011	9/1/2009	- 8/31/2010
Maine	18	6/1/2011	- 5/31/2012	6/1/2010	- 5/31/2011	6/1/2009	- 5/31/2010
Maryland	19	4/1/2011	- 3/31/2012	4/1/2010	- 3/31/2011	4/1/2009	- 3/31/2010
Minnesota	22	1/1/2012	- 12/31/2012	1/1/2011	- 12/31/2011	1/1/2010	- 12/31/2010
Mississippi	23	9/1/2011	- 8/31/2012	9/1/2010	- 8/31/2011	9/1/2009	- 8/31/2010
Missouri	24	7/1/2011	- 6/30/2012	7/1/2010	- 6/30/2011	7/1/2009	- 6/30/2010
Montana	25	1/1/2012	- 12/31/2012	1/1/2011	- 12/31/2011	1/1/2010	- 12/31/2010
Nebraska	26	8/1/2011	- 7/31/2012	8/1/2010	- 7/31/2011	8/1/2009	- 7/31/2010
Nevada	27	1/1/2011	- 12/31/2011	1/1/2010	- 12/31/2010	1/1/2009	- 12/31/2009
New Hampshire	28	4/1/2011	- 3/31/2012	4/1/2010	- 3/31/2011	4/1/2009	- 3/31/2010
New Mexico	30	7/1/2011	- 6/30/2012	7/1/2010	- 6/30/2011	7/1/2009	- 6/30/2010
North Carolina	32	1/1/2011	- 12/31/2011	1/1/2010	- 12/31/2010	1/1/2009	- 12/31/2009
Oklahoma	35	6/1/2011	- 5/31/2012	6/1/2010	- 5/31/2011	6/1/2009	- 5/31/2010
Oregon	36	1/1/2011	- 12/31/2011	1/1/2010	- 12/31/2010	1/1/2009	- 12/31/2009
Rhode Island	38	1/1/2011	- 12/31/2011	1/1/2010	- 12/31/2010	1/1/2009	- 12/31/2009
South Carolina	39	5/1/2011	- 4/30/2012	5/1/2010	- 4/30/2011	5/1/2009	- 4/30/2010
South Dakota	40	1/1/2012	- 12/31/2012	1/1/2011	- 12/31/2011	1/1/2010	- 12/31/2010
Tennessee	41	6/1/2011	- 5/31/2012	6/1/2010	- 5/31/2011	6/1/2009	- 5/31/2010
Utah	43	7/1/2011	- 6/30/2012	7/1/2010	- 6/30/2011	7/1/2009	- 6/30/2010
Vermont	44	7/1/2011	- 6/30/2012	7/1/2010	- 6/30/2011	7/1/2009	- 6/30/2010
Virginia	45	2/1/2011	- 1/31/2012	2/1/2010	- 1/31/2011	2/1/2009	- 1/31/2010
West Virginia	47	7/1/2011	- 6/30/2012	7/1/2010	- 6/30/2011	7/1/2009	- 6/30/2010
Hawaii	52	6/1/2011	- 5/31/2012	6/1/2010	- 5/31/2011	6/1/2009	- 5/31/2010
Alaska	54	4/1/2011	- 3/31/2012	4/1/2010	- 3/31/2011	4/1/2009	- 3/31/2010

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	2.066	1.026	0.593	0.755	1.017	0.957	0.901
	Medical	2.066	0.703	0.407	0.755	1.000	0.961	0.609
	Total		1.729					
Construction	Indemnity	5.418	2.924	0.649	0.755	1.017	0.957	2.584
	Medical	5.418	1.584	0.351	0.755	1.000	0.961	1.381
	Total		4.508					
Office and Clerical	Indemnity	0.162	0.077	0.566	0.755	1.017	0.957	0.067
	Medical	0.162	0.059	0.434	0.755	1.000	0.961	0.051
	Total		0.136					
Goods and Services	Indemnity	1.821	0.888	0.587	0.755	1.017	0.957	0.785
	Medical	1.821	0.626	0.413	0.755	1.000	0.961	0.546
	Total		1.514					
Miscellaneous	Indemnity	5.185	2.728	0.624	0.755	1.017	0.957	2.380
	Medical	5.185	1.642	0.376	0.755	1.000	0.961	1.413
	Total		4.370					

Notes:

- (3): Section IX - H, Exhibit 1 of 04/01/14 stipulation.
- (4): Section IX - G of 04/01/14 stipulation.
- (6): Section VI - J, Exhibit 1 of 04/01/14 stipulation.
- (7): Section IV - A, Exhibit 1.
- (8): Net Indemnity and Medical Trends from Section V - A, Exhibit 1.

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# IX 000060 STIP

Section IX - Classification Pricing  
 Subsection F - Underlying Pure Premiums  
 7/1/2016

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	3.674	2.124	3.311	1.293	4.604
1438	1.637	1.632	1.475	0.994	2.469
1463	5.428	4.247	4.890	2.586	7.477
1701	2.052	1.479	1.849	0.901	2.750
1747	1.416	1.335	1.276	0.813	2.089
1748	1.517	1.615	1.366	0.984	2.350
1852	4.074	1.896	3.670	1.154	4.825
1853	0.895	0.531	0.806	0.323	1.129
1860	1.117	1.005	1.007	0.612	1.619
1924	0.969	0.885	0.873	0.539	1.412
1925	1.537	1.587	1.385	0.966	2.351
2001	1.651	1.928	1.487	1.174	2.661
2002	1.506	1.873	1.357	1.141	2.498
2003	1.651	1.928	1.487	1.174	2.661
2014	1.768	1.788	1.593	1.089	2.682
2021	1.635	1.491	1.473	0.908	2.381
2039	1.172	1.008	1.056	0.614	1.670
2041	1.265	1.151	1.139	0.701	1.840
2070	2.084	1.940	1.878	1.182	3.059
2081	1.472	2.098	1.326	1.278	2.604
2089	1.246	1.106	1.123	0.673	1.796
2095	1.910	1.737	1.720	1.058	2.778
2101	1.246	1.106	1.123	0.673	1.796
2111	1.160	1.087	1.045	0.662	1.707
2114	1.246	1.106	1.123	0.673	1.796
2115	1.684	2.013	1.517	1.226	2.744
2121	0.775	0.813	0.698	0.495	1.193
2130	1.124	0.988	1.013	0.602	1.615
2131	1.059	1.021	0.954	0.622	1.576
2143	1.060	1.155	0.955	0.703	1.659
2150	2.802	2.880	2.525	1.754	4.278
2156	3.417	2.714	3.079	1.653	4.732
2157	2.508	2.204	2.260	1.342	3.602
2172	1.391	0.856	1.253	0.521	1.774
2174	1.816	1.368	1.636	0.833	2.469
2211	2.783	3.333	2.507	2.030	4.537
2220	1.314	1.490	1.184	0.908	2.091
2260	3.611	2.598	3.253	1.582	4.835
2286	1.314	1.490	1.184	0.908	2.091
2288	1.311	1.220	1.181	0.743	1.924
2302	1.314	1.490	1.184	0.908	2.091
2305	1.428	1.123	1.286	0.684	1.970
2362	0.939	1.022	0.846	0.622	1.468
2380	1.086	1.173	0.979	0.714	1.693
2402	1.160	1.033	1.045	0.629	1.674
2413	1.666	1.450	1.501	0.883	2.384
2416	1.207	1.220	1.088	0.743	1.831
2417	1.885	1.473	1.699	0.897	2.596

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Section IX - Classification Pricing  
 Subsection F - Underlying Pure Premiums  
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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)
2501	1.017	0.955	0.916	0.582	1.498
2503	0.499	0.563	0.450	0.343	0.793
2534	1.017	0.955	0.916	0.582	1.498
2570	2.380	2.272	2.144	1.384	3.528
2576	1.249	1.012	1.126	0.616	1.742
2578	1.249	1.012	1.126	0.616	1.742
2585	1.539	1.832	1.386	1.116	2.502
2586	0.861	0.732	0.775	0.446	1.222
2623	2.191	1.867	1.974	1.137	3.111
2640	0.919	0.986	0.828	0.601	1.428
2651	0.919	0.986	0.828	0.601	1.428
2660	0.885	1.005	0.798	0.612	1.410
2683	1.012	0.944	0.912	0.575	1.487
2688	1.321	1.324	1.190	0.806	1.996
2710	3.242	3.904	2.921	2.378	5.299
2731	1.954	1.846	1.760	1.124	2.884
2741	2.774	2.057	2.499	1.253	3.752
2747	3.100	2.917	2.793	1.776	4.569
2790	0.758	0.832	0.683	0.507	1.189
2802	2.036	2.170	1.834	1.321	3.156
2835	0.936	0.920	0.843	0.560	1.403
2836	1.335	1.092	1.203	0.665	1.868
2841	2.101	1.537	1.893	0.936	2.829
2883	1.633	1.533	1.471	0.934	2.405
2923	0.796	0.776	0.717	0.472	1.189
2942	0.875	1.112	0.789	0.677	1.466
3018	1.768	1.474	1.593	0.898	2.491
3022	1.649	1.902	1.486	1.158	2.644
3027	1.492	1.382	1.344	0.841	2.185
3028	1.565	1.544	1.410	0.940	2.350
3030	3.190	4.051	2.874	2.467	5.341
3040	4.045	3.507	3.645	2.136	5.780
3041	2.299	2.331	2.071	1.420	3.491
3042	3.694	2.216	3.328	1.349	4.678
3064	1.392	1.331	1.255	0.810	2.065
3066	1.392	1.331	1.255	0.810	2.065
3076	1.157	1.417	1.042	0.863	1.905
3081	2.667	2.593	2.403	1.579	3.982
3082	2.667	2.593	2.403	1.579	3.982
3085	2.005	1.865	1.807	1.136	2.943
3110	3.202	3.387	2.885	2.063	4.948
3111	1.151	1.312	1.037	0.799	1.836
3113	0.932	0.775	0.840	0.472	1.311
3114	1.305	1.223	1.176	0.745	1.921
3118	0.932	0.775	0.840	0.472	1.311
3119	0.398	0.488	0.359	0.297	0.656
3120	0.938	0.595	0.845	0.362	1.207
3122	0.789	0.787	0.711	0.479	1.190

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Section IX - Classification Pricing  
 Subsection F - Underlying Pure Premiums  
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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)
3127	0.372	0.486	0.335	0.296	0.631
3131	0.790	0.805	0.712	0.490	1.202
3132	1.714	1.909	1.544	1.162	2.707
3145	0.867	0.933	0.781	0.568	1.349
3146	0.917	0.870	0.827	0.530	1.356
3169	1.474	1.460	1.328	0.889	2.217
3179	0.632	0.489	0.569	0.298	0.867
3180	1.267	1.362	1.142	0.829	1.971
3188	1.165	1.026	1.050	0.625	1.674
3200	1.178	1.325	1.061	0.807	1.868
3220	1.562	1.404	1.407	0.855	2.262
3227	1.474	1.460	1.328	0.889	2.217
3241	0.969	0.885	0.873	0.539	1.412
3255	1.438	1.350	1.295	0.822	2.117
3257	1.409	1.193	1.269	0.727	1.996
3270	1.208	1.280	1.088	0.780	1.868
3300	2.455	2.273	2.212	1.384	3.596
3315	1.609	1.532	1.450	0.933	2.383
3336	1.831	1.545	1.649	0.941	2.590
3372	1.147	1.253	1.034	0.763	1.797
3373	2.177	2.004	1.962	1.221	3.182
3381	1.392	1.395	1.254	0.849	2.104
3383	0.562	0.546	0.506	0.333	0.839
3385	0.413	0.410	0.372	0.249	0.621
3400	1.474	1.460	1.328	0.889	2.217
3507	1.417	1.553	1.277	0.946	2.223
3515	1.132	1.222	1.020	0.744	1.764
3548	0.728	0.751	0.656	0.457	1.113
3558	0.368	0.579	0.332	0.353	0.685
3559	0.728	0.751	0.656	0.457	1.113
3571	0.527	0.499	0.475	0.304	0.779
3574	0.728	0.751	0.656	0.457	1.113
3612	0.873	0.805	0.787	0.490	1.277
3620	2.559	3.917	2.306	2.386	4.691
3629	0.728	0.751	0.656	0.457	1.113
3632	0.728	0.751	0.656	0.457	1.113
3634	0.899	0.813	0.810	0.495	1.305
3635	1.411	1.993	1.271	1.214	2.485
3638	0.728	0.751	0.656	0.457	1.113
3642	0.627	0.469	0.565	0.285	0.851
3643	0.632	0.489	0.569	0.298	0.867
3647	1.100	1.135	0.991	0.691	1.682
3648	0.665	0.758	0.599	0.462	1.061
3681	0.349	0.357	0.315	0.218	0.532
3685	0.349	0.357	0.315	0.218	0.532
3807	1.474	1.460	1.328	0.889	2.217
3808	1.677	1.382	1.511	0.842	2.353
3826	2.385	2.427	2.149	1.478	3.627

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Section IX - Classification Pricing  
 Subsection F - Underlying Pure Premiums  
 7/1/2016

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)
3830	0.728	0.751	0.656	0.457	1.113
3841	0.781	0.856	0.704	0.521	1.225
4021	2.068	2.090	1.864	1.273	3.136
4024	1.458	1.316	1.314	0.801	2.115
4034	2.681	2.991	2.416	1.821	4.237
4036	1.652	0.956	1.488	0.582	2.070
4038	1.198	1.107	1.079	0.674	1.753
4053	0.922	0.887	0.831	0.540	1.371
4061	0.946	1.270	0.852	0.774	1.626
4062	0.946	1.270	0.852	0.774	1.626
4112	0.350	0.307	0.316	0.187	0.503
4113	0.922	0.887	0.831	0.540	1.371
4114	1.236	1.005	1.113	0.612	1.725
4130	2.109	2.001	1.900	1.219	3.119
4133	0.844	0.869	0.761	0.529	1.290
4150	0.362	0.300	0.326	0.183	0.509
4239	1.416	1.473	1.276	0.897	2.173
4243	1.689	1.640	1.522	0.999	2.520
4244	1.511	1.711	1.362	1.042	2.404
4250	1.003	1.057	0.903	0.644	1.547
4251	0.992	0.869	0.894	0.529	1.423
4273	1.086	1.118	0.978	0.681	1.659
4279	1.186	1.233	1.068	0.751	1.819
4282	0.440	0.416	0.397	0.253	0.650
4283	1.280	1.102	1.153	0.671	1.824
4299	0.906	0.744	0.816	0.453	1.269
4301	2.819	2.439	2.540	1.485	4.025
4304	1.574	1.655	1.418	1.008	2.426
4307	0.787	0.755	0.709	0.460	1.169
4308	1.679	0.400	1.513	0.244	1.756
4350	0.312	0.250	0.282	0.152	0.433
4351	0.612	0.400	0.551	0.243	0.795
4352	0.417	0.494	0.375	0.301	0.676
4360	0.613	0.656	0.553	0.400	0.952
4410	1.935	1.776	1.744	1.082	2.825
4417	2.457	2.147	2.214	1.308	3.522
4432	0.563	0.543	0.507	0.331	0.838
4439	1.613	1.942	1.453	1.183	2.636
4452	1.753	1.625	1.579	0.989	2.569
4459	1.358	1.616	1.224	0.984	2.208
4470	1.153	0.969	1.039	0.590	1.629
4484	1.049	1.101	0.945	0.671	1.616
4493	1.365	1.611	1.230	0.981	2.211
4557	0.912	0.857	0.822	0.522	1.344
4558	0.727	0.758	0.655	0.461	1.116
4561	1.613	1.942	1.453	1.183	2.636
4583	1.694	1.374	1.526	0.836	2.363
4611	0.530	0.564	0.477	0.344	0.821

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Section IX - Classification Pricing  
 Subsection F - Underlying Pure Premiums  
 7/1/2016

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)
4635	1.743	1.919	1.571	1.169	2.740
4653	0.975	0.834	0.879	0.508	1.387
4665	3.619	3.477	3.261	2.118	5.379
4692	0.373	0.236	0.337	0.144	0.480
4693	0.462	0.468	0.416	0.285	0.701
4720	0.809	0.867	0.729	0.528	1.256
4740	0.464	0.387	0.418	0.236	0.654
4741	1.357	0.978	1.223	0.595	1.818
4771	8.425	1.294	7.591	0.788	8.379
4777	1.694	1.374	1.526	0.836	2.363
4825	0.349	0.391	0.314	0.238	0.552
4828	0.587	0.467	0.529	0.284	0.813
4829	0.587	0.467	0.529	0.284	0.813
4902	0.875	1.112	0.789	0.677	1.466
4923	0.613	0.656	0.553	0.400	0.952
6504	1.246	1.106	1.123	0.673	1.796
9501	1.129	1.563	1.017	0.952	1.969
9505	1.129	1.563	1.017	0.952	1.969
9521	1.719	1.204	1.549	0.733	2.282
9522	0.944	0.781	0.851	0.476	1.327

**Notes:**

(2), (3): Section IX - I, Exhibit 1 of 04/01/2014 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 = 0.901, Medical = 0.609).

# IX 000065 STIP

Section IX - Classification Pricing  
 Subsection F - Underlying Pure Premiums  
 7/1/2016

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	1.269	1.039	3.279	1.435	4.714
3365	1.341	1.226	3.464	1.693	5.157
3724	0.751	0.766	1.940	1.058	2.999
3726	2.304	1.737	5.953	2.399	8.352
5020	1.162	0.861	3.003	1.190	4.193
5022	1.677	1.410	4.333	1.947	6.281
5037	4.205	3.129	10.865	4.321	15.185
5040	13.290	10.274	34.342	14.188	48.530
5057	4.455	4.913	11.513	6.784	18.297
5059	4.455	4.913	11.513	6.784	18.297
5069	4.455	4.913	11.513	6.784	18.297
5102	1.183	0.856	3.057	1.183	4.240
5146	1.065	1.176	2.753	1.624	4.376
5160	0.665	0.583	1.719	0.805	2.524
5183	0.626	0.571	1.618	0.788	2.406
5188	0.992	0.918	2.564	1.268	3.831
5190	0.499	0.534	1.289	0.738	2.027
5213	2.639	2.309	6.820	3.188	10.008
5215	0.889	0.860	2.297	1.187	3.484
5221	1.257	1.232	3.249	1.701	4.950
5222	1.889	1.610	4.881	2.224	7.105
5223	0.889	0.860	2.297	1.187	3.484
5348	1.184	0.960	3.060	1.325	4.385
5402	1.672	1.993	4.320	2.753	7.073
5403	2.128	2.049	5.498	2.830	8.329
5437	0.937	0.836	2.420	1.154	3.574
5443	0.775	0.812	2.004	1.121	3.125
5445	1.483	1.218	3.831	1.682	5.514
5462	1.340	1.018	3.463	1.406	4.869
5472	1.981	1.597	5.120	2.205	7.325
5473	1.795	1.965	4.637	2.714	7.351
5474	1.084	1.164	2.800	1.607	4.407
5478	1.301	1.034	3.361	1.429	4.790
5479	1.309	1.905	3.384	2.631	6.014
5480	1.027	0.832	2.653	1.149	3.802
5506	1.328	1.308	3.432	1.807	5.239
5507	1.348	1.423	3.483	1.965	5.448
5508	1.269	1.039	3.279	1.435	4.714
5509	0.580	0.615	1.498	0.849	2.347
5538	0.934	0.909	2.413	1.256	3.668
5545	6.655	8.966	17.196	12.382	29.578
5547	2.588	3.430	6.686	4.737	11.423
5606	0.354	0.363	0.915	0.501	1.415
5610	1.432	1.077	3.699	1.487	5.186
5645	1.365	1.617	3.526	2.233	5.759
5651	1.365	1.617	3.526	2.233	5.759
5701	3.317	5.608	8.572	7.745	16.317
5703	3.970	2.936	10.259	4.054	14.314



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Section IX - Classification Pricing  
 Subsection F - Underlying Pure Premiums  
 7/1/2016

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)
5705	1.768	1.948	4.568	2.690	7.258
6003	2.091	1.586	5.402	2.191	7.593
6005	1.269	1.039	3.279	1.435	4.714
6204	1.812	1.438	4.681	1.986	6.668
6217	0.867	0.874	2.239	1.207	3.446
6229	0.867	0.874	2.239	1.207	3.446
6233	0.930	0.630	2.403	0.870	3.272
6251	1.365	0.684	3.527	0.945	4.472
6252	1.785	1.607	4.612	2.220	6.832
6306	1.740	1.665	4.496	2.300	6.796
6319	0.824	0.950	2.129	1.313	3.442
6325	1.094	1.283	2.828	1.772	4.600
6400	1.198	1.236	3.096	1.707	4.803
7538	1.081	1.005	2.792	1.387	4.180
7601	1.081	1.005	2.792	1.387	4.180
7855	1.097	0.784	2.834	1.082	3.916
8227	0.772	0.899	1.995	1.242	3.236
9533	3.103	1.951	8.019	2.694	10.713
9534	1.367	1.253	3.533	1.730	5.263
9545	0.799	0.760	2.065	1.049	3.115
9549	0.791	0.950	2.043	1.312	3.355
9552	1.635	1.263	4.224	1.744	5.968
9553	1.635	1.263	4.224	1.744	5.968

**Notes:**

(2), (3): Section IX - I, Exhibit 1 of 04/01/2014 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 = 2.584, Medical = 1.381).

# IX 000067 STIP

Section IX - Classification Pricing  
Subsection F - Underlying Pure Premiums  
7/1/2016

Section IX - F  
Exhibit 3

## Calculation of Pure Premiums Underlying Present Rate Office and Clerical Industry Group, Industry Code 3

Class (1)	Adopted Relativities		Pure Premiums Underlying Present Rate		
	Indemnity (2)	Medical (3)	Indemnity (4)	Medical (5)	Total (6) = (4) + (5)
4361	4.003	4.467	0.268	0.228	0.496
7610	2.690	1.970	0.180	0.100	0.281
8601	1.867	1.610	0.125	0.082	0.207
8721	1.607	3.892	0.108	0.198	0.306
8742	1.094	1.022	0.073	0.052	0.125
8748	3.927	3.682	0.263	0.188	0.451
8800	8.145	8.657	0.546	0.441	0.987
8803	0.244	0.226	0.016	0.012	0.028
8810	0.417	0.465	0.028	0.024	0.052
8820	0.634	0.501	0.042	0.026	0.068
8832	1.795	1.445	0.120	0.074	0.194
8833	8.083	6.635	0.542	0.338	0.880
8868	4.972	5.626	0.333	0.287	0.620
8901	0.417	0.465	0.028	0.024	0.052
9156	8.021	8.804	0.537	0.449	0.986

Notes:

(2), (3): Section IX - I, Exhibit 1 of 04/01/2014 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 = 0.067, Medical = 0.051).

# IX 000068 STIP

Section IX - Classification Pricing  
 Subsection F - Underlying Pure Premiums  
 7/1/2016

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	1.436	1.535	1.127	0.838	1.965
0008	1.329	1.478	1.044	0.807	1.851
0016	2.116	2.330	1.661	1.272	2.933
0034	1.891	2.592	1.485	1.415	2.900
0035	1.150	1.219	0.903	0.666	1.568
0036	1.891	2.592	1.485	1.415	2.900
0037	1.329	1.478	1.044	0.807	1.851
0042	2.224	2.498	1.746	1.364	3.110
0046	1.023	1.139	0.803	0.622	1.425
0079	1.418	1.549	1.113	0.846	1.959
0083	2.243	3.801	1.761	2.075	3.836
0113	1.891	2.592	1.485	1.415	2.900
0170	1.891	2.592	1.485	1.415	2.900
0908	103.000	86.450	80.855	47.202	128.057
0909	112.571	257.967	88.368	140.850	229.218
0912	112.571	257.967	88.368	140.850	229.218
0913	103.000	86.450	80.855	47.202	128.057
0917	1.793	2.110	1.407	1.152	2.559
0918	0.474	0.218	0.372	0.119	0.491
2587	2.234	2.367	1.754	1.292	3.046
3821	2.546	2.815	1.998	1.537	3.535
4362	0.367	0.352	0.288	0.192	0.481
4511	0.177	0.156	0.139	0.085	0.225
4512	0.071	0.078	0.056	0.043	0.099
5191	0.593	0.588	0.465	0.321	0.786
5192	1.961	1.656	1.540	0.904	2.444
8001	0.968	1.048	0.760	0.572	1.332
8002	0.898	1.117	0.705	0.610	1.315
8006	0.843	0.961	0.662	0.525	1.186
8008	0.436	0.430	0.343	0.235	0.577
8010	0.815	0.883	0.640	0.482	1.122
8013	0.233	0.279	0.183	0.152	0.335
8017	0.603	0.686	0.474	0.375	0.848
8018	1.690	1.603	1.327	0.875	2.202
8021	1.648	1.527	1.294	0.834	2.127
8031	1.486	1.273	1.166	0.695	1.861
8032	0.883	0.841	0.693	0.459	1.152
8033	1.077	1.131	0.845	0.617	1.463
8034	2.250	1.961	1.766	1.071	2.837
8039	0.632	0.716	0.496	0.391	0.887
8044	1.929	2.728	1.515	1.489	3.004
8046	1.250	1.486	0.981	0.811	1.793
8048	1.640	1.472	1.287	0.804	2.091
8050	0.861	0.933	0.676	0.509	1.185
8058	1.337	1.655	1.049	0.904	1.953
8103	1.745	1.606	1.370	0.877	2.247

# IX 000069 STIP

Section IX - Classification Pricing  
 Subsection F - Underlying Pure Premiums  
 7/1/2016

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)
8105	2.663	2.361	2.090	1.289	3.380
8106	3.636	4.417	2.854	2.412	5.266
8107	1.640	1.665	1.287	0.909	2.196
8111	1.424	1.602	1.118	0.875	1.993
8116	1.640	1.665	1.287	0.909	2.196
8203	3.067	3.388	2.408	1.850	4.258
8204	3.236	2.143	2.540	1.170	3.710
8215	1.954	1.669	1.534	0.912	2.446
8232	2.792	2.578	2.192	1.408	3.600
8233	3.228	3.090	2.534	1.687	4.221
8235	2.416	2.342	1.897	1.279	3.175
8263	3.653	3.438	2.867	1.877	4.744
8264	3.448	2.817	2.707	1.538	4.245
8265	3.228	3.090	2.534	1.687	4.221
8279	2.625	3.502	2.061	1.912	3.973
8291	2.532	2.510	1.988	1.371	3.359
8292	1.749	1.627	1.373	0.888	2.261
8293	5.533	6.135	4.343	3.350	7.693
8350	3.611	2.926	2.834	1.597	4.432
8380	1.709	1.607	1.342	0.878	2.219
8381	0.979	1.298	0.769	0.709	1.477
8385	1.753	1.436	1.376	0.784	2.160
8392	0.884	0.924	0.694	0.504	1.198
8393	1.173	0.951	0.921	0.519	1.440
8500	3.228	3.090	2.534	1.687	4.221
8710	2.032	2.042	1.595	1.115	2.711
8719	2.032	2.042	1.595	1.115	2.711
8720	0.527	0.449	0.414	0.245	0.659
8745	2.332	2.345	1.831	1.280	3.111
8747	0.533	0.592	0.418	0.323	0.741
8829	1.248	1.081	0.980	0.590	1.570
8831	0.452	0.866	0.355	0.473	0.828
8835	1.204	0.986	0.945	0.538	1.484
9014	1.538	1.361	1.207	0.743	1.950
9015	1.891	1.648	1.484	0.900	2.384
9016	0.994	1.513	0.780	0.826	1.607
9033	2.309	1.616	1.812	0.883	2.695
9040	1.550	1.384	1.217	0.756	1.972
9052	0.878	0.922	0.690	0.504	1.193
9058	0.878	0.922	0.690	0.504	1.193
9060	0.511	0.657	0.401	0.359	0.760
9061	0.527	0.578	0.414	0.316	0.729
9063	0.357	0.476	0.281	0.260	0.540
9079	0.602	0.732	0.473	0.400	0.873
9089	0.662	0.733	0.520	0.400	0.920
9093	0.531	0.859	0.417	0.469	0.886

# IX 000070 STIP

Section IX - Classification Pricing  
Subsection F - Underlying Pure Premiums  
7/1/2016

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)
9101	1.836	1.989	1.441	1.086	2.527
9220	1.974	1.720	1.550	0.939	2.489
9410	1.173	1.813	0.921	0.990	1.910
9519	1.737	1.807	1.364	0.986	2.350
9586	0.261	0.219	0.205	0.120	0.324
9620	0.398	0.414	0.313	0.226	0.539

Notes:

(2), (3): Section IX - I, Exhibit 1 of 04/01/2014 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 = 0.785, Medical = 0.546).

# IX 000071 STIP

Section IX - Classification Pricing  
 Subsection F - Underlying Pure Premiums  
 7/1/2016

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	2.308	3.919	5.493	5.538	11.031
0251	0.748	0.733	1.780	1.036	2.816
1624	1.052	0.874	2.504	1.234	3.739
1655	0.943	1.113	2.245	1.573	3.817
1710	1.052	0.874	2.504	1.234	3.739
2702	3.123	2.625	7.432	3.709	11.141
4000	0.890	0.687	2.117	0.971	3.089
6834	0.529	0.461	1.259	0.652	1.911
6836	0.659	0.667	1.568	0.943	2.511
7219	2.004	1.732	4.770	2.447	7.217
7230	1.521	1.338	3.621	1.891	5.511
7231	2.091	1.848	4.976	2.611	7.587
7360	1.297	1.192	3.088	1.684	4.771
7370	0.810	0.959	1.927	1.355	3.282
7380	1.148	1.121	2.733	1.584	4.317
7382	0.689	0.813	1.639	1.149	2.788
7403	0.808	1.075	1.922	1.519	3.441
7405	0.352	0.356	0.837	0.504	1.341
7420	1.919	0.765	4.568	1.081	5.648
7421	0.454	0.260	1.079	0.367	1.446
7422	0.454	0.260	1.079	0.367	1.446
7425	0.800	0.406	1.903	0.573	2.476
7431	0.454	0.260	1.079	0.367	1.446
7502	0.531	0.605	1.263	0.855	2.118
7515	0.346	0.567	0.822	0.802	1.624
7520	0.748	0.733	1.780	1.036	2.816
7539	0.302	0.265	0.720	0.374	1.093
7580	0.537	0.629	1.277	0.889	2.166
7590	1.057	0.904	2.516	1.277	3.794
7600	0.938	0.770	2.233	1.088	3.321
7704	0.646	0.822	1.537	1.161	2.698
7720	0.366	0.376	0.871	0.531	1.402
9019	0.399	0.248	0.949	0.351	1.300
9102	0.496	0.618	1.180	0.873	2.053
9154	0.301	0.351	0.717	0.497	1.213
9178	1.099	3.610	2.615	5.101	7.716
9179	4.858	4.381	11.562	6.190	17.752
9180	0.650	1.080	1.546	1.526	3.072
9182	0.484	1.282	1.152	1.812	2.963
9186	0.650	1.080	1.546	1.526	3.072
9402	1.030	0.964	2.450	1.362	3.813
9403	1.893	1.833	4.504	2.590	7.094

**Notes:**

- (2), (3): Section IX - I, Exhibit 1 of 04/01/2014 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 = 2.38, Medical = 1.413).

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Section IX - Classification Pricing  
 Subsection G - Class Relativities  
 7/1/2016

Section IX - G

## A-Sheet Table of Contents

Class	To find the A-Sheet for: Description	Class	Look at the A-Sheet for: Exhibit
0005	FARM: NURSERY EMP & DRIVERS	0005	Section IX - G, Exhibit 1
0008	FARM: GARDENING-MARKET OR TRUCK & DRIVERS	0008	Section IX - G, Exhibit 1
0016	FARM: ORCHARDS & DRIVERS	0016	Section IX - G, Exhibit 2
0034	FARM: POULTRY OR EGG PRODUCERS & DRIVERS	0034	Section IX - G, Exhibit 2
0035	FARM: FLORIST & DRIVERS	0035	Section IX - G, Exhibit 3
0036	FARM: DAIRY & DRIVERS	0034	Section IX - G, Exhibit 2
0037	FARM: FIELD CROPS & DRIVERS	0008	Section IX - G, Exhibit 1
0042	LANDSCAPE GARDENING & DRIVERS	0042	Section IX - G, Exhibit 3
0046	FERTILIZER OR PESTICIDE APPLICATION-COMM OR DOMESTIC, DRIVERS	0046	Section IX - G, Exhibit 4
0050	FARM MACHINERY OPERATION-BY CONTRACTOR & DRIVERS	0050	Section IX - G, Exhibit 4
0079	FARM: BERRY OR VINEYARD & DRIVERS	0079	Section IX - G, Exhibit 5
0083	FARM: CATTLE OR LIVESTOCK RAISING NOC & DRIVERS	0083	Section IX - G, Exhibit 5
0106	TREE PRUNING, SPRAYING, REPAIRING & DRIVERS	0106	Section IX - G, Exhibit 6
0113	FARM: FISH HATCHERY & DRIVERS	0034	Section IX - G, Exhibit 2
0170	FARM: ANIMAL RAISING & DRIVERS	0034	Section IX - G, Exhibit 2
0251	IRRIGATION WORKS OPERATION & DRIVERS	0251	Section IX - G, Exhibit 6
0908	DOMESTIC WORKERS-INSIDE-OCCASIONAL-NOC	0908	Section IX - G, Exhibit 7
0909	DOMESTIC WORKERS-OUTSIDE-OCCASIONAL-INCL OCCASNL PRIV CHAUFF	0909	Section IX - G, Exhibit 7
0912	DOMESTIC WORKERS-OUTSIDE-INCL PRIVATE CHAUFFERS	0909	Section IX - G, Exhibit 7
0913	DOMESTIC WORKERS-INSIDE-NOC	0908	Section IX - G, Exhibit 7
0917	DOMESTIC SERVICE CONTRACTOR-INSIDE	0917	Section IX - G, Exhibit 8
0918	DOMESTIC WORKERS-INSIDE-PHYSICAL ASSISTANCE	0918	Section IX - G, Exhibit 8
1430	SMELTING, SINTERING OR REFINING-LEAD & DRIVERS	1430	Section IX - G, Exhibit 9
1438	SMELTING, SINTERING OR REFINING-METALS-NOT IRON OR LEAD-NOC & D	1438	Section IX - G, Exhibit 9
1463	ASPHALT WORKS & DRIVERS	1463	Section IX - G, Exhibit 10
1624	QUARRY NOC & DRIVERS	1624	Section IX - G, Exhibit 10
1655	LIME MFG-QUARRY-SURFACE & DRIVERS	1655	Section IX - G, Exhibit 11
1701	CEMENT MFG	1701	Section IX - G, Exhibit 11
1710	STONE CRUSHING & DRIVERS	1624	Section IX - G, Exhibit 10
1747	EMERY WORKS & DRIVERS	1747	Section IX - G, Exhibit 12
1748	ABRASIVE WHEEL MFG & DRIVERS	1748	Section IX - G, Exhibit 12
1852	ASBESTOS GOODS MFG	1852	Section IX - G, Exhibit 13
1853	MICA GOODS MFG & MICA PREPARING	1853	Section IX - G, Exhibit 13
1860	ABRASIVE PAPER OR CLOTH PREPARATION	1860	Section IX - G, Exhibit 14
1924	WIRE DRAWING OR CABLE MFG-NOT IRON OR STEEL	1924	Section IX - G, Exhibit 14
1925	DIE CASTING MFG	1925	Section IX - G, Exhibit 15
2001	CRACKER MFG	2001	Section IX - G, Exhibit 15
2002	MACARONI MFG	2002	Section IX - G, Exhibit 16
2003	BAKERY & DRIVERS, ROUTE SUPERVISORS	2001	Section IX - G, Exhibit 15
2014	GRAIN MILLING	2014	Section IX - G, Exhibit 16
2021	SUGAR REFINING-ALL OPERATIONS & DRIVERS	2021	Section IX - G, Exhibit 17
2039	ICE CREAM MFG & DRIVERS	2039	Section IX - G, Exhibit 17
2041	CONFECTION MFG	2041	Section IX - G, Exhibit 18
2070	CREAMERY OR DAIRY & ROUTE SUPERVISORS, DRIVERS	2070	Section IX - G, Exhibit 18
2081	BUTCHERING	2081	Section IX - G, Exhibit 19
2089	PACKING HOUSE- ALL OPERATIONS	2089	Section IX - G, Exhibit 19
2095	MEAT PRODUCTS MFG-NOC	2095	Section IX - G, Exhibit 20
2101	FISH CURING	2089	Section IX - G, Exhibit 19
2111	CANNERY NOC	2111	Section IX - G, Exhibit 20
2114	OYSTERMEN	2089	Section IX - G, Exhibit 19
2115	SEAFOOD PRODUCTS MFG-NOC	2115	Section IX - G, Exhibit 21
2121	BREWERY & DRIVERS	2121	Section IX - G, Exhibit 21
2130	SPIRITUOUS LIQUOR DISTILLERY	2130	Section IX - G, Exhibit 22
2131	SPIRITUOUS LIQUOR BOTTLING	2131	Section IX - G, Exhibit 22
2143	FRUIT JUICE MFG	2143	Section IX - G, Exhibit 23
2150	ICE MFG	2150	Section IX - G, Exhibit 23
2156	BOTTLING-NOT CARBONATED LIQUIDS OR SPIRIT LIQRS & RTE SUP,DR	2156	Section IX - G, Exhibit 24
2157	BOTTLING NOC & ROUTE SUPERVISORS, DRIVERS	2157	Section IX - G, Exhibit 24
2172	CIGARETTE MFG	2172	Section IX - G, Exhibit 25
2174	TOBACCO REHANDLING OR WAREHOUSING	2174	Section IX - G, Exhibit 25
2211	COTTON BATTING,WADDING OR WASTE MFG	2211	Section IX - G, Exhibit 26
2220	YARN OR THREAD MFG-COTTON	2220	Section IX - G, Exhibit 26
2260	WOOL COMBING OR SCOURING	2260	Section IX - G, Exhibit 27
2286	WOOL SPINNING & WEAVING	2220	Section IX - G, Exhibit 26
2288	FELTING MFG	2288	Section IX - G, Exhibit 27
2302	SILK THREAD OR YARN MFG	2220	Section IX - G, Exhibit 26
2305	TEXTILE FIBER MFG-SYNTHETIC	2305	Section IX - G, Exhibit 28

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Section IX - Classification Pricing  
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Class	To find the A-Sheet for: Description	Class	Look at the A-Sheet for: Exhibit
2362	KNIT GOODS MFG NOC	2362	Section IX - G, Exhibit 28
2380	WEBBING MFG	2380	Section IX - G, Exhibit 29
2402	CARPET OR RUG MFG NOC	2402	Section IX - G, Exhibit 29
2413	TEXTILE - BLEACHING, DYEING, MERCERZNG, FINISH	2413	Section IX - G, Exhibit 30
2416	YARN OR THREAD DYEING OR FINISHING	2416	Section IX - G, Exhibit 30
2417	CLOTH PRINTING	2417	Section IX - G, Exhibit 31
2501	CLOTHING MFG	2501	Section IX - G, Exhibit 31
2503	DRESSMAKING OR TAILORING-CUSTOM EXCLUSIVELY	2503	Section IX - G, Exhibit 32
2534	FEATHER OR FLOWER MFG-ARTIFICIAL	2501	Section IX - G, Exhibit 31
2570	MATTRESS OR BOX SPRING MFG	2570	Section IX - G, Exhibit 32
2576	CANVAS GOODS MFG NOC-SHOP	2576	Section IX - G, Exhibit 33
2578	BAG OR SACK MFG-CLOTH	2576	Section IX - G, Exhibit 33
2585	LAUNDRY NOC & ROUTE SUPERVISORS, DRIVERS	2585	Section IX - G, Exhibit 33
2586	CLEANING OR DYEING & ROUTE SUPERVISORS, DRIVERS	2586	Section IX - G, Exhibit 34
2587	TOWEL OR TOILET SUPPLY CO & RTE SUPERVISORS, DR	2587	Section IX - G, Exhibit 34
2623	TANNING	2623	Section IX - G, Exhibit 35
2640	LEATHER EMBOSSING	2640	Section IX - G, Exhibit 35
2651	SHOE STOCK MFG	2640	Section IX - G, Exhibit 35
2660	BOOT OR SHOE MFG NOC	2660	Section IX - G, Exhibit 36
2683	LUGGAGE MFG	2683	Section IX - G, Exhibit 36
2688	LEATHER GOODS MFG NOC	2688	Section IX - G, Exhibit 37
2702	LOGGING OR LUMBERING & DRIVERS	2702	Section IX - G, Exhibit 37
2710	SAWMILLS	2710	Section IX - G, Exhibit 38
2731	PLANING OR MOLDING MILL	2731	Section IX - G, Exhibit 38
2741	COOPERAGE STOCK MFG	2741	Section IX - G, Exhibit 39
2747	COOPERAGE ASSEMBLY	2747	Section IX - G, Exhibit 39
2790	PATTERN MAKING NOC	2790	Section IX - G, Exhibit 40
2802	CARPENTRY-SHOP ONLY & DRIVERS	2802	Section IX - G, Exhibit 40
2835	BRUSH OR BROOM ASSEMBLY	2835	Section IX - G, Exhibit 41
2836	BRUSH OR BROOM MFG NOC	2836	Section IX - G, Exhibit 41
2841	WOODENWARE MFG NOC	2841	Section IX - G, Exhibit 42
2883	FURNITURE MFG-WOOD-NOC	2883	Section IX - G, Exhibit 42
2923	PIANO MFG	2923	Section IX - G, Exhibit 43
2942	PENCIL, PENHOLDER OR CRAYON MFG	2942	Section IX - G, Exhibit 43
3018	IRON OR STEEL: MFG: ROLLING MILL & DRIVERS	3018	Section IX - G, Exhibit 44
3022	PIPE OR TUBE MFG NOC & DRIVERS	3022	Section IX - G, Exhibit 44
3027	ROLLING MILL NOC & DRIVERS	3027	Section IX - G, Exhibit 45
3028	PIPE OR TUBE MFG - IRON OR STEEL & DRIVERS	3028	Section IX - G, Exhibit 45
3030	IRON OR STEEL: FABRICATION: IRON/STEEL WORK-SHOP-STRUCT & DR	3030	Section IX - G, Exhibit 46
3040	IRON OR STEEL: FABRICATION: IRON WORKS-SHOP-ORNAMENTAL & DR	3040	Section IX - G, Exhibit 46
3041	IRON OR STEEL: FABRICATION: IRON WORKS-SHP-DEC/ART &FNDRS,DR	3041	Section IX - G, Exhibit 47
3042	ELEVATOR OR ESCALATOR MFG	3042	Section IX - G, Exhibit 47
3064	SIGN MFG-METAL	3064	Section IX - G, Exhibit 48
3066	SHEET METAL WORK - SHOP	3064	Section IX - G, Exhibit 48
3076	FIREPROOF EQUIPMENT MFG	3076	Section IX - G, Exhibit 48
3081	FOUNDRY-FERROUS-NOC	3081	Section IX - G, Exhibit 49
3082	FOUNDRY-STEEL CASTINGS	3081	Section IX - G, Exhibit 49
3085	FOUNDRY-NON FERROUS	3085	Section IX - G, Exhibit 49
3110	FORGING WORK - DROP OR MACHINE	3110	Section IX - G, Exhibit 50
3111	BLACKSMITH	3111	Section IX - G, Exhibit 50
3113	TOOL MFG-NOT DROP OR MACHINE FORGED-NOC	3113	Section IX - G, Exhibit 51
3114	TOOL MFG-DROP OR MACHINE FORGED-NOC: MACHINING OR FINISHING	3114	Section IX - G, Exhibit 51
3118	SAW MFG	3118	Section IX - G, Exhibit 52
3119	NEEDLE MFG	3119	Section IX - G, Exhibit 52
3120	RAZOR MFG-SAFETY	3120	Section IX - G, Exhibit 53
3122	CUTLERY MFG-NOC	3122	Section IX - G, Exhibit 53
3127	PRECISION MEASURING TOOL MFG-NOC	3127	Section IX - G, Exhibit 54
3131	BUTTON OR FASTENER MFG-METAL	3131	Section IX - G, Exhibit 54
3132	NUT OR BOLT MFG	3132	Section IX - G, Exhibit 55
3145	SCREW MFG	3145	Section IX - G, Exhibit 55
3146	HARDWARE MFG-NOC	3146	Section IX - G, Exhibit 56
3169	STOVE MFG	3169	Section IX - G, Exhibit 56
3179	ELECTRICAL APPARATUS MFG-NOC	3179	Section IX - G, Exhibit 57
3180	ELECTRIC OR GAS LIGHTING FIXTURES MFG	3180	Section IX - G, Exhibit 57
3188	PLUMBERS SUPPLIES MFG-NOC	3188	Section IX - G, Exhibit 58
3200	ARMS MFG-SMALL	3200	Section IX - G, Exhibit 58
3220	CAN MFG	3220	Section IX - G, Exhibit 59



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Section IX - G

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Section IX - Classification Pricing  
 Subsection G - Class Relativities  
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Section IX - G  
 Exhibit 1

## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	124.736	0	23	0	451.693	0	149.380	601.073	3.621	1.198	4.819
2010	107.778	0	28	0	16.394	0	32.135	48.529	0.152	0.298	0.450
2011	114.867	0	34	0	33.249	0	44.955	78.204	0.289	0.391	0.681
2012	108.045	1	24	99.471	6.950	16.970	14.049	137.439	0.985	0.287	1.272
2013	112.524	0	26	0	9.248	0	31.488	40.736	0.082	0.280	0.362
<b>MA Total:</b>	<b>567.951</b>	<b>1</b>	<b>135</b>	<b>99.471</b>	<b>517.533</b>	<b>16.970</b>	<b>272.009</b>	<b>905.983</b>	<b>1.086</b>	<b>0.509</b>	<b>1.595</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.142	0.848	.
(14) Massachusetts Credibility:	0.220	0.350	.
(15) Countrywide Pure Premium:	1.520	0.999	2.520
(16) Countrywide Indicated Relativity:	1.585	1.637	.
(17) Countrywide Credibility:	0.390	0.330	.
(18) Countrywide Lost-Time Claims:	1595.0	.	.
(19) Pure Premium Underlying Present Rate:	1.127	0.838	1.965
(20) Relativity to Underlying Present Rate:	1.454	1.556	.
(21) Credibility to Underlying Relativity:	0.390	0.320	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.437	1.335	.
(24) Balanced Formula Relativity:	ormula	1.336	1.393

Class(es):		Effective: 7/1/2016							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)
2009	229.400	1	42	121.790	177.839	21.344	158.520	479.493	1.306	0.784	2.090
2010	253.424	2	52	129.952	76.263	11.632	196.703	414.550	0.814	0.822	1.636
2011	274.639	2	54	30.010	82.091	7.316	228.682	348.100	0.408	0.859	1.267
2012	262.453	0	39	0	34.081	0	88.210	122.292	0.130	0.336	0.466
2013	295.950	0	38	0	177.480	0	317.111	494.592	0.600	1.072	1.671
<b>MA Total:</b>	<b>1,315,865</b>	<b>5</b>	<b>225</b>	<b>281.752</b>	<b>547.755</b>	<b>40.293</b>	<b>989,227</b>	<b>1,859,027</b>	<b>0.630</b>	<b>0.782</b>	<b>1.413</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.663	1.303	.
(14) Massachusetts Credibility:	0.300	0.490	.
(15) Countrywide Pure Premium:	1.728	1.169	2.897
(16) Countrywide Indicated Relativity:	1.802	1.914	.
(17) Countrywide Credibility:	0.350	0.260	.
(18) Countrywide Lost-Time Claims:	4304.0	.	.
(19) Pure Premium Underlying Present Rate:	1.044	0.807	1.851
(20) Relativity to Underlying Present Rate:	1.347	1.498	.
(21) Credibility to Underlying Relativity:	0.350	0.250	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.301	1.511	.
(24) Balanced Formula Relativity:	1.294	1.512	1.378

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Section IX - G  
 Exhibit 2

## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	72,119	1	15	32,932	7,653	64,623	49,636	154,845	0.563	1.584	2.147
2010	75,262	0	22	0	110,896	0	91,058	201,954	1.473	1.210	2.683
2011	64,358	0	7	0	0	0	6,246	6,246	0.000	0.097	0.097
2012	70,870	0	7	0	88,508	0	46,946	135,454	1.249	0.662	1.911
2013	78,206	0	11	0	250,106	0	142,920	393,026	3.198	1.827	5.026
<b>MA Total:</b>	<b>360,815</b>	<b>1</b>	<b>62</b>	<b>32,932</b>	<b>457,164</b>	<b>64,623</b>	<b>336,806</b>	<b>891,525</b>	<b>1.358</b>	<b>1.113</b>	<b>2.471</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.428	1.853	.
(14) Massachusetts Credibility:	0.220	0.350	.
(15) Countrywide Pure Premium:	3.195	2.063	5.258
(16) Countrywide Indicated Relativity:	3.332	3.378	.
(17) Countrywide Credibility:	0.390	0.330	.
(18) Countrywide Lost-Time Claims:	1297.0	.	.
(19) Pure Premium Underlying Present Rate:	1.661	1.272	2.933
(20) Relativity to Underlying Present Rate:	2.144	2.361	.
(21) Credibility to Underlying Relativity:	0.390	0.320	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.450	2.519	.
(24) Balanced Formula Relativity:	2.437	2.521	2.469

Class(es):		Effective: 7/1/2016							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)
2009	101,926	0	29	0	84,435	0	145,244	229,679	0.828	1.425	2.253
2010	96,594	3	22	365,003	277,371	114,271	142,767	899,411	6.650	2.661	9.311
2011	99,357	0	28	0	232,529	0	315,341	547,870	2.340	3.174	5.514
2012	96,161	2	30	504,172	43,883	67,903	114,301	730,259	5.699	1.895	7.594
2013	91,677	0	22	0	118,362	0	150,816	269,178	1.291	1.645	2.936
<b>MA Total:</b>	<b>485,715</b>	<b>5</b>	<b>131</b>	<b>869,175</b>	<b>756,580</b>	<b>182,174</b>	<b>868,469</b>	<b>2,676,398</b>	<b>3.347</b>	<b>2.163</b>	<b>5.510</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.519	3.603	.
(14) Massachusetts Credibility:	0.230	0.410	.
(15) Countrywide Pure Premium:	1.738	1.191	2.928
(16) Countrywide Indicated Relativity:	1.812	1.950	.
(17) Countrywide Credibility:	0.390	0.300	.
(18) Countrywide Lost-Time Claims:	2953.0	.	.
(19) Pure Premium Underlying Present Rate:	1.485	1.415	2.900
(20) Relativity to Underlying Present Rate:	1.916	2.627	.
(21) Credibility to Underlying Relativity:	0.380	0.290	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.244	2.824	.
(24) Balanced Formula Relativity:	2.232	2.826	2.462

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 Exhibit 3

## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	350,513	4	62	427,403	9,845	379,599	52,057	868,903	1,247	1,231	2,479
2010	332,111	0	50	0	335,291	0	227,950	563,241	1,010	0,686	1,696
2011	335,988	1	53	3,337	140,841	2,786	213,188	360,152	0,429	0,643	1,072
2012	333,768	0	51	0	294,142	0	335,313	629,456	0,881	1,005	1,886
2013	344,794	2	74	157,422	551,969	119,077	363,594	1,192,062	2,057	1,400	3,457
<b>MA Total:</b>	<b>1,697,173</b>	<b>7</b>	<b>290</b>	<b>588,162</b>	<b>1,332,088</b>	<b>501,462</b>	<b>1,192,102</b>	<b>3,613,814</b>	<b>1,131</b>	<b>0,998</b>	<b>2,129</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.189	1.662	.
(14) Massachusetts Credibility:	0.320	0.500	.
(15) Countrywide Pure Premium:	1.198	0.840	2.038
(16) Countrywide Indicated Relativity:	1.249	1.375	.
(17) Countrywide Credibility:	0.340	0.250	.
(18) Countrywide Lost-Time Claims:	1253.0	.	.
(19) Pure Premium Underlying Present Rate:	0.903	0.666	1.568
(20) Relativity to Underlying Present Rate:	1.165	1.236	.
(21) Credibility to Underlying Relativity:	0.340	0.250	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.201	1.484	.
(24) Balanced Formula Relativity:	1.195	1.485	1.307

Class(es):		Effective: 7/1/2016							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)
2009	3,417,983	23	655	2,102,479	4,558,677	917,013	3,318,182	10,896,352	1,949	1,239	3,188
2010	3,670,954	27	725	2,379,458	4,984,319	1,242,244	3,663,633	12,269,653	2,006	1,336	3,342
2011	4,026,200	26	823	3,095,859	5,688,284	1,948,311	4,458,645	15,191,098	2,182	1,591	3,773
2012	4,238,110	37	762	4,538,082	6,125,722	1,713,300	5,014,308	17,391,411	2,516	1,587	4,104
2013	4,626,470	30	751	3,834,912	6,501,218	1,811,231	4,759,228	16,906,589	2,234	1,420	3,654
<b>MA Total:</b>	<b>19,979,717</b>	<b>143</b>	<b>3,716</b>	<b>15,950,789</b>	<b>27,858,220</b>	<b>7,632,099</b>	<b>21,213,995</b>	<b>72,655,104</b>	<b>2,193</b>	<b>1,444</b>	<b>3,636</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.305	2.405	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.895	1.746	4.641
(16) Countrywide Indicated Relativity:	3.019	2.859	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	6672.0	.	.
(19) Pure Premium Underlying Present Rate:	1.746	1.364	3.110
(20) Relativity to Underlying Present Rate:	2.253	2.532	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.305	2.405	.
(24) Balanced Formula Relativity:	2.293	2.407	2.337



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	83,208	0	15	0	57,511	0	65,751	123,262	0.691	0.790	1.481	
2010	96,870	0	13	0	26,221	0	35,886	62,107	0.271	0.370	0.641	
2011	95,292	1	20	4,205	43,774	8,335	100,169	156,483	0.503	1.139	1.642	
2012	105,290	0	10	0	151,130	0	43,192	194,322	1.435	0.410	1.846	
2013	115,931	1	15	53,023	104,335	19,391	70,256	247,004	1.357	0.773	2.131	
<b>MA Total:</b>	<b>496,591</b>	<b>2</b>	<b>73</b>	<b>57,227</b>	<b>382,971</b>	<b>27,726</b>	<b>315,254</b>	<b>783,178</b>	<b>0.886</b>	<b>0.691</b>	<b>1.577</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.932	1.150	.
(14) Massachusetts Credibility:	0.180	0.300	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.030	1.145	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.803	0.622	1.425
(20) Relativity to Underlying Present Rate:	1.037	1.154	.
(21) Credibility to Underlying Relativity:	0.820	0.700	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.018	1.153	.
(24) Balanced Formula Relativity:	1.012	1.154	1.067

Class(es):		Effective: 7/1/2016							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)	2,371	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2009	14,948	0	5	0	331,887	0	55,863	387,749	22.203	3.737	25.940	
2010	17,900	0	2	0	0	0	1,488	1,488	0.000	0.083	0.083	
2011	14,553	0	0	0	0	0	0	0	0.000	0.000	0.000	
2012	14,229	0	3	0	31,643	0	24,598	56,241	2.224	1.729	3.953	
2013	15,691	0	1	0	0	0	187	187	0.000	0.012	0.012	
<b>MA Total:</b>	<b>77,320</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>363,530</b>	<b>0</b>	<b>82,136</b>	<b>445,666</b>	<b>4.702</b>	<b>1.062</b>	<b>5.764</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.520	0.683	.
(14) Massachusetts Credibility:	0.150	0.200	.
(15) Countrywide Pure Premium:	3.647	1.827	5.473
(16) Countrywide Indicated Relativity:	1.175	1.174	.
(17) Countrywide Credibility:	0.430	0.400	.
(18) Countrywide Lost-Time Claims:	836.00	.	.
(19) Pure Premium Underlying Present Rate:	3.279	1.435	4.714
(20) Relativity to Underlying Present Rate:	1.261	1.036	.
(21) Credibility to Underlying Relativity:	0.420	0.400	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.263	1.020	.
(24) Balanced Formula Relativity:	1.283	1.024	1.197

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 Exhibit 5

## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	146,088	1	24	17,246	35,348	47,759	62,362	162,716	0.360	0.754	1.114	
2010	151,088	0	27	0	661,625	0	622,658	1,284,282	4.379	4.121	8.500	
2011	153,993	2	37	385,717	34,283	278,924	142,343	841,267	2.727	2.736	5.463	
2012	165,436	1	35	442,860	283,569	216,417	223,449	1,166,295	4.391	2.659	7.050	
2013	162,646	4	28	247,667	89,501	368,282	112,359	817,809	2.073	2.955	5.028	
<b>MA Total:</b>	<b>779,250</b>	<b>8</b>	<b>151</b>	<b>1,093,490</b>	<b>1,104,325</b>	<b>911,382</b>	<b>1,163,171</b>	<b>4,272,369</b>	<b>2.820</b>	<b>2.662</b>	<b>5.483</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.965	4.435	.
(14) Massachusetts Credibility:	0.250	0.400	.
(15) Countrywide Pure Premium:	1.485	1.223	2.708
(16) Countrywide Indicated Relativity:	1.549	2.003	.
(17) Countrywide Credibility:	0.380	0.300	.
(18) Countrywide Lost-Time Claims:	134.00	.	.
(19) Pure Premium Underlying Present Rate:	1.113	0.846	1.959
(20) Relativity to Underlying Present Rate:	1.437	1.570	.
(21) Credibility to Underlying Relativity:	0.370	0.300	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.861	2.846	.
(24) Balanced Formula Relativity:	1.851	2.848	2.237

Class(es):		Effective: 7/1/2016							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)	
2009	51,044	0	8	0	734	0	6,575	7,309	0.014	0.129	0.143	
2010	53,266	0	8	0	0	0	14,645	14,645	0.000	0.275	0.275	
2011	44,401	0	7	0	13,040	0	20,964	34,005	0.294	0.472	0.766	
2012	66,054	0	7	0	33,357	0	44,617	77,974	0.505	0.675	1.180	
2013	46,963	0	4	0	36,372	0	95,658	132,030	0.774	2.037	2.811	
<b>MA Total:</b>	<b>261,728</b>	<b>0</b>	<b>34</b>	<b>0</b>	<b>83,504</b>	<b>0</b>	<b>182,459</b>	<b>265,963</b>	<b>0.319</b>	<b>0.697</b>	<b>1.016</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.335	1.161	.
(14) Massachusetts Credibility:	0.200	0.370	.
(15) Countrywide Pure Premium:	2.602	1.790	4.393
(16) Countrywide Indicated Relativity:	2.714	2.931	.
(17) Countrywide Credibility:	0.400	0.320	.
(18) Countrywide Lost-Time Claims:	3228.0	.	.
(19) Pure Premium Underlying Present Rate:	1.761	2.075	3.836
(20) Relativity to Underlying Present Rate:	2.272	3.853	.
(21) Credibility to Underlying Relativity:	0.400	0.310	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.061	2.562	.
(24) Balanced Formula Relativity:	2.051	2.564	2.249

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	280,007	9	119	720,619	1,088,495	993,290	1,605,822	4,408,226	6,461	9,282	15,743
2010	313,821	2	102	717,252	1,211,209	162,345	1,278,221	3,369,027	6,145	4,590	10,735
2011	371,071	2	112	299,924	1,172,229	707,877	847,022	3,027,052	3,967	4,190	8,158
2012	379,251	6	85	1,263,577	1,275,241	1,126,364	951,616	4,616,797	6,694	5,479	12,173
2013	398,765	7	91	1,016,961	1,416,643	817,432	1,225,011	4,476,047	6,103	5,122	11,225
<b>MA Total:</b>	<b>1,742,916</b>	<b>26</b>	<b>509</b>	<b>4,018,332</b>	<b>6,163,817</b>	<b>3,807,308</b>	<b>5,907,692</b>	<b>19,897,149</b>	<b>5,842</b>	<b>5,574</b>	<b>11,416</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.070	3.567	.
(14) Massachusetts Credibility:	0.660	1.000	.
(15) Countrywide Pure Premium:	6.033	4.036	10.069
(16) Countrywide Indicated Relativity:	2.336	2.852	.
(17) Countrywide Credibility:	0.170	0.000	.
(18) Countrywide Lost-Time Claims:	2816.0	.	.
(19) Pure Premium Underlying Present Rate:	5.493	5.538	11.031
(20) Relativity to Underlying Present Rate:	2.355	3.996	.
(21) Credibility to Underlying Relativity:	0.170	0.000	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	2.163	3.567	.
(24) Balanced Formula Relativity:	2.137	3.560	2.644

Class(es):		Effective: 7/1/2016							Miscellaneous		
0251 IRRIGATION WORKS 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)
2009	241,782	2	41	139,735	408,278	52,925	202,382	803,321	2,267	1,056	3,322
2010	225,124	0	27	0	80,862	0	53,116	133,977	0,359	0,236	0,595
2011	220,324	3	38	182,198	561,903	40,270	316,516	1,100,886	3,377	1,619	4,997
2012	233,980	1	36	114,493	218,390	14,851	80,336	428,070	1,423	0,407	1,830
2013	261,310	1	48	6,197	142,316	4,191	143,160	295,863	0,568	0,564	1,132
<b>MA Total:</b>	<b>1,182,520</b>	<b>7</b>	<b>190</b>	<b>442,623</b>	<b>1,411,748</b>	<b>112,237</b>	<b>795,510</b>	<b>2,762,118</b>	<b>1,568</b>	<b>0,768</b>	<b>2,336</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.556	0.491	.
(14) Massachusetts Credibility:	0.360	0.520	.
(15) Countrywide Pure Premium:	1.744	1.087	2.830
(16) Countrywide Indicated Relativity:	0.675	0.768	.
(17) Countrywide Credibility:	0.320	0.240	.
(18) Countrywide Lost-Time Claims:	2239.0	.	.
(19) Pure Premium Underlying Present Rate:	1.780	1.036	2.816
(20) Relativity to Underlying Present Rate:	0.763	0.747	.
(21) Credibility to Underlying Relativity:	0.320	0.240	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.660	0.619	.
(24) Balanced Formula Relativity:	0.652	0.618	0.640

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Goods and Services			
0908 DOMESTIC WORKERS-INSIDE-OCCASIONAL-NO												
		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)	
2009	2,613	0	7	0	459,211	0	117,554	576,765	175.76	44,992	220.75	
2010	2,675	2	17	31,669	53,401	36,623	53,810	175,503	31,803	33,808	65,611	
2011	2,842	0	15	0	5,220	0	29,980	35,200	1,837	10,550	12,387	
2012	2,916	2	18	10,285	481,147	35,202	117,865	644,499	168.55	52,499	221.05	
2013	2,988	0	15	0	137,593	0	70,481	208,074	46,049	23,588	69,637	
<b>MA Total:</b>	<b>14,033</b>	<b>4</b>	<b>72</b>	<b>41,954</b>	<b>1,136,573</b>	<b>71,825</b>	<b>389,689</b>	<b>1,640,040</b>	<b>83,983</b>	<b>32,888</b>	<b>116.87</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	88.286	54.783	.
(14) Massachusetts Credibility:	0.300	0.420	.
(15) Countrywide Pure Premium:	167.89	84.503	252.40
(16) Countrywide Indicated Relativity:	117.90	98.955	.
(17) Countrywide Credibility:	0.350	0.290	.
(18) Countrywide Lost-Time Claims:	425.00	.	.
(19) Pure Premium Underlying Present Rate:	91.988	53.701	145.69
(20) Relativity to Underlying Present Rate:	118.72	99.696	.
(21) Credibility to Underlying Relativity:	0.350	0.290	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	109.30	80.618	.
(24) Balanced Formula Relativity:	108.72	80.679	97.872

Class(es):		Effective: 7/1/2016							Goods and Services			
0909 DOMESTIC WORKERS-OUTSIDE-OCCASIONAL-INCL OCCASNL PRIV CHAUFF												
		Converted Unlimited Losses										
		Amount										
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums				
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)	
2009	364	0	6	0	269	0	7,063	7,332	0.739	19,424	20,163	
2010	347	2	3	81,249	0	13,910	2,279	97,439	233.98	46,623	280.60	
2011	341	0	8	0	1,553	0	6,461	8,014	4,560	18,963	23,522	
2012	349	0	4	0	0	0	3,893	3,893	0,000	11,147	11,147	
2013	337	0	6	0	114,611	0	55,405	170,016	340.40	164,55	504.95	
<b>MA Total:</b>	<b>1,738</b>	<b>2</b>	<b>27</b>	<b>81,249</b>	<b>116,434</b>	<b>13,910</b>	<b>75,101</b>	<b>286,694</b>	<b>113.77</b>	<b>51,230</b>	<b>165.00</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	119.60	85.336	.
(14) Massachusetts Credibility:	0.140	0.290	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	138.77	318.00	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	108.27	172.57	280.84
(20) Relativity to Underlying Present Rate:	139.74	320.38	.
(21) Credibility to Underlying Relativity:	0.860	0.710	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	136.92	252.22	.
(24) Balanced Formula Relativity:	136.19	252.41	181.16

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Goods and Services		
0917 DOMESTIC SERVICE CONTRACTOR-INSIDE											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	278,000	8	38	181,950	171,000	592,432	104,012	1,049,394	1,270	2,505	3,775
2010	277,758	2	35	91,809	170,384	128,526	123,957	514,676	0,944	0,909	1,853
2011	291,680	6	45	325,309	223,109	255,252	140,693	944,364	1,880	1,357	3,238
2012	311,000	2	40	57,703	160,257	96,243	381,350	695,552	0,701	1,536	2,237
2013	361,863	3	45	140,343	352,400	32,981	158,300	684,024	1,362	0,529	1,890
<b>MA Total:</b>	<b>1,520,300</b>	<b>21</b>	<b>203</b>	<b>797,113</b>	<b>1,077,150</b>	<b>1,105,435</b>	<b>908,313</b>	<b>3,888,011</b>	<b>1,233</b>	<b>1,325</b>	<b>2,557</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.296	2.206	.
(14) Massachusetts Credibility:	0.360	0.600	.
(15) Countrywide Pure Premium:	2.236	1.523	3.759
(16) Countrywide Indicated Relativity:	2.331	2.494	.
(17) Countrywide Credibility:	0.320	0.200	.
(18) Countrywide Lost-Time Claims:	763.00	.	.
(19) Pure Premium Underlying Present Rate:	1.407	1.152	2.559
(20) Relativity to Underlying Present Rate:	1.816	2.139	.
(21) Credibility to Underlying Relativity:	0.320	0.200	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.794	2.250	.
(24) Balanced Formula Relativity:	1.784	2.252	1.965

Class(es):		Effective: 7/1/2016							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)
2009	3,992,338	8	57	379,515	285,275	196,481	159,840	1,021,111	0,167	0,089	0,256
2010	4,724,502	8	54	312,741	321,692	111,348	183,865	929,646	0,134	0,062	0,197
2011	4,665,379	9	76	397,343	945,710	237,127	314,547	1,894,727	0,288	0,118	0,406
2012	5,291,482	6	81	457,306	769,954	128,471	365,565	1,721,295	0,232	0,093	0,325
2013	5,801,546	8	69	716,855	1,211,487	413,844	426,251	2,768,437	0,332	0,145	0,477
<b>MA Total:</b>	<b>24,475,248</b>	<b>39</b>	<b>337</b>	<b>2,263,760</b>	<b>3,534,118</b>	<b>1,087,271</b>	<b>1,450,068</b>	<b>8,335,217</b>	<b>0,237</b>	<b>0,104</b>	<b>0,341</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.249	0.173	.
(14) Massachusetts Credibility:	0.650	0.730	.
(15) Countrywide Pure Premium:	0.756	0.398	1.155
(16) Countrywide Indicated Relativity:	0.789	0.652	.
(17) Countrywide Credibility:	0.180	0.140	.
(18) Countrywide Lost-Time Claims:	42,000	.	.
(19) Pure Premium Underlying Present Rate:	0.372	0.119	0.491
(20) Relativity to Underlying Present Rate:	0.480	0.221	.
(21) Credibility to Underlying Relativity:	0.170	0.130	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.385	0.246	.
(24) Balanced Formula Relativity:	0.383	0.246	0.330

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## Calculation of Class Relativities

Class(es): 1430 SMELTING, SINTERING OR REFINING-LEAD & DRIVERS									Effective: 7/1/2016			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)			
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000			
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000			
2011	0	0	0	0	0	0	0	0	0.000	0.000	0.000			
2012	0	0	0	0	0	0	0	0	0.000	0.000	0.000			
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000			
<b>MA Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>.</b>	<b>.</b>	<b>.</b>			

	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:	1.775	0.961	2.736
(16) Countrywide Indicated Relativity:	1.813	1.694	.
(17) Countrywide Credibility:	0.340	0.360	.
(18) Countrywide Lost-Time Claims:	77.000	.	.
(19) Pure Premium Underlying Present Rate:	3.311	1.293	4.604
(20) Relativity to Underlying Present Rate:	3.731	2.155	.
(21) Credibility to Underlying Relativity:	0.660	0.640	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	3.079	1.989	.
(24) Balanced Formula Relativity:	3.036	1.975	2.640

Class(es): 1438 SMELTING, SINTERING OR REFINING-METALS-NOT IRON OR LEAD-NOC & D									Effective: 7/1/2016			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)			
2009	53.641	1	5	8.823	0	38.945	6.185	53.954	0.164	0.841	1.006			
2010	64.732	0	10	0	12.416	0	33.373	45.789	0.192	0.516	0.707			
2011	71.680	0	10	0	17.069	0	41.130	58.199	0.238	0.574	0.812			
2012	148.767	0	16	0	122.491	0	99.847	222.338	0.823	0.671	1.495			
2013	138.852	0	17	0	118.213	0	83.272	201.485	0.851	0.600	1.451			
<b>MA Total:</b>	<b>477.672</b>	<b>1</b>	<b>58</b>	<b>8.823</b>	<b>270.189</b>	<b>38.945</b>	<b>263.808</b>	<b>581.766</b>	<b>0.584</b>	<b>0.634</b>	<b>1.218</b>			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.541	0.985	.
(14) Massachusetts Credibility:	0.230	0.350	.
(15) Countrywide Pure Premium:	2.369	1.164	3.532
(16) Countrywide Indicated Relativity:	2.418	2.051	.
(17) Countrywide Credibility:	0.390	0.330	.
(18) Countrywide Lost-Time Claims:	756.00	.	.
(19) Pure Premium Underlying Present Rate:	1.475	0.994	2.469
(20) Relativity to Underlying Present Rate:	1.662	1.656	.
(21) Credibility to Underlying Relativity:	0.380	0.320	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.699	1.551	.
(24) Balanced Formula Relativity:	1.676	1.541	1.625

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## Calculation of Class Relativities

Class(es): 1463 ASPHALT WORKS & DRIVERS		Effective: 7/1/2016							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)
2009	64,209	1	15	150,944	48,853	25,972	106,871	332,639	3,112	2,069	5,181
2010	73,973	1	18	185,364	143,418	39,826	54,303	422,912	4,445	1,272	5,717
2011	85,153	3	13	725,102	66,122	284,186	71,520	1,146,931	9,292	4,177	13,469
2012	116,267	2	27	155,217	153,069	59,333	74,166	441,785	2,652	1,148	3,800
2013	131,806	1	18	109,190	530,805	34,927	390,688	1,065,609	4,856	3,229	8,085
<b>MA Total:</b>	<b>471,409</b>	<b>8</b>	<b>91</b>	<b>1,325,816</b>	<b>942,267</b>	<b>444,244</b>	<b>697,549</b>	<b>3,409,876</b>	<b>4,811</b>	<b>2,422</b>	<b>7,233</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.454	3.763	.
(14) Massachusetts Credibility:	0.370	0.520	.
(15) Countrywide Pure Premium:	4.599	2.697	7.297
(16) Countrywide Indicated Relativity:	4.696	4.755	.
(17) Countrywide Credibility:	0.320	0.240	.
(18) Countrywide Lost-Time Claims:	642.00	.	.
(19) Pure Premium Underlying Present Rate:	4.890	2.586	7.477
(20) Relativity to Underlying Present Rate:	5.511	4.309	.
(21) Credibility to Underlying Relativity:	0.310	0.240	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	4.859	4.132	.
(24) Balanced Formula Relativity:	4.792	4.104	4.535

Class(es): 1624 QUARRY NOC & DRIVERS		Effective: 7/1/2016							Miscellaneous		
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	350,441	3	56	673,376	229,439	227,953	237,862	1,368,631	2,576	1,329	3,905
2010	386,463	1	49	156,683	861,027	22,236	580,556	1,620,503	2,633	1,560	4,193
2011	377,962	2	44	384,961	841,664	124,082	747,320	2,098,026	3,245	2,306	5,551
2012	457,936	1	48	209,257	337,259	60,177	297,517	904,210	1,193	0,781	1,975
2013	460,264	4	52	667,699	623,478	367,079	775,273	2,433,529	2,805	2,482	5,287
<b>MA Total:</b>	<b>2,033,067</b>	<b>11</b>	<b>249</b>	<b>2,091,975</b>	<b>2,892,867</b>	<b>801,528</b>	<b>2,638,529</b>	<b>8,424,899</b>	<b>2,452</b>	<b>1,692</b>	<b>4,144</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.869	1.083	.
(14) Massachusetts Credibility:	0.510	0.690	.
(15) Countrywide Pure Premium:	2.222	1.113	3.335
(16) Countrywide Indicated Relativity:	0.861	0.786	.
(17) Countrywide Credibility:	0.250	0.160	.
(18) Countrywide Lost-Time Claims:	1088.0	.	.
(19) Pure Premium Underlying Present Rate:	2.504	1.234	3.739
(20) Relativity to Underlying Present Rate:	1.074	0.891	.
(21) Credibility to Underlying Relativity:	0.240	0.150	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.916	1.007	.
(24) Balanced Formula Relativity:	0.905	1.004	0.940

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	470	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	1,871	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	3,182	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	2,731	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	3,333	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>11,586</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	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:	1.273	0.577	1.850
(16) Countrywide Indicated Relativity:	0.493	0.408	.
(17) Countrywide Credibility:	0.220	0.230	.
(18) Countrywide Lost-Time Claims:	26.000	.	.
(19) Pure Premium Underlying Present Rate:	2.245	1.573	3.817
(20) Relativity to Underlying Present Rate:	0.963	1.135	.
(21) Credibility to Underlying Relativity:	0.720	0.670	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.802	0.854	.
(24) Balanced Formula Relativity:	0.792	0.852	0.813

Class(es):		Effective: 7/1/2016							Manufacturing		
1701 CEMENT 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)
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	5,465	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	8,470	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	8,530	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	10,053	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>32,518</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.090	0.120	.
(15) Countrywide Pure Premium:	1.751	0.892	2.643
(16) Countrywide Indicated Relativity:	1.788	1.572	.
(17) Countrywide Credibility:	0.460	0.440	.
(18) Countrywide Lost-Time Claims:	486.00	.	.
(19) Pure Premium Underlying Present Rate:	1.849	0.901	2.750
(20) Relativity to Underlying Present Rate:	2.083	1.501	.
(21) Credibility to Underlying Relativity:	0.450	0.440	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.760	1.352	.
(24) Balanced Formula Relativity:	1.736	1.343	1.589



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## Calculation of Class Relativities

Class(es): 1747 EMERY WORKS & DRIVERS		Effective: 7/1/2016							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)
2009	34,407	0	2	0	0	0	571	571	0.000	0.017	0.017
2010	46,682	0	9	0	50,378	0	90,518	140,896	1.079	1.939	3.018
2011	47,154	1	13	83,502	25,070	14,365	11,805	134,742	2.302	0.555	2.857
2012	45,855	1	10	113,080	198,694	42,806	37,567	392,148	6.799	1.753	8.552
2013	18,821	0	4	0	22,894	0	15,391	38,285	1.216	0.818	2.034
<b>MA Total:</b>	<b>192,920</b>	<b>2</b>	<b>38</b>	<b>196,582</b>	<b>297,037</b>	<b>57,171</b>	<b>155,852</b>	<b>706,641</b>	<b>2.559</b>	<b>1.104</b>	<b>3.663</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.369	1.715	.
(14) Massachusetts Credibility:	0.150	0.230	.
(15) Countrywide Pure Premium:	1.384	0.553	1.936
(16) Countrywide Indicated Relativity:	1.413	0.975	.
(17) Countrywide Credibility:	0.300	0.320	.
(18) Countrywide Lost-Time Claims:	59.000	.	.
(19) Pure Premium Underlying Present Rate:	1.276	0.813	2.089
(20) Relativity to Underlying Present Rate:	1.438	1.355	.
(21) Credibility to Underlying Relativity:	0.550	0.450	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.570	1.316	.
(24) Balanced Formula Relativity:	1.548	1.307	1.458

Class(es): 1748 ABRASIVE WHEEL MFG & DRIVERS		Effective: 7/1/2016							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)
2009	28,696	0	4	0	5,908	0	18,210	24,118	0.206	0.635	0.840
2010	48,515	0	12	0	0	0	5,971	5,971	0.000	0.123	0.123
2011	53,374	0	14	0	23,459	0	16,750	40,209	0.440	0.314	0.753
2012	44,500	0	14	0	1,984	0	10,725	12,709	0.045	0.241	0.286
2013	39,087	0	14	0	32,800	0	76,649	109,449	0.839	1.961	2.800
<b>MA Total:</b>	<b>214,172</b>	<b>0</b>	<b>58</b>	<b>0</b>	<b>64,152</b>	<b>0</b>	<b>128,305</b>	<b>192,457</b>	<b>0.300</b>	<b>0.599</b>	<b>0.899</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.277	0.931	.
(14) Massachusetts Credibility:	0.160	0.260	.
(15) Countrywide Pure Premium:	1.980	1.603	3.584
(16) Countrywide Indicated Relativity:	2.022	2.827	.
(17) Countrywide Credibility:	0.320	0.340	.
(18) Countrywide Lost-Time Claims:	68.000	.	.
(19) Pure Premium Underlying Present Rate:	1.366	0.984	2.350
(20) Relativity to Underlying Present Rate:	1.540	1.639	.
(21) Credibility to Underlying Relativity:	0.520	0.400	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.492	1.859	.
(24) Balanced Formula Relativity:	1.472	1.846	1.611

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Manufacturing		
1852 ASBESTOS 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)
2009	2	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	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:	0.893	0.877	1.769
(16) Countrywide Indicated Relativity:	0.911	1.545	.
(17) Countrywide Credibility:	0.160	0.170	.
(18) Countrywide Lost-Time Claims:	12.000	.	.
(19) Pure Premium Underlying Present Rate:	3.670	1.154	4.825
(20) Relativity to Underlying Present Rate:	4.136	1.923	.
(21) Credibility to Underlying Relativity:	0.840	0.830	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	3.620	1.859	.
(24) Balanced Formula Relativity:	3.570	1.846	2.927

Class(es):		Effective: 7/1/2016							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)
2009	1.535	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	1.691	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	1.796	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	1.555	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	1.525	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>8.101</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.040	0.040	.
(15) Countrywide Pure Premium:	1.492	0.583	2.075
(16) Countrywide Indicated Relativity:	1.523	1.028	.
(17) Countrywide Credibility:	0.120	0.130	.
(18) Countrywide Lost-Time Claims:	6.000	.	.
(19) Pure Premium Underlying Present Rate:	0.806	0.323	1.129
(20) Relativity to Underlying Present Rate:	0.909	0.539	.
(21) Credibility to Underlying Relativity:	0.840	0.830	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.946	0.581	.
(24) Balanced Formula Relativity:	0.933	0.577	0.800

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Manufacturing		
1860 ABRASIVE PAPER OR CLOTH PREPARATION											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	1,258	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	1,948	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	1,782	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	1,672	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	1,840	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>8,500</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	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:	0.978	0.482	1.460
(16) Countrywide Indicated Relativity:	0.998	0.850	.
(17) Countrywide Credibility:	0.320	0.340	.
(18) Countrywide Lost-Time Claims:	69.000	.	.
(19) Pure Premium Underlying Present Rate:	1.007	0.612	1.619
(20) Relativity to Underlying Present Rate:	1.135	1.020	.
(21) Credibility to Underlying Relativity:	0.640	0.600	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.046	0.901	.
(24) Balanced Formula Relativity:	1.031	0.895	0.980

Class(es):		Effective: 7/1/2016							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)
2009	131,852	0	16	0	58,961	0	35,077	94,038	0.447	0.266	0.713
2010	143,894	0	21	0	37,822	0	47,631	85,453	0.263	0.331	0.594
2011	137,113	0	24	0	134,649	0	57,986	192,636	0.982	0.423	1.405
2012	166,423	1	40	50,505	248,488	8,863	209,688	517,543	1.797	1.313	3.110
2013	167,366	1	16	60,662	236,652	19,312	90,538	407,165	1.776	0.656	2.433
<b>MA Total:</b>	<b>746,648</b>	<b>2</b>	<b>117</b>	<b>111,167</b>	<b>716,573</b>	<b>28,175</b>	<b>440,920</b>	<b>1,296,835</b>	<b>1.109</b>	<b>0.628</b>	<b>1.737</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.026	0.976	.
(14) Massachusetts Credibility:	0.220	0.330	.
(15) Countrywide Pure Premium:	1.034	0.562	1.596
(16) Countrywide Indicated Relativity:	1.056	0.990	.
(17) Countrywide Credibility:	0.390	0.340	.
(18) Countrywide Lost-Time Claims:	468.00	.	.
(19) Pure Premium Underlying Present Rate:	0.873	0.539	1.412
(20) Relativity to Underlying Present Rate:	0.984	0.898	.
(21) Credibility to Underlying Relativity:	0.390	0.330	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.021	0.955	.
(24) Balanced Formula Relativity:	1.007	0.949	0.985

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## Calculation of Class Relativities

Class(es): 1925 DIE CASTING MFG		Effective: 7/1/2016							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)
2009	3,205	0	2	0	0	0	849	849	0.000	0.265	0.265
2010	3,604	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	4,035	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	3,274	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	5,017	0	2	0	83,582	0	685,331	768,913	16.660	136.60	153.26
<b>MA Total:</b>	<b>19,135</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>83,582</b>	<b>0</b>	<b>686,180</b>	<b>769,762</b>	<b>4.368</b>	<b>35.859</b>	<b>40.227</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.043	55.708	.
(14) Massachusetts Credibility:	0.060	0.100	.
(15) Countrywide Pure Premium:	1.368	1.014	2.382
(16) Countrywide Indicated Relativity:	1.396	1.789	.
(17) Countrywide Credibility:	0.470	0.450	.
(18) Countrywide Lost-Time Claims:	453.00	.	.
(19) Pure Premium Underlying Present Rate:	1.385	0.966	2.351
(20) Relativity to Underlying Present Rate:	1.560	1.610	.
(21) Credibility to Underlying Relativity:	0.470	0.450	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.632	7.100	.
(24) Balanced Formula Relativity:	1.610	7.052	3.642

Class(es): 2001 CRACKER MFG		Effective: 7/1/2016							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)
2009	1,696,471	8	383	334,401	1,964,307	185,594	1,512,658	3,996,959	1.355	1.001	2.356
2010	1,878,371	14	403	1,228,438	3,656,539	441,709	2,279,827	7,606,514	2.601	1.449	4.050
2011	1,811,632	6	394	511,824	2,021,466	420,412	1,270,256	4,223,957	1.398	0.933	2.332
2012	1,935,389	15	423	1,403,136	3,398,280	822,625	1,596,656	7,220,696	2.481	1.250	3.731
2013	1,815,048	18	300	1,280,862	1,348,401	536,497	917,012	4,082,772	1.449	0.801	2.249
<b>MA Total:</b>	<b>9,136,910</b>	<b>61</b>	<b>1,903</b>	<b>4,758,661</b>	<b>12,388,993</b>	<b>2,406,836</b>	<b>7,576,408</b>	<b>27,130,898</b>	<b>1.877</b>	<b>1.093</b>	<b>2.969</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.737	1.697	.
(14) Massachusetts Credibility:	0.760	1.000	.
(15) Countrywide Pure Premium:	2.069	1.066	3.134
(16) Countrywide Indicated Relativity:	2.112	1.879	.
(17) Countrywide Credibility:	0.120	0.000	.
(18) Countrywide Lost-Time Claims:	6517.0	.	.
(19) Pure Premium Underlying Present Rate:	1.487	1.174	2.661
(20) Relativity to Underlying Present Rate:	1.676	1.956	.
(21) Credibility to Underlying Relativity:	0.120	0.000	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.775	1.697	.
(24) Balanced Formula Relativity:	1.750	1.686	1.726

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## Calculation of Class Relativities

Class(es): 2002 MACARONI MFG		Effective: 7/1/2016							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)
2009	9,395	0	2	0	0	0	282	282	0.000	0.030	0.030
2010	17,674	1	0	38,116	0	12,395	0	50,511	2.157	0.701	2.858
2011	6,425	0	7	0	11,243	0	3,854	15,097	1.750	0.600	2.350
2012	11,246	0	2	0	1,721	0	3,003	4,724	0.153	0.267	0.420
2013	97,185	1	5	83,193	4,359	32,035	35,260	154,847	0.901	0.692	1.593
<b>MA Total:</b>	<b>141,925</b>	<b>2</b>	<b>16</b>	<b>121,309</b>	<b>17,323</b>	<b>44,430</b>	<b>42,399</b>	<b>225,462</b>	<b>0.977</b>	<b>0.612</b>	<b>1.589</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.904	0.950	.
(14) Massachusetts Credibility:	0.140	0.230	.
(15) Countrywide Pure Premium:	0.876	0.776	1.652
(16) Countrywide Indicated Relativity:	0.895	1.369	.
(17) Countrywide Credibility:	0.430	0.390	.
(18) Countrywide Lost-Time Claims:	137.00	.	.
(19) Pure Premium Underlying Present Rate:	1.357	1.141	2.498
(20) Relativity to Underlying Present Rate:	1.529	1.900	.
(21) Credibility to Underlying Relativity:	0.430	0.380	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.169	1.474	.
(24) Balanced Formula Relativity:	1.153	1.464	1.269

Class(es): 2014 GRAIN MILLING		Effective: 7/1/2016							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)
2009	3,417	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	22,499	0	1	0	10,561	0	31,338	41,899	0.469	1.393	1.862
2011	25,666	0	1	0	0	0	1,157	1,157	0.000	0.045	0.045
2012	24,857	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	21,420	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>97,859</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>10,561</b>	<b>0</b>	<b>32,495</b>	<b>43,057</b>	<b>0.108</b>	<b>0.332</b>	<b>0.440</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.100	0.516	.
(14) Massachusetts Credibility:	0.130	0.190	.
(15) Countrywide Pure Premium:	2.303	1.224	3.527
(16) Countrywide Indicated Relativity:	2.352	2.158	.
(17) Countrywide Credibility:	0.440	0.410	.
(18) Countrywide Lost-Time Claims:	1147.0	.	.
(19) Pure Premium Underlying Present Rate:	1.593	1.089	2.682
(20) Relativity to Underlying Present Rate:	1.796	1.815	.
(21) Credibility to Underlying Relativity:	0.430	0.400	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.820	1.709	.
(24) Balanced Formula Relativity:	1.795	1.697	1.758

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	1,721	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	2,037	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	1,438	0	1	0	0	0	1,351	1,351	0.000	0.939	0.939
2012	1,289	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	1,788	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>8,273</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,351</b>	<b>1,351</b>	<b>0.000</b>	<b>0.163</b>	<b>0.163</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.254	.
(14) Massachusetts Credibility:	0.050	0.070	.
(15) Countrywide Pure Premium:	1.350	0.798	2.149
(16) Countrywide Indicated Relativity:	1.379	1.407	.
(17) Countrywide Credibility:	0.480	0.470	.
(18) Countrywide Lost-Time Claims:	263.00	.	.
(19) Pure Premium Underlying Present Rate:	1.473	0.908	2.381
(20) Relativity to Underlying Present Rate:	1.660	1.513	.
(21) Credibility to Underlying Relativity:	0.470	0.460	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.442	1.375	.
(24) Balanced Formula Relativity:	1.422	1.366	1.401

Class(es):		Effective: 7/1/2016							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)
2009	30,340	0	5	0	16,942	0	44,793	61,735	0.558	1.476	2.035
2010	134,013	0	7	0	109,110	0	97,670	206,781	0.814	0.729	1.543
2011	22,929	0	4	0	0	0	555	555	0.000	0.024	0.024
2012	128,989	1	15	438,973	333,407	376,697	138,112	1,287,189	5.988	3.991	9.979
2013	144,801	1	18	732,807	35,268	104,182	27,467	899,725	5.304	0.909	6.214
<b>MA Total:</b>	<b>461,073</b>	<b>2</b>	<b>49</b>	<b>1,171,780</b>	<b>494,728</b>	<b>480,879</b>	<b>308,597</b>	<b>2,455,984</b>	<b>3.614</b>	<b>1.712</b>	<b>5.327</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.346	2.660	.
(14) Massachusetts Credibility:	0.200	0.290	.
(15) Countrywide Pure Premium:	1.281	0.599	1.879
(16) Countrywide Indicated Relativity:	1.308	1.056	.
(17) Countrywide Credibility:	0.400	0.360	.
(18) Countrywide Lost-Time Claims:	439.00	.	.
(19) Pure Premium Underlying Present Rate:	1.056	0.614	1.670
(20) Relativity to Underlying Present Rate:	1.190	1.023	.
(21) Credibility to Underlying Relativity:	0.400	0.350	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.668	1.509	.
(24) Balanced Formula Relativity:	1.645	1.499	1.591

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## Calculation of Class Relativities

Class(es): 2041 CONFECTION MFG		Effective: 7/1/2016							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)
2009	204.539	1	30	56.115	74.676	3.051	33.692	167.533	0.639	0.180	0.819
2010	183.154	2	11	69.708	197.119	49.509	61.250	377.587	1.457	0.605	2.062
2011	189.619	0	24	0	284.484	0	133.301	417.785	1.500	0.703	2.203
2012	205.026	1	25	15.606	680.926	2.551	358.597	1,057.680	3.397	1.761	5.159
2013	204.813	0	16	0	394.744	0	205.213	599.957	1.927	1.002	2.929
<b>MA Total:</b>	<b>987.151</b>	<b>4</b>	<b>106</b>	<b>141.430</b>	<b>1,631.949</b>	<b>55.111</b>	<b>792.052</b>	<b>2,620.542</b>	<b>1.796</b>	<b>0.858</b>	<b>2.655</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.663	1.333	.
(14) Massachusetts Credibility:	0.280	0.410	.
(15) Countrywide Pure Premium:	1.297	0.768	2.065
(16) Countrywide Indicated Relativity:	1.324	1.354	.
(17) Countrywide Credibility:	0.360	0.300	.
(18) Countrywide Lost-Time Claims:	984.00	.	.
(19) Pure Premium Underlying Present Rate:	1.139	0.701	1.840
(20) Relativity to Underlying Present Rate:	1.284	1.168	.
(21) Credibility to Underlying Relativity:	0.360	0.290	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.405	1.292	.
(24) Balanced Formula Relativity:	1.385	1.283	1.347

Class(es): 2070 CREAMERY OR DAIRY & ROUTE SUPERVISORS, DRIVERS		Effective: 7/1/2016							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)
2009	137.227	0	13	0	2.229	0	10.230	12.459	0.016	0.075	0.091
2010	306.023	3	45	161.587	528.842	34.571	213.888	938.889	2.256	0.812	3.068
2011	269.575	2	40	53.214	577.558	515.548	247.603	1,393.923	2.340	2.831	5.171
2012	288.812	0	26	0	521.352	0	234.775	756.127	1.805	0.813	2.618
2013	293.456	3	35	181.106	659.370	76.232	264.983	1,181.691	2.864	1.163	4.027
<b>MA Total:</b>	<b>1,295.094</b>	<b>8</b>	<b>159</b>	<b>395.907</b>	<b>2,289.351</b>	<b>626.351</b>	<b>971.479</b>	<b>4,283.088</b>	<b>2.073</b>	<b>1.234</b>	<b>3.307</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.919	1.917	.
(14) Massachusetts Credibility:	0.380	0.560	.
(15) Countrywide Pure Premium:	2.416	1.162	3.577
(16) Countrywide Indicated Relativity:	2.466	2.048	.
(17) Countrywide Credibility:	0.310	0.220	.
(18) Countrywide Lost-Time Claims:	2679.0	.	.
(19) Pure Premium Underlying Present Rate:	1.878	1.182	3.059
(20) Relativity to Underlying Present Rate:	2.116	1.969	.
(21) Credibility to Underlying Relativity:	0.310	0.220	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.150	1.957	.
(24) Balanced Formula Relativity:	2.120	1.944	2.054

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## Calculation of Class Relativities

Class(es): 2081 BUTCHERING		Effective: 7/1/2016							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)
2009	12,462	0	9	0	76,935	0	39,583	116,518	6,174	3,176	9,350
2010	12,385	0	17	0	182,602	0	165,871	348,473	14,744	13,393	28,137
2011	18,553	0	25	0	18,612	0	46,843	65,455	1,003	2,525	3,528
2012	16,408	0	9	0	50,069	0	32,991	83,060	3,052	2,011	5,062
2013	16,802	0	20	0	2,519	0	13,865	16,384	0,150	0,825	0,975
<b>MA Total:</b>	<b>76,609</b>	<b>0</b>	<b>80</b>	<b>0</b>	<b>330,737</b>	<b>0</b>	<b>299,153</b>	<b>629,890</b>	<b>4,317</b>	<b>3,905</b>	<b>8,222</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.997	6.066	.
(14) Massachusetts Credibility:	0.110	0.190	.
(15) Countrywide Pure Premium:	1.454	1.040	2.494
(16) Countrywide Indicated Relativity:	1.485	1.834	.
(17) Countrywide Credibility:	0.450	0.410	.
(18) Countrywide Lost-Time Claims:	876.00	.	.
(19) Pure Premium Underlying Present Rate:	1.326	1.278	2.604
(20) Relativity to Underlying Present Rate:	1.495	2.129	.
(21) Credibility to Underlying Relativity:	0.440	0.400	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.766	2.756	.
(24) Balanced Formula Relativity:	1.741	2.737	2.113

Class(es): 2089 PACKING HOUSE- ALL OPERATIONS		Effective: 7/1/2016							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)
2009	874,039	2	201	28,641	670,597	2,852	664,830	1,366,921	0,800	0,764	1,564
2010	946,798	8	261	605,021	1,014,390	333,289	609,296	2,561,995	1,710	0,996	2,706
2011	1,020,525	9	213	563,405	1,842,993	119,048	1,053,102	3,578,548	2,358	1,149	3,507
2012	1,115,710	14	208	1,098,030	1,284,737	507,511	647,915	3,538,193	2,136	1,036	3,171
2013	1,285,931	9	199	979,222	2,020,095	348,938	818,672	4,166,926	2,332	0,908	3,240
<b>MA Total:</b>	<b>5,243,002</b>	<b>42</b>	<b>1,082</b>	<b>3,274,319</b>	<b>6,832,812</b>	<b>1,311,637</b>	<b>3,793,816</b>	<b>15,212,583</b>	<b>1,928</b>	<b>0,974</b>	<b>2,902</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.785	1.513	.
(14) Massachusetts Credibility:	0.540	0.790	.
(15) Countrywide Pure Premium:	1.356	0.750	2.107
(16) Countrywide Indicated Relativity:	1.385	1.323	.
(17) Countrywide Credibility:	0.230	0.110	.
(18) Countrywide Lost-Time Claims:	9837.0	.	.
(19) Pure Premium Underlying Present Rate:	1.123	0.673	1.796
(20) Relativity to Underlying Present Rate:	1.265	1.122	.
(21) Credibility to Underlying Relativity:	0.230	0.100	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.573	1.453	.
(24) Balanced Formula Relativity:	1.551	1.443	1.511



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	373,462	9	75	639,325	267,532	140,479	240,316	1,287,652	2,428	1,020	3,448
2010	428,986	4	72	390,459	533,580	98,435	401,834	1,424,308	2,154	1,166	3,320
2011	385,043	7	77	565,534	437,632	127,514	242,917	1,373,597	2,605	0,962	3,567
2012	392,719	2	85	180,814	614,389	48,046	412,880	1,256,129	2,025	1,174	3,199
2013	401,475	1	67	72,905	393,324	23,535	271,325	761,088	1,161	0,734	1,896
<b>MA Total:</b>	<b>1,981,686</b>	<b>23</b>	<b>376</b>	<b>1,849,037</b>	<b>2,246,457</b>	<b>438,009</b>	<b>1,569,271</b>	<b>6,102,773</b>	<b>2,067</b>	<b>1,013</b>	<b>3,080</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.913	1.574	.
(14) Massachusetts Credibility:	0.440	0.640	.
(15) Countrywide Pure Premium:	1.589	0.956	2.545
(16) Countrywide Indicated Relativity:	1.622	1.686	.
(17) Countrywide Credibility:	0.280	0.180	.
(18) Countrywide Lost-Time Claims:	2555.0	.	.
(19) Pure Premium Underlying Present Rate:	1.720	1.058	2.778
(20) Relativity to Underlying Present Rate:	1.939	1.762	.
(21) Credibility to Underlying Relativity:	0.280	0.180	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.839	1.628	.
(24) Balanced Formula Relativity:	1.814	1.617	1.740

Class(es):		Effective: 7/1/2016							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)
2009	7,224	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	5,691	0	1	0	0	0	309	309	0.000	0.054	0.054
2011	8,487	0	2	0	0	0	1,493	1,493	0.000	0.176	0.176
2012	21,307	0	4	0	8,645	0	4,166	12,811	0.406	0.196	0.601
2013	9,992	0	1	0	0	0	2,471	2,471	0.000	0.247	0.247
<b>MA Total:</b>	<b>52,701</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>8,645</b>	<b>0</b>	<b>8,439</b>	<b>17,083</b>	<b>0.164</b>	<b>0.160</b>	<b>0.324</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.152	0.249	.
(14) Massachusetts Credibility:	0.080	0.120	.
(15) Countrywide Pure Premium:	1.238	0.690	1.928
(16) Countrywide Indicated Relativity:	1.264	1.216	.
(17) Countrywide Credibility:	0.460	0.440	.
(18) Countrywide Lost-Time Claims:	910.00	.	.
(19) Pure Premium Underlying Present Rate:	1.045	0.662	1.707
(20) Relativity to Underlying Present Rate:	1.178	1.103	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.135	1.050	.
(24) Balanced Formula Relativity:	1.120	1.043	1.091

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Manufacturing		
2115 SEAFOOD PRODUCTS MFG-NOG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	242,312	2	47	329,702	206,703	91,790	197,710	825,906	2,214	1,195	3,408
2010	200,799	1	45	297,046	88,583	448,742	174,135	1,008,507	1,920	3,102	5,022
2011	224,850	1	54	16,384	1,136,828	22,034	361,772	1,537,018	5,129	1,707	6,836
2012	208,009	1	52	92,751	534,184	10,736	245,385	883,056	3,014	1,231	4,245
2013	128,207	0	23	0	303,731	0	160,952	464,683	2,369	1,255	3,624
<b>MA Total:</b>	<b>1,004,177</b>	<b>5</b>	<b>221</b>	<b>735,884</b>	<b>2,270,029</b>	<b>573,301</b>	<b>1,139,954</b>	<b>4,719,169</b>	<b>2,993</b>	<b>1,706</b>	<b>4,700</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.771	2.650	.
(14) Massachusetts Credibility:	0.320	0.520	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.685	2.011	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	1.517	1.226	2.744
(20) Relativity to Underlying Present Rate:	1.710	2.043	.
(21) Credibility to Underlying Relativity:	0.680	0.480	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.050	2.359	.
(24) Balanced Formula Relativity:	2.021	2.343	2.141

Class(es):		Effective: 7/1/2016							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)
2009	55,503	0	6	0	83,491	0	59,501	142,991	1,504	1,072	2,576
2010	55,816	0	10	0	20,407	0	53,599	74,007	0,366	0,960	1,326
2011	73,032	0	4	0	948	0	4,099	5,047	0,013	0,056	0,069
2012	81,670	0	7	0	4,600	0	37,187	41,787	0,056	0,455	0,512
2013	77,253	0	15	0	8,949	0	31,801	40,749	0,116	0,412	0,527
<b>MA Total:</b>	<b>343,274</b>	<b>0</b>	<b>42</b>	<b>0</b>	<b>118,394</b>	<b>0</b>	<b>186,188</b>	<b>304,582</b>	<b>0,345</b>	<b>0,542</b>	<b>0,887</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.319	0.843	.
(14) Massachusetts Credibility:	0.150	0.230	.
(15) Countrywide Pure Premium:	0.711	0.413	1.125
(16) Countrywide Indicated Relativity:	0.726	0.729	.
(17) Countrywide Credibility:	0.430	0.390	.
(18) Countrywide Lost-Time Claims:	549.00	.	.
(19) Pure Premium Underlying Present Rate:	0.698	0.495	1.193
(20) Relativity to Underlying Present Rate:	0.786	0.825	.
(21) Credibility to Underlying Relativity:	0.420	0.380	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.690	0.792	.
(24) Balanced Formula Relativity:	0.681	0.786	0.720

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## Calculation of Class Relativities

Class(es): 2130 SPIRITUOUS LIQUOR DISTILLERY		Effective: 7/1/2016							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)
2009	3.125	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	3.447	0	1	0	0	0	890	890	0.000	0.258	0.258
2011	1.836	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	1.748	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	1.148	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>11,305</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>890</b>	<b>890</b>	<b>0.000</b>	<b>0.079</b>	<b>0.079</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.122	.
(14) Massachusetts Credibility:	0.040	0.060	.
(15) Countrywide Pure Premium:	0.888	0.503	1.390
(16) Countrywide Indicated Relativity:	0.906	0.887	.
(17) Countrywide Credibility:	0.480	0.470	.
(18) Countrywide Lost-Time Claims:	249.00	.	.
(19) Pure Premium Underlying Present Rate:	1.013	0.602	1.615
(20) Relativity to Underlying Present Rate:	1.141	1.003	.
(21) Credibility to Underlying Relativity:	0.480	0.470	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.983	0.895	.
(24) Balanced Formula Relativity:	0.969	0.889	0.939

Class(es): 2131 SPIRITUOUS LIQUOR BOTTLING		Effective: 7/1/2016							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)
2009	38.613	0	4	0	5.945	0	5.548	11.493	0.154	0.144	0.298
2010	40.210	0	13	0	0	0	8,905	8,905	0.000	0.221	0.221
2011	43.388	0	8	0	18.295	0	65,288	83,583	0.422	1.505	1.926
2012	49.249	0	10	0	6,430	0	8,860	15,290	0.131	0.180	0.310
2013	51.849	0	14	0	276,535	0	137,766	414,301	5.333	2.657	7.991
<b>MA Total:</b>	<b>223,308</b>	<b>0</b>	<b>49</b>	<b>0</b>	<b>307,205</b>	<b>0</b>	<b>226,367</b>	<b>533,572</b>	<b>1.376</b>	<b>1.014</b>	<b>2.389</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.274	1.575	.
(14) Massachusetts Credibility:	0.140	0.220	.
(15) Countrywide Pure Premium:	1.279	0.619	1.898
(16) Countrywide Indicated Relativity:	1.306	1.091	.
(17) Countrywide Credibility:	0.430	0.390	.
(18) Countrywide Lost-Time Claims:	174.00	.	.
(19) Pure Premium Underlying Present Rate:	0.954	0.622	1.576
(20) Relativity to Underlying Present Rate:	1.075	1.036	.
(21) Credibility to Underlying Relativity:	0.430	0.390	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.202	1.176	.
(24) Balanced Formula Relativity:	1.185	1.168	1.179

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## Calculation of Class Relativities

Class(es): 2143 FRUIT JUICE MFG		Effective: 7/1/2016							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)
2009	58,958	0	7	0	0	0	5,134	5,134	0.000	0.087	0.087
2010	106,004	0	4	0	18,469	0	4,567	23,036	0.174	0.043	0.217
2011	62,032	0	3	0	0	0	1,326	1,326	0.000	0.021	0.021
2012	61,502	0	6	0	0	0	4,901	4,901	0.000	0.080	0.080
2013	42,366	0	15	0	20,423	0	20,274	40,697	0.482	0.479	0.961
<b>MA Total:</b>	<b>330,863</b>	<b>0</b>	<b>35</b>	<b>0</b>	<b>38,892</b>	<b>0</b>	<b>36,203</b>	<b>75,094</b>	<b>0.118</b>	<b>0.109</b>	<b>0.227</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.109	0.170	.
(14) Massachusetts Credibility:	0.170	0.270	.
(15) Countrywide Pure Premium:	1.003	0.843	1.846
(16) Countrywide Indicated Relativity:	1.024	1.486	.
(17) Countrywide Credibility:	0.420	0.370	.
(18) Countrywide Lost-Time Claims:	167.00	.	.
(19) Pure Premium Underlying Present Rate:	0.955	0.703	1.659
(20) Relativity to Underlying Present Rate:	1.077	1.172	.
(21) Credibility to Underlying Relativity:	0.410	0.360	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.890	1.018	.
(24) Balanced Formula Relativity:	0.878	1.011	0.927

Class(es): 2150 ICE MFG		Effective: 7/1/2016							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)
2009	9,318	0	1	0	5,758	0	19,002	24,760	0.618	2.039	2.657
2010	6,021	0	3	0	0	0	2,064	2,064	0.000	0.343	0.343
2011	9,732	0	1	0	0	0	504	504	0.000	0.052	0.052
2012	8,181	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	7,624	0	2	0	1,070	0	8,814	9,884	0.140	1.156	1.296
<b>MA Total:</b>	<b>40,876</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>6,828</b>	<b>0</b>	<b>30,385</b>	<b>37,213</b>	<b>0.167</b>	<b>0.743</b>	<b>0.910</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.155	1.155	.
(14) Massachusetts Credibility:	0.110	0.170	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	2.803	2.876	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.525	1.754	4.278
(20) Relativity to Underlying Present Rate:	2.845	2.922	.
(21) Credibility to Underlying Relativity:	0.890	0.830	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.549	2.621	.
(24) Balanced Formula Relativity:	2.514	2.604	2.547

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## Calculation of Class Relativities

Class(es): 2156 BOTTLING-NOT CARBONATED LIQUIDS OR SPIRIT LIQRS & RTE SUP,DR									Effective: 7/1/2016 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)
2009	63,573	0	11	0	94,405	0	153,192	247,598	1,485	2,410	3,895
2010	70,852	1	12	4,016	76,282	30,182	31,108	141,589	1,133	0,865	1,998
2011	89,699	0	19	0	7,112	0	24,441	31,553	0,079	0,272	0,352
2012	89,562	0	9	0	2,828	0	9,339	12,167	0,032	0,104	0,136
2013	64,810	1	12	76,020	270,573	18,867	271,440	636,900	5,348	4,479	9,827
<b>MA Total:</b>	<b>378,497</b>	<b>2</b>	<b>63</b>	<b>80,036</b>	<b>451,201</b>	<b>49,049</b>	<b>489,520</b>	<b>1,069,806</b>	<b>1,404</b>	<b>1,423</b>	<b>2,826</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.299	2.211	.
(14) Massachusetts Credibility:	0.280	0.390	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	3.418	2.711	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	3.079	1.653	4.732
(20) Relativity to Underlying Present Rate:	3.470	2.754	.
(21) Credibility to Underlying Relativity:	0.720	0.610	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.862	2.542	.
(24) Balanced Formula Relativity:	2.823	2.525	2.711

Class(es): 2157 BOTTLING NOC & ROUTE SUPERVISORS, DRIVERS									Effective: 7/1/2016 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)
2009	278,436	1	89	26,323	99,528	6,229	128,377	260,457	0,452	0,483	0,935
2010	291,287	2	129	104,494	396,260	72,829	453,862	1,027,444	1,719	1,808	3,527
2011	286,026	1	110	173,959	272,115	23,876	275,097	745,048	1,560	1,045	2,605
2012	292,921	1	104	19,113	876,332	3,755	360,691	1,259,891	3,057	1,244	4,301
2013	294,509	2	102	280,487	257,379	63,436	173,605	774,908	1,826	0,805	2,631
<b>MA Total:</b>	<b>1,443,180</b>	<b>7</b>	<b>534</b>	<b>604,376</b>	<b>1,901,614</b>	<b>170,126</b>	<b>1,391,632</b>	<b>4,067,748</b>	<b>1,736</b>	<b>1,082</b>	<b>2,819</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.607	1.681	.
(14) Massachusetts Credibility:	0.430	0.620	.
(15) Countrywide Pure Premium:	2.586	1.132	3.718
(16) Countrywide Indicated Relativity:	2.640	1.995	.
(17) Countrywide Credibility:	0.290	0.190	.
(18) Countrywide Lost-Time Claims:	6414.0	.	.
(19) Pure Premium Underlying Present Rate:	2.260	1.342	3.602
(20) Relativity to Underlying Present Rate:	2.547	2.236	.
(21) Credibility to Underlying Relativity:	0.280	0.190	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.170	1.846	.
(24) Balanced Formula Relativity:	2.140	1.834	2.026

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## Calculation of Class Relativities

Class(es): 2172 CIGARETTE MFG		Effective: 7/1/2016							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)
2009	262	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	172	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	172	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	52	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>658</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.020	0.020	.
(15) Countrywide Pure Premium:	1.282	0.391	1.673
(16) Countrywide Indicated Relativity:	1.309	0.689	.
(17) Countrywide Credibility:	0.490	0.490	.
(18) Countrywide Lost-Time Claims:	259.00	.	.
(19) Pure Premium Underlying Present Rate:	1.253	0.521	1.774
(20) Relativity to Underlying Present Rate:	1.412	0.869	.
(21) Credibility to Underlying Relativity:	0.490	0.490	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.333	0.763	.
(24) Balanced Formula Relativity:	1.315	0.758	1.107

Class(es): 2174 TOBACCO REHANDLING OR WAREHOUSING		Effective: 7/1/2016							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)
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	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:	1.631	1.082	2.713
(16) Countrywide Indicated Relativity:	1.665	1.908	.
(17) Countrywide Credibility:	0.350	0.370	.
(18) Countrywide Lost-Time Claims:	83.000	.	.
(19) Pure Premium Underlying Present Rate:	1.636	0.833	2.469
(20) Relativity to Underlying Present Rate:	1.844	1.388	.
(21) Credibility to Underlying Relativity:	0.650	0.630	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.781	1.580	.
(24) Balanced Formula Relativity:	1.757	1.569	1.687

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Manufacturing		
2211 COTTON BATTING,WADDING OR WASTE 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)
2009	55	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	1,416	0	2	0	0	0	1,464	1,464	0.000	1,034	1,034
2012	1,123	0	3	0	2,670	0	4,337	7,007	2,377	3,862	6,239
2013	551	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>3,145</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>2,670</b>	<b>0</b>	<b>5,801</b>	<b>8,470</b>	<b>0.849</b>	<b>1.845</b>	<b>2.693</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.786	2.865	.
(14) Massachusetts Credibility:	0.040	0.060	.
(15) Countrywide Pure Premium:	5,681	2,095	7,775
(16) Countrywide Indicated Relativity:	5.800	3.693	.
(17) Countrywide Credibility:	0.300	0.320	.
(18) Countrywide Lost-Time Claims:	56,000	.	.
(19) Pure Premium Underlying Present Rate:	2.507	2.030	4.537
(20) Relativity to Underlying Present Rate:	2.825	3.382	.
(21) Credibility to Underlying Relativity:	0.660	0.620	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	3.636	3.450	.
(24) Balanced Formula Relativity:	3.586	3.427	3.526

Class(es):		Effective: 7/1/2016							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)
2009	79,627	1	13	83,823	14,584	44,746	28,247	171,400	1,236	0,917	2,153
2010	85,174	0	31	0	71,267	0	65,625	136,892	0,837	0,770	1,607
2011	87,372	0	27	0	211,269	0	163,030	374,299	2,418	1,866	4,284
2012	87,440	0	35	0	129,080	0	122,647	251,727	1,476	1,403	2,879
2013	85,873	1	28	74,899	328,146	30,527	90,594	524,166	4,693	1,410	6,104
<b>MA Total:</b>	<b>425,487</b>	<b>2</b>	<b>134</b>	<b>158,722</b>	<b>754,346</b>	<b>75,274</b>	<b>470,143</b>	<b>1,458,485</b>	<b>2,146</b>	<b>1,282</b>	<b>3,428</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.987	1.991	.
(14) Massachusetts Credibility:	0.200	0.330	.
(15) Countrywide Pure Premium:	1,029	0,617	1,646
(16) Countrywide Indicated Relativity:	1.051	1.087	.
(17) Countrywide Credibility:	0.400	0.340	.
(18) Countrywide Lost-Time Claims:	832.00	.	.
(19) Pure Premium Underlying Present Rate:	1.184	0.908	2.091
(20) Relativity to Underlying Present Rate:	1.334	1.512	.
(21) Credibility to Underlying Relativity:	0.400	0.330	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.351	1.526	.
(24) Balanced Formula Relativity:	1.332	1.515	1.401

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## Calculation of Class Relativities

Class(es): 2260 WOOL COMBING OR SCOURING		Effective: 7/1/2016							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)
2009	1,312	0	2	0	61,463	0	34,842	96,306	46,843	26,554	73,397
2010	2,290	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	544	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	550	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	405	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>5,101</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>61,463</b>	<b>0</b>	<b>34,842</b>	<b>96,306</b>	<b>12,050</b>	<b>6,831</b>	<b>18,882</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	11.155	10.612	.
(14) Massachusetts Credibility:	0.050	0.070	.
(15) Countrywide Pure Premium:	1.790	0.966	2.756
(16) Countrywide Indicated Relativity:	1.827	1.703	.
(17) Countrywide Credibility:	0.140	0.140	.
(18) Countrywide Lost-Time Claims:	8.000	.	.
(19) Pure Premium Underlying Present Rate:	3.253	1.582	4.835
(20) Relativity to Underlying Present Rate:	3.666	2.636	.
(21) Credibility to Underlying Relativity:	0.810	0.790	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	3.783	3.064	.
(24) Balanced Formula Relativity:	3.731	3.043	3.474

Class(es): 2288 FELTING MFG		Effective: 7/1/2016							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)
2009	72,874	0	11	0	92,892	0	56,405	149,297	1,275	0,774	2,049
2010	94,887	1	8	74,704	3,044	77,022	10,694	165,463	0,819	0,924	1,744
2011	107,534	0	18	0	154,913	0	79,924	234,838	1,441	0,743	2,184
2012	120,026	0	20	0	41,601	0	43,787	85,387	0,347	0,365	0,711
2013	128,095	0	26	0	159,288	0	79,104	238,393	1,244	0,618	1,861
<b>MA Total:</b>	<b>523,417</b>	<b>1</b>	<b>83</b>	<b>74,704</b>	<b>451,738</b>	<b>77,022</b>	<b>269,915</b>	<b>873,379</b>	<b>1,006</b>	<b>0,663</b>	<b>1,669</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.931	1.030	.
(14) Massachusetts Credibility:	0.220	0.330	.
(15) Countrywide Pure Premium:	2.468	1.475	3.943
(16) Countrywide Indicated Relativity:	2.519	2.601	.
(17) Countrywide Credibility:	0.390	0.340	.
(18) Countrywide Lost-Time Claims:	186.00	.	.
(19) Pure Premium Underlying Present Rate:	1.181	0.743	1.924
(20) Relativity to Underlying Present Rate:	1.331	1.237	.
(21) Credibility to Underlying Relativity:	0.390	0.330	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.706	1.633	.
(24) Balanced Formula Relativity:	1.683	1.621	1.660



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Manufacturing		
2305 TEXTILE FIBER MFG-SYNTHETIC											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	47,206	0	6	0	398,297	0	119,115	517,412	8,437	2,523	10,961
2010	52,381	1	8	111,173	74,503	18,111	43,559	247,346	3,545	1,177	4,722
2011	41,146	0	5	0	31,866	0	16,693	48,559	0,774	0,406	1,180
2012	33,800	1	5	142,102	107,981	153,295	89,837	493,215	7,399	7,193	14,592
2013	13,319	1	2	111,750	43,548	22,327	3,916	181,541	11,660	1,970	13,631
<b>MA Total:</b>	<b>187,852</b>	<b>3</b>	<b>26</b>	<b>365,025</b>	<b>656,195</b>	<b>193,732</b>	<b>273,121</b>	<b>1,488,073</b>	<b>5,436</b>	<b>2,485</b>	<b>7,922</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.033	3.861	.
(14) Massachusetts Credibility:	0.150	0.210	.
(15) Countrywide Pure Premium:	1.191	0.624	1.815
(16) Countrywide Indicated Relativity:	1.216	1.101	.
(17) Countrywide Credibility:	0.430	0.400	.
(18) Countrywide Lost-Time Claims:	738.00	.	.
(19) Pure Premium Underlying Present Rate:	1.286	0.684	1.970
(20) Relativity to Underlying Present Rate:	1.450	1.139	.
(21) Credibility to Underlying Relativity:	0.420	0.390	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.887	1.695	.
(24) Balanced Formula Relativity:	1.860	1.684	1.794

Class(es):		Effective: 7/1/2016							Manufacturing		
2362 KNIT 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)
2009	11,685	0	2	0	4,687	0	9,118	13,806	0,401	0,780	1,182
2010	12,969	0	1	0	0	0	859	859	0,000	0,066	0,066
2011	13,842	0	8	0	8,671	0	17,880	26,551	0,626	1,292	1,918
2012	12,978	0	1	0	0	0	448	448	0,000	0,034	0,034
2013	14,482	0	1	0	0	0	402	402	0,000	0,028	0,028
<b>MA Total:</b>	<b>65,956</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>13,359</b>	<b>0</b>	<b>28,707</b>	<b>42,065</b>	<b>0,203</b>	<b>0,435</b>	<b>0,638</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.187	0.676	.
(14) Massachusetts Credibility:	0.080	0.130	.
(15) Countrywide Pure Premium:	0.669	0.412	1.081
(16) Countrywide Indicated Relativity:	0.683	0.727	.
(17) Countrywide Credibility:	0.450	0.440	.
(18) Countrywide Lost-Time Claims:	153.00	.	.
(19) Pure Premium Underlying Present Rate:	0.846	0.622	1.468
(20) Relativity to Underlying Present Rate:	0.953	1.037	.
(21) Credibility to Underlying Relativity:	0.470	0.430	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.770	0.853	.
(24) Balanced Formula Relativity:	0.760	0.848	0.793

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## Calculation of Class Relativities

Class(es): 2380 WEBBING MFG		Effective: 7/1/2016							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)
2009	64.172	0	7	0	10.783	0	16.112	26.895	0.168	0.251	0.419
2010	67.071	0	8	0	1.695	0	9.864	11.559	0.025	0.147	0.172
2011	72.496	1	13	72.198	1.335	15.379	14.121	103.032	1.014	0.407	1.421
2012	67.197	0	7	0	9.505	0	12.095	21.600	0.141	0.180	0.321
2013	67.407	1	10	259.534	195.437	98.086	82.305	635.362	6.750	2.676	9.426
<b>MA Total:</b>	<b>338.343</b>	<b>2</b>	<b>45</b>	<b>331.731</b>	<b>218.754</b>	<b>113.465</b>	<b>134.496</b>	<b>798.447</b>	<b>1.627</b>	<b>0.733</b>	<b>2.360</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.506	1.139	.
(14) Massachusetts Credibility:	0.170	0.270	.
(15) Countrywide Pure Premium:	1.165	0.809	1.974
(16) Countrywide Indicated Relativity:	1.190	1.426	.
(17) Countrywide Credibility:	0.420	0.370	.
(18) Countrywide Lost-Time Claims:	187.00	.	.
(19) Pure Premium Underlying Present Rate:	0.979	0.714	1.693
(20) Relativity to Underlying Present Rate:	1.103	1.190	.
(21) Credibility to Underlying Relativity:	0.410	0.360	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.208	1.263	.
(24) Balanced Formula Relativity:	1.191	1.255	1.215

Class(es): 2402 CARPET OR RUG MFG NOC		Effective: 7/1/2016							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)
2009	2.322	0	1	0	1.076	0	1.696	2.772	0.463	0.731	1.194
2010	2.512	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	5.165	0	1	0	0	0	474	474	0.000	0.092	0.092
2012	8.903	0	3	0	191	0	2.472	2.663	0.021	0.278	0.299
2013	9.491	0	2	0	0	0	343	343	0.000	0.036	0.036
<b>MA Total:</b>	<b>28.393</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>1.267</b>	<b>0</b>	<b>4.986</b>	<b>6.252</b>	<b>0.045</b>	<b>0.176</b>	<b>0.220</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.041	0.273	.
(14) Massachusetts Credibility:	0.070	0.100	.
(15) Countrywide Pure Premium:	1.153	0.758	1.911
(16) Countrywide Indicated Relativity:	1.177	1.337	.
(17) Countrywide Credibility:	0.470	0.450	.
(18) Countrywide Lost-Time Claims:	324.00	.	.
(19) Pure Premium Underlying Present Rate:	1.045	0.629	1.674
(20) Relativity to Underlying Present Rate:	1.178	1.048	.
(21) Credibility to Underlying Relativity:	0.460	0.450	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.098	1.100	.
(24) Balanced Formula Relativity:	1.083	1.093	1.087

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	255.758	3	69	51.002	431.411	19.436	406.430	908.280	1.886	1.665	3.551
2010	289.853	5	89	634.961	734.761	360.352	594.143	2,324.218	4.726	3.293	8.019
2011	278.543	0	58	0	491.397	0	231.364	722.760	1.764	0.831	2.595
2012	229.018	1	56	98.902	508.283	44.649	215.037	866.871	2.651	1.134	3.785
2013	278.355	0	39	0	502.236	0	158.745	660.981	1.804	0.570	2.375
<b>MA Total:</b>	<b>1,331,528</b>	<b>9</b>	<b>311</b>	<b>784.865</b>	<b>2,668,088</b>	<b>424.437</b>	<b>1,605,719</b>	<b>5,483,109</b>	<b>2.593</b>	<b>1.525</b>	<b>4.118</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.401	2.369	.
(14) Massachusetts Credibility:	0.350	0.510	.
(15) Countrywide Pure Premium:	1.084	0.740	1.824
(16) Countrywide Indicated Relativity:	1.107	1.305	.
(17) Countrywide Credibility:	0.330	0.250	.
(18) Countrywide Lost-Time Claims:	296.00	.	.
(19) Pure Premium Underlying Present Rate:	1.501	0.883	2.384
(20) Relativity to Underlying Present Rate:	1.692	1.471	.
(21) Credibility to Underlying Relativity:	0.320	0.240	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.747	1.887	.
(24) Balanced Formula Relativity:	1.723	1.874	1.779

Class(es):		Effective: 7/1/2016							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)
2009	13.894	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	19.694	0	3	0	0	0	1.780	1.780	0.000	0.090	0.090
2011	18.839	0	3	0	0	0	2.270	2.270	0.000	0.120	0.120
2012	14.636	0	3	0	23.255	0	6.286	29.541	1.589	0.429	2.018
2013	16.577	1	4	122.336	170.494	32.763	39.152	364.744	17.665	4.338	22.003
<b>MA Total:</b>	<b>83.638</b>	<b>1</b>	<b>13</b>	<b>122.336</b>	<b>193.748</b>	<b>32.763</b>	<b>49.488</b>	<b>398.335</b>	<b>3.779</b>	<b>0.983</b>	<b>4.763</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.498	1.528	.
(14) Massachusetts Credibility:	0.100	0.160	.
(15) Countrywide Pure Premium:	0.837	0.516	1.353
(16) Countrywide Indicated Relativity:	0.855	0.910	.
(17) Countrywide Credibility:	0.270	0.290	.
(18) Countrywide Lost-Time Claims:	45.000	.	.
(19) Pure Premium Underlying Present Rate:	1.088	0.743	1.831
(20) Relativity to Underlying Present Rate:	1.226	1.238	.
(21) Credibility to Underlying Relativity:	0.630	0.550	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.353	1.189	.
(24) Balanced Formula Relativity:	1.334	1.181	1.277

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## Calculation of Class Relativities

Class(es): 2417 CLOTH PRINTING		Effective: 7/1/2016							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)
2009	70,291	1	16	417,834	134,408	42,329	51,254	645,825	7,857	1,331	9,188
2010	74,045	2	13	170,820	223,325	21,003	162,114	577,263	5,323	2,473	7,796
2011	63,184	2	12	283,186	12,910	80,973	23,179	400,248	4,686	1,648	6,335
2012	52,651	0	9	0	124,110	0	25,316	149,427	2,357	0,481	2,838
2013	54,585	0	0	0	0	0	0	0	0,000	0,000	0,000
<b>MA Total:</b>	<b>314,756</b>	<b>5</b>	<b>50</b>	<b>871,841</b>	<b>494,754</b>	<b>144,305</b>	<b>261,864</b>	<b>1,772,763</b>	<b>4,342</b>	<b>1,290</b>	<b>5,632</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.019	2.005	.
(14) Massachusetts Credibility:	0.210	0.290	.
(15) Countrywide Pure Premium:	0.640	0.438	1.078
(16) Countrywide Indicated Relativity:	0.654	0.772	.
(17) Countrywide Credibility:	0.250	0.260	.
(18) Countrywide Lost-Time Claims:	36,000	.	.
(19) Pure Premium Underlying Present Rate:	1.699	0.897	2,596
(20) Relativity to Underlying Present Rate:	1.914	1.495	.
(21) Credibility to Underlying Relativity:	0.540	0.450	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.041	1.455	.
(24) Balanced Formula Relativity:	2.013	1.445	1.801

Class(es): 2501 CLOTHING MFG		Effective: 7/1/2016							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)
2009	907,272	5	139	487,465	696,236	368,848	414,547	1,967,096	1,305	0,863	2,168
2010	993,941	4	185	289,658	663,589	215,715	537,297	1,706,259	0,959	0,758	1,717
2011	928,736	4	132	276,654	556,644	83,263	339,234	1,255,795	0,897	0,455	1,352
2012	920,097	4	117	123,122	892,732	118,021	612,411	1,746,286	1,104	0,794	1,898
2013	887,861	4	104	160,962	477,828	88,391	338,556	1,065,736	0,719	0,481	1,200
<b>MA Total:</b>	<b>4,637,906</b>	<b>21</b>	<b>677</b>	<b>1,337,861</b>	<b>3,287,028</b>	<b>874,238</b>	<b>2,242,046</b>	<b>7,741,172</b>	<b>0,997</b>	<b>0,672</b>	<b>1,669</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.923	1.044	.
(14) Massachusetts Credibility:	0.480	0.710	.
(15) Countrywide Pure Premium:	1.162	0.706	1.868
(16) Countrywide Indicated Relativity:	1.186	1.245	.
(17) Countrywide Credibility:	0.260	0.150	.
(18) Countrywide Lost-Time Claims:	2636.0	.	.
(19) Pure Premium Underlying Present Rate:	0.916	0.582	1,498
(20) Relativity to Underlying Present Rate:	1.032	0.969	.
(21) Credibility to Underlying Relativity:	0.260	0.140	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.020	1.064	.
(24) Balanced Formula Relativity:	1.006	1.056	1.025

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Manufacturing		
2503 DRESSMAKING OR TAILORING-CUSTOM EXCLUSIVELY											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	41,521	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	49,211	0	4	0	105	0	1,182	1,287	0.002	0.024	0.026
2011	50,963	0	5	0	22,316	0	13,022	35,337	0.438	0.256	0.693
2012	50,284	0	2	0	6,285	0	24,608	30,893	0.125	0.489	0.614
2013	52,284	1	3	97,021	19,957	28,561	2,571	148,109	2.237	0.595	2.833
<b>MA Total:</b>	<b>244,263</b>	<b>1</b>	<b>14</b>	<b>97,021</b>	<b>48,662</b>	<b>28,561</b>	<b>41,382</b>	<b>215,627</b>	<b>0.596</b>	<b>0.286</b>	<b>0.883</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.552	0.445	.
(14) Massachusetts Credibility:	0.110	0.180	.
(15) Countrywide Pure Premium:	0.657	0.347	1.004
(16) Countrywide Indicated Relativity:	0.670	0.612	.
(17) Countrywide Credibility:	0.290	0.310	.
(18) Countrywide Lost-Time Claims:	52,000	.	.
(19) Pure Premium Underlying Present Rate:	0.450	0.343	0.793
(20) Relativity to Underlying Present Rate:	0.507	0.571	.
(21) Credibility to Underlying Relativity:	0.600	0.510	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.559	0.561	.
(24) Balanced Formula Relativity:	0.552	0.557	0.554

Class(es):		Effective: 7/1/2016							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)
2009	29,551	0	2	0	1,645	0	1,261	2,906	0.056	0.043	0.098
2010	106,152	3	13	552,459	11,555	720,429	26,552	1,310,996	5.313	7.037	12.350
2011	110,957	3	19	293,100	278,272	138,828	126,572	836,772	5.150	2.392	7.541
2012	115,813	4	31	837,230	254,882	301,037	149,345	1,542,495	9.430	3.889	13.319
2013	29,228	0	8	0	60,711	0	20,000	80,711	2.077	0.684	2.761
<b>MA Total:</b>	<b>391,701</b>	<b>10</b>	<b>73</b>	<b>1,682,789</b>	<b>607,066</b>	<b>1,160,295</b>	<b>323,729</b>	<b>3,773,879</b>	<b>5.846</b>	<b>3.789</b>	<b>9.635</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.412	5.886	.
(14) Massachusetts Credibility:	0.250	0.370	.
(15) Countrywide Pure Premium:	1.937	0.985	2.922
(16) Countrywide Indicated Relativity:	1.977	1.737	.
(17) Countrywide Credibility:	0.380	0.320	.
(18) Countrywide Lost-Time Claims:	445,00	.	.
(19) Pure Premium Underlying Present Rate:	2.144	1.384	3.528
(20) Relativity to Underlying Present Rate:	2.417	2.305	.
(21) Credibility to Underlying Relativity:	0.370	0.310	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.998	3.448	.
(24) Balanced Formula Relativity:	2.957	3.425	3.132

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	67.115	0	5	0	6.414	0	32.260	38.674	0.096	0.481	0.576
2010	81.711	1	10	16.553	19.734	691	22.136	59.114	0.444	0.279	0.723
2011	84.578	0	11	0	19.964	0	36.856	56.820	0.236	0.436	0.672
2012	91.237	0	8	0	54	0	4.180	4.234	0.001	0.046	0.046
2013	101.255	0	11	0	126.120	0	112.639	238.759	1.246	1.112	2.358
<b>MA Total:</b>	<b>425.897</b>	<b>1</b>	<b>45</b>	<b>16,553</b>	<b>172,286</b>	<b>691</b>	<b>208,072</b>	<b>397,602</b>	<b>0.443</b>	<b>0.490</b>	<b>0.934</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.410	0.761	.
(14) Massachusetts Credibility:	0.200	0.280	.
(15) Countrywide Pure Premium:	0.168	0.373	0.541
(16) Countrywide Indicated Relativity:	0.171	0.658	.
(17) Countrywide Credibility:	0.110	0.120	.
(18) Countrywide Lost-Time Claims:	5.000	.	.
(19) Pure Premium Underlying Present Rate:	1.126	0.616	1.742
(20) Relativity to Underlying Present Rate:	1.269	1.026	.
(21) Credibility to Underlying Relativity:	0.690	0.600	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.976	0.908	.
(24) Balanced Formula Relativity:	0.963	0.902	0.940

Class(es):		Effective: 7/1/2016							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)
2009	697.124	2	147	305.044	524.127	38.723	386.299	1,254.193	1.189	0.610	1.799
2010	533.133	3	120	324.287	646.294	199.624	367.521	1,537.726	1.821	1.064	2.884
2011	603.962	4	117	773.804	557.154	705.520	310.419	2,346.897	2.204	1.682	3.886
2012	591.089	4	83	351.551	956.115	154.076	551.203	2,012.945	2.212	1.193	3.405
2013	667.902	8	72	381.845	340.874	224.632	232.268	1,179.619	1.082	0.684	1.766
<b>MA Total:</b>	<b>3,093,209</b>	<b>21</b>	<b>539</b>	<b>2,136,531</b>	<b>3,024,565</b>	<b>1,322,575</b>	<b>1,847,710</b>	<b>8,331,381</b>	<b>1.669</b>	<b>1.025</b>	<b>2.693</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.545	1.592	.
(14) Massachusetts Credibility:	0.480	0.780	.
(15) Countrywide Pure Premium:	1.902	1.030	2.932
(16) Countrywide Indicated Relativity:	1.942	1.816	.
(17) Countrywide Credibility:	0.260	0.110	.
(18) Countrywide Lost-Time Claims:	3750.0	.	.
(19) Pure Premium Underlying Present Rate:	1.386	1.116	2.502
(20) Relativity to Underlying Present Rate:	1.562	1.859	.
(21) Credibility to Underlying Relativity:	0.260	0.110	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.653	1.646	.
(24) Balanced Formula Relativity:	1.630	1.635	1.632

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## Calculation of Class Relativities

Class(es): 2586 CLEANING OR DYEING & ROUTE SUPERVISORS, DRIVERS									Effective: 7/1/2016			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)			
2009	491,540	2	40	105,362	415,813	25,151	375,755	922,081	1,060	0,816	1,876			
2010	489,462	1	25	2,146	162,965	11,160	72,221	248,491	0,337	0,170	0,508			
2011	505,573	1	43	54,952	292,614	3,200	254,705	605,471	0,687	0,510	1,198			
2012	514,100	3	34	294,610	317,848	101,985	229,309	943,752	1,191	0,644	1,836			
2013	510,755	1	41	12,394	118,701	2,886	107,380	241,361	0,257	0,216	0,473			
<b>MA Total:</b>	<b>2,511,430</b>	<b>8</b>	<b>183</b>	<b>469,464</b>	<b>1,307,940</b>	<b>144,382</b>	<b>1,039,371</b>	<b>2,961,157</b>	<b>0,708</b>	<b>0,471</b>	<b>1,179</b>			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.655	0.732	.
(14) Massachusetts Credibility:	0.350	0.500	.
(15) Countrywide Pure Premium:	1.020	0.602	1.623
(16) Countrywide Indicated Relativity:	1.042	1.062	.
(17) Countrywide Credibility:	0.330	0.250	.
(18) Countrywide Lost-Time Claims:	214.00	.	.
(19) Pure Premium Underlying Present Rate:	0.775	0.446	1.222
(20) Relativity to Underlying Present Rate:	0.874	0.743	.
(21) Credibility to Underlying Relativity:	0.320	0.250	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.853	0.817	.
(24) Balanced Formula Relativity:	0.841	0.812	0.830

Class(es): 2587 TOWEL OR TOILET SUPPLY CO & RTE SUPERVISORS, DR									Effective: 7/1/2016			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)			
2009	31,612	0	4	0	66,577	0	49,896	116,473	2,106	1,578	3,684			
2010	33,208	0	6	0	2,613	0	6,226	8,839	0,079	0,187	0,266			
2011	33,600	1	4	2,101	387,707	8,359	418,859	817,027	11,601	12,715	24,316			
2012	22,983	0	2	0	0	0	4,232	4,232	0,000	0,184	0,184			
2013	27,961	0	1	0	4,314	0	3,014	7,327	0,154	0,108	0,262			
<b>MA Total:</b>	<b>149,364</b>	<b>1</b>	<b>17</b>	<b>2,101</b>	<b>461,211</b>	<b>8,359</b>	<b>482,228</b>	<b>953,899</b>	<b>3,102</b>	<b>3,285</b>	<b>6,386</b>			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.261	5.471	.
(14) Massachusetts Credibility:	0.160	0.250	.
(15) Countrywide Pure Premium:	1.787	0.745	2.533
(16) Countrywide Indicated Relativity:	1.864	1.220	.
(17) Countrywide Credibility:	0.420	0.380	.
(18) Countrywide Lost-Time Claims:	137.00	.	.
(19) Pure Premium Underlying Present Rate:	1.754	1.292	3.046
(20) Relativity to Underlying Present Rate:	2.263	2.399	.
(21) Credibility to Underlying Relativity:	0.420	0.370	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.255	2.719	.
(24) Balanced Formula Relativity:	2.243	2.721	2.428

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## Calculation of Class Relativities

Class(es): 2623 TANNING		Effective: 7/1/2016							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)
2009	1,114	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	891	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	132	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	2,086	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	1,896	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>6,118</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	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:	3.168	2.409	5.577
(16) Countrywide Indicated Relativity:	3.234	4.248	.
(17) Countrywide Credibility:	0.320	0.340	.
(18) Countrywide Lost-Time Claims:	68.000	.	.
(19) Pure Premium Underlying Present Rate:	1.974	1.137	3.111
(20) Relativity to Underlying Present Rate:	2.224	1.894	.
(21) Credibility to Underlying Relativity:	0.630	0.590	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.436	2.562	.
(24) Balanced Formula Relativity:	2.403	2.544	2.456

Class(es): 2640 LEATHER EMBOSsing		Effective: 7/1/2016							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)
2009	52,655	0	5	0	3,114	0	11,778	14,892	0.059	0.224	0.283
2010	59,359	1	3	116,263	738	13,338	2,869	133,208	1.971	0.273	2.244
2011	59,515	1	7	245,497	12,569	16,015	23,300	297,380	4.336	0.661	4.997
2012	63,079	0	13	0	1,820	0	18,438	20,258	0.029	0.292	0.321
2013	61,831	0	7	0	0	0	3,423	3,423	0.000	0.055	0.055
<b>MA Total:</b>	<b>296,438</b>	<b>2</b>	<b>35</b>	<b>361,759</b>	<b>18,241</b>	<b>29,353</b>	<b>59,808</b>	<b>469,161</b>	<b>1.282</b>	<b>0.301</b>	<b>1.583</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.187	0.467	.
(14) Massachusetts Credibility:	0.150	0.240	.
(15) Countrywide Pure Premium:	0.642	0.436	1.078
(16) Countrywide Indicated Relativity:	0.655	0.769	.
(17) Countrywide Credibility:	0.360	0.380	.
(18) Countrywide Lost-Time Claims:	89.000	.	.
(19) Pure Premium Underlying Present Rate:	0.828	0.601	1.428
(20) Relativity to Underlying Present Rate:	0.933	1.001	.
(21) Credibility to Underlying Relativity:	0.490	0.380	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.871	0.785	.
(24) Balanced Formula Relativity:	0.859	0.779	0.829



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## Calculation of Class Relativities

Class(es): 2660 BOOT OR SHOE MFG NOC		Effective: 7/1/2016							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)
2009	33,512	0	4	0	0	0	2,194	2,194	0.000	0.065	0.065
2010	38,376	0	7	0	83	0	8,759	8,841	0.002	0.228	0.230
2011	43,694	0	9	0	78,439	0	92,458	170,897	1.795	2,116	3,911
2012	48,173	0	6	0	16,147	0	7,393	23,541	0.335	0.153	0.489
2013	44,048	0	1	0	3,137	0	9,711	12,847	0.071	0.220	0.292
<b>MA Total:</b>	<b>207,803</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>97,805</b>	<b>0</b>	<b>120,515</b>	<b>218,320</b>	<b>0.471</b>	<b>0.580</b>	<b>1.051</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.436	0.901	.
(14) Massachusetts Credibility:	0.130	0.210	.
(15) Countrywide Pure Premium:	0.799	0.621	1.420
(16) Countrywide Indicated Relativity:	0.816	1.094	.
(17) Countrywide Credibility:	0.440	0.400	.
(18) Countrywide Lost-Time Claims:	205.00	.	.
(19) Pure Premium Underlying Present Rate:	0.798	0.612	1.410
(20) Relativity to Underlying Present Rate:	0.899	1.020	.
(21) Credibility to Underlying Relativity:	0.430	0.390	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.802	1.024	.
(24) Balanced Formula Relativity:	0.791	1.018	0.876

Class(es): 2683 LUGGAGE MFG		Effective: 7/1/2016							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)
2009	2,435	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	2,640	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	1,395	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	2,504	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	3,225	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>12,198</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.040	0.070	.
(15) Countrywide Pure Premium:	0.446	0.412	0.858
(16) Countrywide Indicated Relativity:	0.455	0.727	.
(17) Countrywide Credibility:	0.240	0.250	.
(18) Countrywide Lost-Time Claims:	31.000	.	.
(19) Pure Premium Underlying Present Rate:	0.912	0.575	1.487
(20) Relativity to Underlying Present Rate:	1.028	0.958	.
(21) Credibility to Underlying Relativity:	0.720	0.680	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.849	0.833	.
(24) Balanced Formula Relativity:	0.838	0.827	0.834

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## Calculation of Class Relativities

Class(es): 2688 LEATHER GOODS MFG NOC		Effective: 7/1/2016							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)
2009	68.813	1	7	87	12.705	15.364	9.383	37.539	0.186	0.360	0.546
2010	68.532	0	19	0	21.647	0	15.633	37.280	0.316	0.228	0.544
2011	71.166	0	16	0	31.645	0	66.187	97.832	0.445	0.930	1.375
2012	69.119	0	9	0	2.335	0	11.971	14.305	0.034	0.173	0.207
2013	70.432	1	7	63.586	374	25.981	7.804	97.745	0.908	0.480	1.388
<b>MA Total:</b>	<b>348.063</b>	<b>2</b>	<b>58</b>	<b>63.673</b>	<b>68.706</b>	<b>41.345</b>	<b>110.978</b>	<b>284.701</b>	<b>0.380</b>	<b>0.438</b>	<b>0.818</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.352	0.680	.
(14) Massachusetts Credibility:	0.190	0.290	.
(15) Countrywide Pure Premium:	1.483	0.875	2.359
(16) Countrywide Indicated Relativity:	1.515	1.543	.
(17) Countrywide Credibility:	0.380	0.360	.
(18) Countrywide Lost-Time Claims:	103.00	.	.
(19) Pure Premium Underlying Present Rate:	1.190	0.806	1.996
(20) Relativity to Underlying Present Rate:	1.341	1.343	.
(21) Credibility to Underlying Relativity:	0.430	0.350	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.219	1.223	.
(24) Balanced Formula Relativity:	1.202	1.214	1.207

Class(es): 2702 LOGGING OR LUMBERING & DRIVERS		Effective: 7/1/2016							Miscellaneous		
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	24.460	0	6	0	4.970	0	21.214	26.184	0.203	0.867	1.070
2010	24.678	0	6	0	25.602	0	27.396	52.998	1.037	1.110	2.148
2011	28.852	0	7	0	71.790	0	66.970	138.759	2.488	2.321	4.809
2012	28.970	0	6	0	8.553	0	47.034	55.587	0.295	1.624	1.919
2013	30.042	0	8	0	445.614	0	334.442	780.056	14.833	11.132	25.965
<b>MA Total:</b>	<b>137.003</b>	<b>0</b>	<b>33</b>	<b>0</b>	<b>556.529</b>	<b>0</b>	<b>497.056</b>	<b>1,053.584</b>	<b>4.062</b>	<b>3.628</b>	<b>7.690</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.439	2.322	.
(14) Massachusetts Credibility:	0.270	0.360	.
(15) Countrywide Pure Premium:	11.729	6.287	18.016
(16) Countrywide Indicated Relativity:	4.542	4.442	.
(17) Countrywide Credibility:	0.370	0.320	.
(18) Countrywide Lost-Time Claims:	1831.0	.	.
(19) Pure Premium Underlying Present Rate:	7.432	3.709	11.141
(20) Relativity to Underlying Present Rate:	3.187	2.676	.
(21) Credibility to Underlying Relativity:	0.360	0.320	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	3.217	3.114	.
(24) Balanced Formula Relativity:	3.177	3.107	3.152

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## Calculation of Class Relativities

Class(es): 2710 SAWMILLS		Effective: 7/1/2016							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)
2009	18,637	0	4	0	0	0	9,439	9,439	0.000	0.506	0.506
2010	23,215	0	7	0	13,758	0	16,283	30,041	0.593	0.701	1,294
2011	22,568	2	7	134,516	18,573	140,001	18,135	311,225	6.783	7.007	13,791
2012	25,090	0	17	0	31,796	0	47,147	78,943	1.267	1.879	3,146
2013	32,059	0	10	0	12,888	0	21,570	34,458	0.402	0.673	1,075
<b>MA Total:</b>	<b>121,569</b>	<b>2</b>	<b>45</b>	<b>134,516</b>	<b>77,016</b>	<b>140,001</b>	<b>112,574</b>	<b>464,107</b>	<b>1.740</b>	<b>2.078</b>	<b>3.818</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.611	3.228	.
(14) Massachusetts Credibility:	0.180	0.290	.
(15) Countrywide Pure Premium:	3.812	2.622	6.434
(16) Countrywide Indicated Relativity:	3.892	4.622	.
(17) Countrywide Credibility:	0.410	0.360	.
(18) Countrywide Lost-Time Claims:	1828.0	.	.
(19) Pure Premium Underlying Present Rate:	2.921	2.378	5.299
(20) Relativity to Underlying Present Rate:	3.292	3.961	.
(21) Credibility to Underlying Relativity:	0.410	0.350	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	3.236	3.986	.
(24) Balanced Formula Relativity:	3.191	3.959	3.478

Class(es): 2731 PLANING OR MOLDING MILL		Effective: 7/1/2016							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)
2009	35,264	0	13	0	101,237	0	29,202	130,439	2.871	0.828	3,699
2010	35,259	0	11	0	84,246	0	46,735	130,981	2.389	1.326	3,715
2011	32,143	0	8	0	766	0	4,755	5,521	0.024	0.148	0.172
2012	30,486	0	8	0	0	0	5,810	5,810	0.000	0.191	0.191
2013	35,328	0	8	0	0	0	5,618	5,618	0.000	0.159	0.159
<b>MA Total:</b>	<b>168,479</b>	<b>0</b>	<b>48</b>	<b>0</b>	<b>186,248</b>	<b>0</b>	<b>92,121</b>	<b>278,369</b>	<b>1.105</b>	<b>0.547</b>	<b>1.652</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.023	0.849	.
(14) Massachusetts Credibility:	0.160	0.240	.
(15) Countrywide Pure Premium:	1.672	1.223	2.895
(16) Countrywide Indicated Relativity:	1.707	2.156	.
(17) Countrywide Credibility:	0.420	0.380	.
(18) Countrywide Lost-Time Claims:	1087.0	.	.
(19) Pure Premium Underlying Present Rate:	1.760	1.124	2.884
(20) Relativity to Underlying Present Rate:	1.984	1.873	.
(21) Credibility to Underlying Relativity:	0.420	0.380	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.714	1.735	.
(24) Balanced Formula Relativity:	1.690	1.723	1.702

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## Calculation of Class Relativities

Class(es): 2741 COOPERAGE STOCK MFG		Effective: 7/1/2016							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)
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	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:	8.433	5.314	13.747
(16) Countrywide Indicated Relativity:	8.610	9.369	.
(17) Countrywide Credibility:	0.120	0.130	.
(18) Countrywide Lost-Time Claims:	6.000	.	.
(19) Pure Premium Underlying Present Rate:	2.499	1.253	3.752
(20) Relativity to Underlying Present Rate:	2.817	2.087	.
(21) Credibility to Underlying Relativity:	0.880	0.870	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	3.512	3.034	.
(24) Balanced Formula Relativity:	3.463	3.013	3.295

Class(es): 2747 COOPERAGE ASSEMBLY		Effective: 7/1/2016							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)
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	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:	1.599	1.356	2.954
(16) Countrywide Indicated Relativity:	1.632	2.390	.
(17) Countrywide Credibility:	0.220	0.230	.
(18) Countrywide Lost-Time Claims:	25.000	.	.
(19) Pure Premium Underlying Present Rate:	2.793	1.776	4.569
(20) Relativity to Underlying Present Rate:	3.147	2.959	.
(21) Credibility to Underlying Relativity:	0.780	0.770	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.814	2.828	.
(24) Balanced Formula Relativity:	2.775	2.809	2.788

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## Calculation of Class Relativities

Class(es): 2790 PATTERN MAKING NOC		Effective: 7/1/2016							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)
2009	35,583	0	8	0	21,347	0	16,806	38,153	0.600	0.472	1.072
2010	37,133	0	4	0	0	0	1,963	1,963	0.000	0.053	0.053
2011	37,339	0	7	0	789	0	5,224	6,012	0.021	0.140	0.161
2012	37,500	0	8	0	115,943	0	31,606	147,549	3.092	0.843	3.935
2013	35,372	0	4	0	256,585	0	38,614	295,199	7.254	1.092	8.346
<b>MA Total:</b>	<b>182,927</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>394,663</b>	<b>0</b>	<b>94,212</b>	<b>488,876</b>	<b>2.157</b>	<b>0.515</b>	<b>2.673</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.997	0.800	.
(14) Massachusetts Credibility:	0.120	0.180	.
(15) Countrywide Pure Premium:	0.674	0.504	1.179
(16) Countrywide Indicated Relativity:	0.689	0.889	.
(17) Countrywide Credibility:	0.410	0.410	.
(18) Countrywide Lost-Time Claims:	124.00	.	.
(19) Pure Premium Underlying Present Rate:	0.683	0.507	1.189
(20) Relativity to Underlying Present Rate:	0.769	0.844	.
(21) Credibility to Underlying Relativity:	0.470	0.410	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.884	0.855	.
(24) Balanced Formula Relativity:	0.871	0.849	0.863

Class(es): 2802 CARPENTRY-SHOP ONLY & DRIVERS		Effective: 7/1/2016							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)
2009	949,193	5	239	222,648	1,398,804	100,180	1,242,785	2,964,417	1.708	1.415	3.123
2010	976,638	4	197	723,540	1,544,650	330,818	1,384,439	3,983,447	2.322	1.756	4.079
2011	1,001,798	10	198	1,345,577	1,946,275	207,851	1,047,470	4,547,173	3.286	1.253	4.539
2012	1,021,220	14	200	1,225,270	1,641,519	679,597	1,199,686	4,746,072	2.807	1.840	4.647
2013	1,073,803	3	196	105,395	2,158,691	65,040	1,022,310	3,351,437	2.108	1.013	3.121
<b>MA Total:</b>	<b>5,022,652</b>	<b>36</b>	<b>1,030</b>	<b>3,622,430</b>	<b>8,689,939</b>	<b>1,383,486</b>	<b>5,896,690</b>	<b>19,592,545</b>	<b>2.451</b>	<b>1.449</b>	<b>3.901</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.269	2.252	.
(14) Massachusetts Credibility:	0.650	1.000	.
(15) Countrywide Pure Premium:	2.366	1.432	3.798
(16) Countrywide Indicated Relativity:	2.416	2.524	.
(17) Countrywide Credibility:	0.180	0.000	.
(18) Countrywide Lost-Time Claims:	4114.0	.	.
(19) Pure Premium Underlying Present Rate:	1.834	1.321	3.156
(20) Relativity to Underlying Present Rate:	2.067	2.201	.
(21) Credibility to Underlying Relativity:	0.170	0.000	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.261	2.252	.
(24) Balanced Formula Relativity:	2.230	2.236	2.232

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## Calculation of Class Relativities

Class(es): 2835 BRUSH OR BROOM ASSEMBLY		Effective: 7/1/2016							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)
2009	15,683	0	1	0	588	0	847	1,435	0.037	0.054	0.091
2010	19,170	0	2	0	0	0	1,893	1,893	0.000	0.099	0.099
2011	16,315	0	1	0	0	0	352	352	0.000	0.022	0.022
2012	47,825	0	4	0	645	0	5,220	5,864	0.013	0.109	0.123
2013	51,653	0	4	0	22,188	0	36,299	58,486	0.430	0.703	1.132
<b>MA Total:</b>	<b>150,646</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>23,420</b>	<b>0</b>	<b>44,611</b>	<b>68,031</b>	<b>0.155</b>	<b>0.296</b>	<b>0.452</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.144	0.460	.
(14) Massachusetts Credibility:	0.120	0.180	.
(15) Countrywide Pure Premium:	1.268	0.697	1.965
(16) Countrywide Indicated Relativity:	1.295	1.228	.
(17) Countrywide Credibility:	0.340	0.360	.
(18) Countrywide Lost-Time Claims:	78.000	.	.
(19) Pure Premium Underlying Present Rate:	0.843	0.560	1.403
(20) Relativity to Underlying Present Rate:	0.950	0.933	.
(21) Credibility to Underlying Relativity:	0.540	0.460	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.970	0.954	.
(24) Balanced Formula Relativity:	0.957	0.948	0.954

Class(es): 2836 BRUSH OR BROOM MFG NOC		Effective: 7/1/2016							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)
2009	5,774	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	4,913	0	1	0	0	0	257	257	0.000	0.052	0.052
2011	4,826	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	5,100	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	5,613	0	3	0	69	0	1,333	1,403	0.012	0.238	0.250
<b>MA Total:</b>	<b>26,226</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>69</b>	<b>0</b>	<b>1,590</b>	<b>1,660</b>	<b>0.003</b>	<b>0.061</b>	<b>0.063</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.002	0.094	.
(14) Massachusetts Credibility:	0.070	0.090	.
(15) Countrywide Pure Premium:	0.607	0.596	1.203
(16) Countrywide Indicated Relativity:	0.620	1.051	.
(17) Countrywide Credibility:	0.280	0.300	.
(18) Countrywide Lost-Time Claims:	48.000	.	.
(19) Pure Premium Underlying Present Rate:	1.203	0.665	1.868
(20) Relativity to Underlying Present Rate:	1.355	1.108	.
(21) Credibility to Underlying Relativity:	0.650	0.610	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.055	1.000	.
(24) Balanced Formula Relativity:	1.040	0.993	1.023

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## Calculation of Class Relativities

Class(es): 2841 WOODENWARE MFG NOC		Effective: 7/1/2016							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)
2009	25,299	0	6	0	551,585	0	24,846	576,430	21,803	0.982	22,785
2010	31,856	0	2	0	0	0	408	408	0.000	0.013	0.013
2011	45,160	0	5	0	13,681	0	8,995	22,676	0.303	0.199	0.502
2012	37,113	0	6	0	16,899	0	4,333	21,231	0.455	0.117	0.572
2013	44,738	0	12	0	32,028	0	51,610	83,638	0.716	1.154	1.869
<b>MA Total:</b>	<b>184,165</b>	<b>0</b>	<b>31</b>	<b>0</b>	<b>614,193</b>	<b>0</b>	<b>90,191</b>	<b>704,383</b>	<b>3.335</b>	<b>0.490</b>	<b>3.825</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.087	0.761	.
(14) Massachusetts Credibility:	0.180	0.240	.
(15) Countrywide Pure Premium:	1.589	1.166	2.755
(16) Countrywide Indicated Relativity:	1.622	2.055	.
(17) Countrywide Credibility:	0.410	0.380	.
(18) Countrywide Lost-Time Claims:	181.00	.	.
(19) Pure Premium Underlying Present Rate:	1.893	0.936	2.829
(20) Relativity to Underlying Present Rate:	2.133	1.559	.
(21) Credibility to Underlying Relativity:	0.410	0.380	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.096	1.556	.
(24) Balanced Formula Relativity:	2.067	1.546	1.872

Class(es): 2883 FURNITURE MFG-WOOD-NOC		Effective: 7/1/2016							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)
2009	352,120	3	60	338,592	304,657	158,043	200,455	1,001,747	1,827	1.018	2,845
2010	390,632	3	75	201,325	210,819	192,429	165,448	770,020	1.055	0.916	1.971
2011	383,665	6	79	398,469	314,371	124,162	208,992	1,045,995	1.858	0.868	2,726
2012	437,606	5	82	327,313	516,054	88,325	323,171	1,254,863	1.927	0.940	2,868
2013	451,242	1	73	56,441	540,120	12,952	408,574	1,018,087	1.322	0.934	2,256
<b>MA Total:</b>	<b>2,015,264</b>	<b>18</b>	<b>369</b>	<b>1,322,139</b>	<b>1,886,022</b>	<b>575,910</b>	<b>1,306,641</b>	<b>5,090,713</b>	<b>1.592</b>	<b>0.934</b>	<b>2,526</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.474	1.451	.
(14) Massachusetts Credibility:	0.410	0.610	.
(15) Countrywide Pure Premium:	1.697	0.986	2.683
(16) Countrywide Indicated Relativity:	1.733	1.738	.
(17) Countrywide Credibility:	0.300	0.200	.
(18) Countrywide Lost-Time Claims:	4306.0	.	.
(19) Pure Premium Underlying Present Rate:	1.471	0.934	2.405
(20) Relativity to Underlying Present Rate:	1.658	1.556	.
(21) Credibility to Underlying Relativity:	0.290	0.190	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.605	1.528	.
(24) Balanced Formula Relativity:	1.583	1.518	1.558

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## Calculation of Class Relativities

Class(es): 2923 PIANO MFG		Effective: 7/1/2016							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)
2009	54.844	0	4	0	0	0	4.049	4.049	0.000	0.074	0.074
2010	54.755	0	5	0	4.457	0	19.829	24.286	0.081	0.362	0.444
2011	59.563	0	6	0	4.921	0	28.795	33.716	0.083	0.483	0.566
2012	50.048	0	2	0	0	0	2.240	2.240	0.000	0.045	0.045
2013	52.244	0	7	0	59.020	0	6.508	65.527	1.130	0.125	1.254
<b>MA Total:</b>	<b>271.454</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>68.398</b>	<b>0</b>	<b>61.421</b>	<b>129.819</b>	<b>0.252</b>	<b>0.226</b>	<b>0.478</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.233	0.352	.
(14) Massachusetts Credibility:	0.140	0.210	.
(15) Countrywide Pure Premium:	0.917	0.589	1.506
(16) Countrywide Indicated Relativity:	0.936	1.039	.
(17) Countrywide Credibility:	0.390	0.400	.
(18) Countrywide Lost-Time Claims:	111.00	.	.
(19) Pure Premium Underlying Present Rate:	0.717	0.472	1.189
(20) Relativity to Underlying Present Rate:	0.808	0.787	.
(21) Credibility to Underlying Relativity:	0.470	0.390	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.777	0.796	.
(24) Balanced Formula Relativity:	0.767	0.791	0.776

Class(es): 2942 PENCIL, PENHOLDER OR CRAYON MFG		Effective: 7/1/2016							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)
2009	189.577	0	40	0	54.092	0	101.878	155.970	0.285	0.537	0.823
2010	162.113	0	23	0	134.712	0	173.501	308.213	0.831	1.070	1.901
2011	922.472	2	59	348.046	415.527	126.936	423.300	1,313.808	0.828	0.596	1.424
2012	857.108	3	31	730.879	515.487	340.063	228.566	1,814.995	1.454	0.663	2.118
2013	954.212	1	53	36.387	105.958	5.825	286.156	434.327	0.149	0.306	0.455
<b>MA Total:</b>	<b>3,085.482</b>	<b>6</b>	<b>206</b>	<b>1,115.312</b>	<b>1,225.775</b>	<b>472.824</b>	<b>1,213.402</b>	<b>4,027.313</b>	<b>0.759</b>	<b>0.547</b>	<b>1.305</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.702	0.849	.
(14) Massachusetts Credibility:	0.380	0.640	.
(15) Countrywide Pure Premium:	1.010	0.659	1.669
(16) Countrywide Indicated Relativity:	1.031	1.161	.
(17) Countrywide Credibility:	0.310	0.180	.
(18) Countrywide Lost-Time Claims:	413.00	.	.
(19) Pure Premium Underlying Present Rate:	0.789	0.677	1.466
(20) Relativity to Underlying Present Rate:	0.889	1.128	.
(21) Credibility to Underlying Relativity:	0.310	0.180	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.862	0.955	.
(24) Balanced Formula Relativity:	0.850	0.949	0.887



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	103.340	0	13	0	717.769	0	111.479	829.248	6.946	1.079	8.024
2010	103.017	1	16	493.121	223.242	157.429	56.803	930.594	6.954	2.080	9.033
2011	98.762	1	5	434.288	26.960	164.912	9.555	635.715	4.670	1.767	6.437
2012	180.999	1	18	10.884	85.579	59.962	61.262	217.688	0.533	0.670	1.203
2013	206.122	0	19	0	123.622	0	106.665	230.287	0.600	0.517	1.117
<b>MA Total:</b>	<b>692.241</b>	<b>3</b>	<b>71</b>	<b>938,293</b>	<b>1,177,172</b>	<b>382,302</b>	<b>345,766</b>	<b>2,843,533</b>	<b>3.056</b>	<b>1.052</b>	<b>4.108</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.829	1.634	.
(14) Massachusetts Credibility:	0.280	0.390	.
(15) Countrywide Pure Premium:	1.222	0.746	1.968
(16) Countrywide Indicated Relativity:	1.248	1.316	.
(17) Countrywide Credibility:	0.360	0.310	.
(18) Countrywide Lost-Time Claims:	414.00	.	.
(19) Pure Premium Underlying Present Rate:	1.593	0.898	2.491
(20) Relativity to Underlying Present Rate:	1.795	1.496	.
(21) Credibility to Underlying Relativity:	0.360	0.300	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.888	1.494	.
(24) Balanced Formula Relativity:	1.861	1.484	1.720

Class(es):		Effective: 7/1/2016							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)
2009	7.199	0	2	0	1.455	0	1.787	3.241	0.202	0.248	0.450
2010	6.533	0	4	0	10.238	0	8.544	18.782	1.567	1.308	2.875
2011	6.875	0	3	0	0	0	806	806	0.000	0.117	0.117
2012	5.700	0	1	0	0	0	818	818	0.000	0.143	0.143
2013	10.326	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>36.634</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>11,693</b>	<b>0</b>	<b>11,955</b>	<b>23,648</b>	<b>0.319</b>	<b>0.326</b>	<b>0.646</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.295	0.507	.
(14) Massachusetts Credibility:	0.080	0.130	.
(15) Countrywide Pure Premium:	2.163	1.037	3.200
(16) Countrywide Indicated Relativity:	2.209	1.828	.
(17) Countrywide Credibility:	0.460	0.440	.
(18) Countrywide Lost-Time Claims:	464.00	.	.
(19) Pure Premium Underlying Present Rate:	1.486	1.158	2.644
(20) Relativity to Underlying Present Rate:	1.674	1.930	.
(21) Credibility to Underlying Relativity:	0.460	0.430	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.810	1.700	.
(24) Balanced Formula Relativity:	1.785	1.688	1.749

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	8,936	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	9,147	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	12,416	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	8,427	0	1	0	322,473	0	373,611	696,084	38,265	44,333	82,598
2013	7,348	0	1	0	12,931	0	5,119	18,050	1,760	0,697	2,456
<b>MA Total:</b>	<b>46,275</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>335,404</b>	<b>0</b>	<b>378,730</b>	<b>714,133</b>	<b>7,248</b>	<b>8,184</b>	<b>15,432</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	6.710	12.714	.
(14) Massachusetts Credibility:	0.090	0.130	.
(15) Countrywide Pure Premium:	1.710	0.823	2.533
(16) Countrywide Indicated Relativity:	1.746	1.451	.
(17) Countrywide Credibility:	0.460	0.440	.
(18) Countrywide Lost-Time Claims:	390.00	.	.
(19) Pure Premium Underlying Present Rate:	1.344	0.841	2.185
(20) Relativity to Underlying Present Rate:	1.515	1.402	.
(21) Credibility to Underlying Relativity:	0.450	0.430	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.089	2.894	.
(24) Balanced Formula Relativity:	2.060	2.874	2.364

Class(es):		Effective: 7/1/2016							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)
2009	60,630	0	16	0	0	0	13,672	13,672	0.000	0.225	0.225
2010	69,281	0	13	0	0	0	9,391	9,391	0.000	0.136	0.136
2011	73,718	0	20	0	110,599	0	71,348	181,947	1,500	0.968	2,468
2012	5,317	0	3	0	0	0	4,259	4,259	0.000	0.801	0.801
2013	4,653	0	9	0	48,409	0	28,664	77,074	10,403	6,160	16,563
<b>MA Total:</b>	<b>213,600</b>	<b>0</b>	<b>61</b>	<b>0</b>	<b>159,009</b>	<b>0</b>	<b>127,335</b>	<b>286,343</b>	<b>0.744</b>	<b>0.596</b>	<b>1.341</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.689	0.926	.
(14) Massachusetts Credibility:	0.170	0.250	.
(15) Countrywide Pure Premium:	1.448	0.855	2.303
(16) Countrywide Indicated Relativity:	1.478	1.508	.
(17) Countrywide Credibility:	0.420	0.380	.
(18) Countrywide Lost-Time Claims:	866.00	.	.
(19) Pure Premium Underlying Present Rate:	1.410	0.940	2.350
(20) Relativity to Underlying Present Rate:	1.589	1.566	.
(21) Credibility to Underlying Relativity:	0.410	0.370	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.390	1.384	.
(24) Balanced Formula Relativity:	1.370	1.375	1.372

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## Calculation of Class Relativities

Class(es): 3030 IRON OR STEEL: FABRICATION: IRON/STEEL WORK-SHOP-STRUCT & DR									Effective: 7/1/2016 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)
2009	82,872	0	24	0	181,590	0	132,110	313,700	2,191	1,594	3,785
2010	82,199	1	26	17,433	109,101	10,094	122,591	259,218	1,539	1,614	3,154
2011	118,717	1	44	27,955	667,545	18,758	305,895	1,020,153	5,858	2,735	8,593
2012	104,498	0	25	0	25,811	0	86,145	111,956	0,247	0,824	1,071
2013	115,752	0	34	0	787,318	0	247,534	1,034,852	6,802	2,138	8,940
<b>MA Total:</b>	<b>504,038</b>	<b>2</b>	<b>153</b>	<b>45,387</b>	<b>1,771,366</b>	<b>28,852</b>	<b>894,274</b>	<b>2,739,879</b>	<b>3,604</b>	<b>1,831</b>	<b>5,436</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.337	2.845	.
(14) Massachusetts Credibility:	0.310	0.520	.
(15) Countrywide Pure Premium:	2.651	1.449	4.099
(16) Countrywide Indicated Relativity:	2.706	2.554	.
(17) Countrywide Credibility:	0.350	0.240	.
(18) Countrywide Lost-Time Claims:	2324.0	.	.
(19) Pure Premium Underlying Present Rate:	2.874	2.467	5.341
(20) Relativity to Underlying Present Rate:	3.239	4.110	.
(21) Credibility to Underlying Relativity:	0.340	0.240	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	3.083	3.079	.
(24) Balanced Formula Relativity:	3.040	3.058	3.047

Class(es): 3040 IRON OR STEEL: FABRICATION: IRON WORKS-SHOP-ORNAMENTAL & DR									Effective: 7/1/2016 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)
2009	114,800	0	29	0	209,312	0	165,422	374,734	1,823	1,441	3,264
2010	119,973	1	29	98,652	720,586	93,681	248,745	1,161,664	6,828	2,854	9,683
2011	140,105	0	28	0	317,762	0	302,706	620,468	2,268	2,161	4,429
2012	151,401	2	24	316,914	49,261	44,476	54,752	465,404	2,419	0,655	3,074
2013	168,316	1	24	7,827	53,650	12,939	53,132	127,549	0,365	0,393	0,758
<b>MA Total:</b>	<b>694,596</b>	<b>4</b>	<b>134</b>	<b>423,394</b>	<b>1,350,571</b>	<b>151,096</b>	<b>824,758</b>	<b>2,749,819</b>	<b>2,554</b>	<b>1,405</b>	<b>3,959</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.364	2.183	.
(14) Massachusetts Credibility:	0.390	0.560	.
(15) Countrywide Pure Premium:	2.662	1.445	4.107
(16) Countrywide Indicated Relativity:	2.717	2.547	.
(17) Countrywide Credibility:	0.310	0.220	.
(18) Countrywide Lost-Time Claims:	1362.0	.	.
(19) Pure Premium Underlying Present Rate:	3.645	2.136	5.780
(20) Relativity to Underlying Present Rate:	4.108	3.558	.
(21) Credibility to Underlying Relativity:	0.300	0.220	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.997	2.565	.
(24) Balanced Formula Relativity:	2.955	2.548	2.803

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	40,744	0	8	0	253	0	6,838	7,091	0.006	0.168	0.174
2010	42,538	1	16	432,247	21,466	143,522	58,834	656,069	10.666	4.757	15.423
2011	47,557	0	22	0	61,339	0	61,285	122,624	1.290	1.289	2.578
2012	34,678	0	9	0	18,032	0	139,788	157,820	0.520	4.031	4.551
2013	38,530	0	1	0	0	0	1,709	1,709	0.000	0.044	0.044
<b>MA Total:</b>	<b>204,047</b>	<b>1</b>	<b>56</b>	<b>432,247</b>	<b>101,091</b>	<b>143,522</b>	<b>268,454</b>	<b>945,313</b>	<b>2.614</b>	<b>2.019</b>	<b>4.633</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.420	3.137	.
(14) Massachusetts Credibility:	0.190	0.290	.
(15) Countrywide Pure Premium:	2.244	1.305	3.549
(16) Countrywide Indicated Relativity:	2.291	2.301	.
(17) Countrywide Credibility:	0.410	0.360	.
(18) Countrywide Lost-Time Claims:	192.00	.	.
(19) Pure Premium Underlying Present Rate:	2.071	1.420	3.491
(20) Relativity to Underlying Present Rate:	2.334	2.365	.
(21) Credibility to Underlying Relativity:	0.400	0.350	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.333	2.566	.
(24) Balanced Formula Relativity:	2.300	2.548	2.393

Class(es):		Effective: 7/1/2016							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)
2009	8,393	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	8,978	0	6	0	311	0	8,836	9,147	0.035	0.984	1.019
2011	7,230	0	1	0	0	0	819	819	0.000	0.113	0.113
2012	6,818	2	3	299,778	18,380	50,201	6,943	375,302	46.663	8.381	55.044
2013	7,294	0	2	0	3,322	0	45,940	49,262	0.455	6.298	6.754
<b>MA Total:</b>	<b>38,713</b>	<b>2</b>	<b>12</b>	<b>299,778</b>	<b>22,013</b>	<b>50,201</b>	<b>62,538</b>	<b>434,531</b>	<b>8.312</b>	<b>2.912</b>	<b>11.224</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	7.695	4.524	.
(14) Massachusetts Credibility:	0.120	0.150	.
(15) Countrywide Pure Premium:	2.102	1.100	3.202
(16) Countrywide Indicated Relativity:	2.146	1.940	.
(17) Countrywide Credibility:	0.440	0.430	.
(18) Countrywide Lost-Time Claims:	149.00	.	.
(19) Pure Premium Underlying Present Rate:	3.328	1.349	4.678
(20) Relativity to Underlying Present Rate:	3.751	2.248	.
(21) Credibility to Underlying Relativity:	0.440	0.420	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	3.518	2.457	.
(24) Balanced Formula Relativity:	3.470	2.440	3.085

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## Calculation of Class Relativities

Class(es): 3064 SIGN MFG-METAL		Effective: 7/1/2016							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)
2009	822,410	5	150	1,163,791	189,720	521,067	334,702	2,209,280	1,646	1,041	2,686
2010	924,707	2	199	183,306	356,055	500,306	473,983	1,513,651	0,583	1,054	1,637
2011	919,743	2	173	246,042	1,126,740	180,463	820,618	2,373,863	1,493	1,088	2,581
2012	899,054	3	150	103,457	565,581	77,934	420,448	1,167,421	0,744	0,554	1,298
2013	928,599	3	142	397,537	862,981	123,588	762,334	2,146,440	1,357	0,954	2,311
<b>MA Total:</b>	<b>4,494,513</b>	<b>15</b>	<b>814</b>	<b>2,094,134</b>	<b>3,101,077</b>	<b>1,403,359</b>	<b>2,812,085</b>	<b>9,410,655</b>	<b>1,156</b>	<b>0,938</b>	<b>2,094</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.070	1.457	.
(14) Massachusetts Credibility:	0.530	0.800	.
(15) Countrywide Pure Premium:	2.061	1.367	3.428
(16) Countrywide Indicated Relativity:	2.104	2.409	.
(17) Countrywide Credibility:	0.240	0.100	.
(18) Countrywide Lost-Time Claims:	549.00	.	.
(19) Pure Premium Underlying Present Rate:	1.255	0.810	2.065
(20) Relativity to Underlying Present Rate:	1.414	1.350	.
(21) Credibility to Underlying Relativity:	0.230	0.100	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.397	1.542	.
(24) Balanced Formula Relativity:	1.378	1.531	1.435

Class(es): 3076 FIREPROOF EQUIPMENT MFG		Effective: 7/1/2016							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)
2009	310,519	5	92	406,736	40,906	215,898	97,066	760,606	1,442	1,008	2,449
2010	304,240	0	78	0	199,999	0	189,779	389,778	0,657	0,624	1,281
2011	278,490	0	41	0	74,397	0	129,333	203,730	0,267	0,464	0,732
2012	241,648	0	49	0	315,615	0	177,204	492,819	1,306	0,733	2,039
2013	304,646	0	33	0	217,683	0	170,865	388,548	0,715	0,561	1,275
<b>MA Total:</b>	<b>1,439,542</b>	<b>5</b>	<b>293</b>	<b>406,736</b>	<b>848,601</b>	<b>215,898</b>	<b>764,246</b>	<b>2,235,482</b>	<b>0,872</b>	<b>0,681</b>	<b>1,553</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.807	1.058	.
(14) Massachusetts Credibility:	0.310	0.520	.
(15) Countrywide Pure Premium:	1.339	0.842	2.181
(16) Countrywide Indicated Relativity:	1.367	1.485	.
(17) Countrywide Credibility:	0.350	0.240	.
(18) Countrywide Lost-Time Claims:	6245.0	.	.
(19) Pure Premium Underlying Present Rate:	1.042	0.863	1.905
(20) Relativity to Underlying Present Rate:	1.174	1.437	.
(21) Credibility to Underlying Relativity:	0.340	0.240	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.128	1.251	.
(24) Balanced Formula Relativity:	1.112	1.243	1.161

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## Calculation of Class Relativities

Class(es): 3081 FOUNDRY-FERROUS-NOC		Effective: 7/1/2016							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)
2009	86,720	2	20	148,375	33,469	9,241	45,518	236,603	2,097	0,631	2,728
2010	30,630	1	11	43	151,392	514	21,835	173,784	4,944	0,730	5,674
2011	76,997	2	21	36,327	114,873	6,750	155,397	313,347	1,964	2,106	4,070
2012	74,736	1	20	331,429	90,797	45,618	43,438	511,283	5,650	1,192	6,841
2013	16,664	0	4	0	18,765	0	167,930	186,696	1,126	10,077	11,203
<b>MA Total:</b>	<b>285,747</b>	<b>6</b>	<b>76</b>	<b>516,175</b>	<b>409,296</b>	<b>62,122</b>	<b>434,119</b>	<b>1,421,712</b>	<b>3,239</b>	<b>1,737</b>	<b>4,975</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.998	2.698	.
(14) Massachusetts Credibility:	0.230	0.350	.
(15) Countrywide Pure Premium:	1.772	1.208	2.980
(16) Countrywide Indicated Relativity:	1.810	2.129	.
(17) Countrywide Credibility:	0.390	0.330	.
(18) Countrywide Lost-Time Claims:	1229.0	.	.
(19) Pure Premium Underlying Present Rate:	2.403	1.579	3.982
(20) Relativity to Underlying Present Rate:	2.708	2.631	.
(21) Credibility to Underlying Relativity:	0.380	0.320	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.425	2.489	.
(24) Balanced Formula Relativity:	2.391	2.472	2.421

Class(es): 3085 FOUNDRY-NON FERROUS		Effective: 7/1/2016							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)
2009	121,467	1	26	38,535	266,876	8,110	71,976	385,497	2,514	0,659	3,174
2010	145,748	0	38	0	207,896	0	156,791	364,687	1,426	1,076	2,502
2011	126,196	4	23	463,112	187,712	161,206	151,178	963,209	5,157	2,475	7,633
2012	109,479	0	28	0	151,445	0	86,642	238,087	1,383	0,791	2,175
2013	114,230	4	24	739,110	79,968	160,984	51,572	1,031,634	7,170	1,861	9,031
<b>MA Total:</b>	<b>617,121</b>	<b>9</b>	<b>139</b>	<b>1,240,757</b>	<b>893,897</b>	<b>330,300</b>	<b>518,158</b>	<b>2,983,112</b>	<b>3,459</b>	<b>1,375</b>	<b>4,834</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.202	2.136	.
(14) Massachusetts Credibility:	0.280	0.410	.
(15) Countrywide Pure Premium:	1.992	1.183	3.175
(16) Countrywide Indicated Relativity:	2.034	2.086	.
(17) Countrywide Credibility:	0.360	0.300	.
(18) Countrywide Lost-Time Claims:	722.00	.	.
(19) Pure Premium Underlying Present Rate:	1.807	1.136	2.943
(20) Relativity to Underlying Present Rate:	2.036	1.893	.
(21) Credibility to Underlying Relativity:	0.360	0.290	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.362	2.050	.
(24) Balanced Formula Relativity:	2.329	2.036	2.220

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	11,848	0	12	0	51,390	0	49,167	100,557	4,338	4,150	8,488
2010	16,209	0	7	0	4,997	0	1,718	6,715	0,308	0,106	0,414
2011	16,409	0	14	0	416,678	0	151,508	568,186	25,393	9,233	34,626
2012	19,069	1	8	290,215	2,883	304,626	3,667	601,391	15,371	16,167	31,538
2013	14,727	0	11	0	81,167	0	44,582	125,749	5,511	3,027	8,539
<b>MA Total:</b>	<b>78,262</b>	<b>1</b>	<b>52</b>	<b>290,215</b>	<b>557,115</b>	<b>304,626</b>	<b>250,642</b>	<b>1,402,598</b>	<b>10,827</b>	<b>7,095</b>	<b>17,922</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	10.023	11.022	.
(14) Massachusetts Credibility:	0.150	0.230	.
(15) Countrywide Pure Premium:	2.378	1.184	3.562
(16) Countrywide Indicated Relativity:	2.428	2.087	.
(17) Countrywide Credibility:	0.430	0.390	.
(18) Countrywide Lost-Time Claims:	383.00	.	.
(19) Pure Premium Underlying Present Rate:	2.885	2.063	4.948
(20) Relativity to Underlying Present Rate:	3.251	3.436	.
(21) Credibility to Underlying Relativity:	0.420	0.380	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	3.913	4.655	.
(24) Balanced Formula Relativity:	3.859	4.623	4.144

Class(es):		Effective: 7/1/2016							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)
2009	79,361	3	15	246,321	1,333	81,576	84,755	413,987	3,121	2,096	5,217
2010	80,394	1	11	14,270	12,940	12,959	15,902	56,071	0,338	0,359	0,697
2011	95,744	1	14	41,409	568	17,545	12,028	71,550	0,438	0,309	0,747
2012	55,644	0	13	0	1,819	0	10,764	12,582	0,033	0,193	0,226
2013	60,464	0	10	0	1,106	0	6,539	7,645	0,018	0,108	0,126
<b>MA Total:</b>	<b>371,608</b>	<b>5</b>	<b>63</b>	<b>302,000</b>	<b>17,766</b>	<b>112,080</b>	<b>129,988</b>	<b>561,834</b>	<b>0,860</b>	<b>0,651</b>	<b>1,512</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.797	1.012	.
(14) Massachusetts Credibility:	0.180	0.290	.
(15) Countrywide Pure Premium:	0.991	0.667	1.658
(16) Countrywide Indicated Relativity:	1.012	1.176	.
(17) Countrywide Credibility:	0.410	0.360	.
(18) Countrywide Lost-Time Claims:	196.00	.	.
(19) Pure Premium Underlying Present Rate:	1.037	0.799	1.836
(20) Relativity to Underlying Present Rate:	1.169	1.331	.
(21) Credibility to Underlying Relativity:	0.410	0.350	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.037	1.183	.
(24) Balanced Formula Relativity:	1.023	1.175	1.080

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	791.834	2	118	228.559	248.877	23.556	338.126	839.118	0.603	0.457	1.060
2010	864.457	2	125	21.771	512.240	41.448	470.046	1,045.504	0.618	0.592	1.209
2011	729.266	0	104	0	351.854	0	239.246	591.100	0.482	0.328	0.811
2012	838.089	0	115	0	230.860	0	261.148	492.008	0.275	0.312	0.587
2013	794.761	0	82	0	263.211	0	275.002	538.214	0.331	0.346	0.677
<b>MA Total:</b>	<b>4,018.407</b>	<b>4</b>	<b>544</b>	<b>250.329</b>	<b>1,607.043</b>	<b>65.004</b>	<b>1,583.567</b>	<b>3,505.944</b>	<b>0.462</b>	<b>0.410</b>	<b>0.872</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.428	0.637	.
(14) Massachusetts Credibility:	0.430	0.610	.
(15) Countrywide Pure Premium:	0.736	0.453	1.189
(16) Countrywide Indicated Relativity:	0.751	0.799	.
(17) Countrywide Credibility:	0.290	0.200	.
(18) Countrywide Lost-Time Claims:	1541.0	.	.
(19) Pure Premium Underlying Present Rate:	0.840	0.472	1.311
(20) Relativity to Underlying Present Rate:	0.946	0.786	.
(21) Credibility to Underlying Relativity:	0.280	0.190	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.667	0.698	.
(24) Balanced Formula Relativity:	0.658	0.693	0.671

Class(es):		Effective: 7/1/2016							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)
2009	41.570	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	17.274	0	4	0	1.754	0	29.931	31.685	0.102	1.733	1.834
2011	17.254	0	1	0	0	0	323	323	0.000	0.019	0.019
2012	36.462	0	17	0	16.403	0	19.172	35.575	0.450	0.526	0.976
2013	34.544	1	9	6.378	71.520	3.414	68.165	149.476	2.255	2.072	4.327
<b>MA Total:</b>	<b>147.102</b>	<b>1</b>	<b>31</b>	<b>6.378</b>	<b>89.677</b>	<b>3.414</b>	<b>117.591</b>	<b>217.059</b>	<b>0.653</b>	<b>0.823</b>	<b>1.476</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.604	1.278	.
(14) Massachusetts Credibility:	0.130	0.200	.
(15) Countrywide Pure Premium:	1.116	0.779	1.895
(16) Countrywide Indicated Relativity:	1.139	1.373	.
(17) Countrywide Credibility:	0.440	0.400	.
(18) Countrywide Lost-Time Claims:	246.00	.	.
(19) Pure Premium Underlying Present Rate:	1.176	0.745	1.921
(20) Relativity to Underlying Present Rate:	1.325	1.241	.
(21) Credibility to Underlying Relativity:	0.430	0.400	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.150	1.301	.
(24) Balanced Formula Relativity:	1.134	1.292	1.193



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## Calculation of Class Relativities

Class(es): 3118 SAW MFG		Effective: 7/1/2016							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)
2009	226.831	2	23	98.517	92.576	6.624	34.275	231.993	0.842	0.180	1.023
2010	263.639	1	44	9.782	246.445	411	85.716	342.353	0.972	0.327	1.299
2011	319.351	3	32	323.698	310.805	31.149	129.358	795.010	1.987	0.503	2.489
2012	319.398	0	28	0	314.566	0	98.529	413.095	0.985	0.308	1.293
2013	326.043	0	21	0	153.791	0	42.027	195.818	0.472	0.129	0.601
<b>MA Total:</b>	<b>1,455,262</b>	<b>6</b>	<b>148</b>	<b>431,996</b>	<b>1,118,183</b>	<b>38,184</b>	<b>389,905</b>	<b>1,978,268</b>	<b>1.065</b>	<b>0.294</b>	<b>1.359</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.986	0.457	.
(14) Massachusetts Credibility:	0.290	0.410	.
(15) Countrywide Pure Premium:	0.809	0.483	1.292
(16) Countrywide Indicated Relativity:	0.826	0.851	.
(17) Countrywide Credibility:	0.360	0.300	.
(18) Countrywide Lost-Time Claims:	128.00	.	.
(19) Pure Premium Underlying Present Rate:	0.840	0.472	1.311
(20) Relativity to Underlying Present Rate:	0.946	0.786	.
(21) Credibility to Underlying Relativity:	0.350	0.290	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.915	0.671	.
(24) Balanced Formula Relativity:	0.902	0.666	0.814

Class(es): 3119 NEEDLE MFG		Effective: 7/1/2016							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)
2009	73.155	0	7	0	6.873	0	24.493	31.366	0.094	0.335	0.429
2010	69.196	0	8	0	6.603	0	7.991	14.594	0.095	0.115	0.211
2011	59.995	0	7	0	5.321	0	43.591	48.911	0.089	0.727	0.815
2012	69.362	0	5	0	0	0	2.389	2.389	0.000	0.034	0.034
2013	77.087	0	3	0	0	0	4.335	4.335	0.000	0.056	0.056
<b>MA Total:</b>	<b>348,796</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>18,796</b>	<b>0</b>	<b>82,799</b>	<b>101,595</b>	<b>0.054</b>	<b>0.237</b>	<b>0.291</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.050	0.369	.
(14) Massachusetts Credibility:	0.120	0.190	.
(15) Countrywide Pure Premium:	0.495	0.285	0.780
(16) Countrywide Indicated Relativity:	0.506	0.502	.
(17) Countrywide Credibility:	0.200	0.210	.
(18) Countrywide Lost-Time Claims:	20.000	.	.
(19) Pure Premium Underlying Present Rate:	0.359	0.297	0.656
(20) Relativity to Underlying Present Rate:	0.404	0.495	.
(21) Credibility to Underlying Relativity:	0.680	0.600	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.382	0.473	.
(24) Balanced Formula Relativity:	0.377	0.469	0.411

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## Calculation of Class Relativities

Class(es): 3120 RAZOR MFG-SAFETY		Effective: 7/1/2016							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)
2009	9.536	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	29.223	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	10.289	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	1.689	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	7.679	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>58,417</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.080	0.100	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.938	0.594	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.845	0.362	1.207
(20) Relativity to Underlying Present Rate:	0.952	0.604	.
(21) Credibility to Underlying Relativity:	0.920	0.900	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.876	0.543	.
(24) Balanced Formula Relativity:	0.864	0.540	0.743

Class(es): 3122 CUTLERY MFG-NOC		Effective: 7/1/2016							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)
2009	62.904	0	3	0	141	0	1,940	2,081	0.002	0.031	0.033
2010	69.036	1	15	8,894	16,359	5,845	35,546	66,644	0.366	0.600	0.965
2011	104.035	0	31	0	79,885	0	34,092	113,977	0.768	0.328	1.096
2012	101.101	0	34	0	128,093	0	172,940	301,032	1.267	1.711	2.978
2013	108.468	3	41	308,120	52,067	47,747	126,339	534,272	3.321	1.605	4.926
<b>MA Total:</b>	<b>445,544</b>	<b>4</b>	<b>124</b>	<b>317,013</b>	<b>276,544</b>	<b>53,592</b>	<b>370,856</b>	<b>1,018,006</b>	<b>1.332</b>	<b>0.953</b>	<b>2.285</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.233	1.480	.
(14) Massachusetts Credibility:	0.170	0.260	.
(15) Countrywide Pure Premium:	0.561	0.449	1.011
(16) Countrywide Indicated Relativity:	0.573	0.792	.
(17) Countrywide Credibility:	0.300	0.320	.
(18) Countrywide Lost-Time Claims:	59.000	.	.
(19) Pure Premium Underlying Present Rate:	0.711	0.479	1.190
(20) Relativity to Underlying Present Rate:	0.801	0.798	.
(21) Credibility to Underlying Relativity:	0.530	0.420	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.806	0.974	.
(24) Balanced Formula Relativity:	0.795	0.967	0.859

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	131.302	0	12	0	2,350	0	11,302	13,652	0.018	0.086	0.104
2010	169.490	0	38	0	94,274	0	138,281	232,555	0.556	0.816	1.372
2011	182.630	0	34	0	53,373	0	92,744	146,117	0.292	0.508	0.800
2012	163.401	0	26	0	634,399	0	216,728	851,127	3.882	1.326	5.209
2013	2.144	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>648,968</b>	<b>0</b>	<b>110</b>	<b>0</b>	<b>784,396</b>	<b>0</b>	<b>459,056</b>	<b>1,243,452</b>	<b>1.209</b>	<b>0.707</b>	<b>1.916</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.119	1.099	.
(14) Massachusetts Credibility:	0.140	0.250	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.372	0.485	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.335	0.296	0.631
(20) Relativity to Underlying Present Rate:	0.378	0.493	.
(21) Credibility to Underlying Relativity:	0.860	0.750	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.481	0.644	.
(24) Balanced Formula Relativity:	0.475	0.640	0.537

Class(es):		Effective: 7/1/2016							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)
2009	7.341	0	1	0	614	0	3,670	4,283	0.084	0.500	0.584
2010	8.374	0	2	0	213	0	4,617	4,829	0.025	0.551	0.577
2011	8.386	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	7.417	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	6.832	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>38,349</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>826</b>	<b>0</b>	<b>8,286</b>	<b>9,113</b>	<b>0.022</b>	<b>0.216</b>	<b>0.238</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.020	0.336	.
(14) Massachusetts Credibility:	0.060	0.100	.
(15) Countrywide Pure Premium:	0.698	0.518	1.216
(16) Countrywide Indicated Relativity:	0.712	0.914	.
(17) Countrywide Credibility:	0.410	0.430	.
(18) Countrywide Lost-Time Claims:	122.00	.	.
(19) Pure Premium Underlying Present Rate:	0.712	0.490	1.202
(20) Relativity to Underlying Present Rate:	0.802	0.816	.
(21) Credibility to Underlying Relativity:	0.530	0.470	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.718	0.810	.
(24) Balanced Formula Relativity:	0.709	0.805	0.744

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## Calculation of Class Relativities

Class(es): 3132 NUT OR BOLT MFG		Effective: 7/1/2016							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)
2009	2.397	1	1	60.705	0	16.679	452	77.836	25.327	7.148	32.475
2010	4.127	0	1	0	8.751	0	12.393	21.144	2.120	3.003	5.123
2011	4.597	0	4	0	46.439	0	12.740	59.179	10.101	2.771	12.872
2012	6.680	1	2	862	0	1.455	3.848	6.164	0.129	0.794	0.923
2013	7.470	0	1	0	14.639	0	5.881	20.521	1.960	0.787	2.747
<b>MA Total:</b>	<b>25.272</b>	<b>2</b>	<b>9</b>	<b>61,566</b>	<b>69,830</b>	<b>18,134</b>	<b>35,314</b>	<b>184,844</b>	<b>5.199</b>	<b>2.115</b>	<b>7.314</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.813	3.286	.
(14) Massachusetts Credibility:	0.070	0.120	.
(15) Countrywide Pure Premium:	1.028	0.805	1.833
(16) Countrywide Indicated Relativity:	1.049	1.419	.
(17) Countrywide Credibility:	0.470	0.440	.
(18) Countrywide Lost-Time Claims:	210.00	.	.
(19) Pure Premium Underlying Present Rate:	1.544	1.162	2.707
(20) Relativity to Underlying Present Rate:	1.740	1.937	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.631	1.871	.
(24) Balanced Formula Relativity:	1.608	1.858	1.701

Class(es): 3145 SCREW MFG		Effective: 7/1/2016							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)
2009	172.494	1	26	100.849	31.675	21.646	70.990	225.161	0.768	0.537	1.305
2010	178.117	0	30	0	34.262	0	84.734	118.995	0.192	0.476	0.668
2011	217.920	0	21	0	22.697	0	35.681	58.377	0.104	0.164	0.268
2012	207.820	1	21	231	31.703	14.587	30.836	77.356	0.154	0.219	0.372
2013	191.017	0	32	0	246.502	0	64.052	310.553	1.290	0.335	1.626
<b>MA Total:</b>	<b>967.369</b>	<b>2</b>	<b>130</b>	<b>101,080</b>	<b>366,838</b>	<b>36,233</b>	<b>286,292</b>	<b>790,443</b>	<b>0.484</b>	<b>0.333</b>	<b>0.817</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.448	0.518	.
(14) Massachusetts Credibility:	0.240	0.370	.
(15) Countrywide Pure Premium:	0.887	0.593	1.480
(16) Countrywide Indicated Relativity:	0.905	1.046	.
(17) Countrywide Credibility:	0.380	0.320	.
(18) Countrywide Lost-Time Claims:	500.00	.	.
(19) Pure Premium Underlying Present Rate:	0.781	0.568	1.349
(20) Relativity to Underlying Present Rate:	0.880	0.947	.
(21) Credibility to Underlying Relativity:	0.380	0.310	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.786	0.820	.
(24) Balanced Formula Relativity:	0.775	0.814	0.790

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## Calculation of Class Relativities

Class(es): 3146 HARDWARE MFG-NOC		Effective: 7/1/2016							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)
2009	84,127	0	13	0	369	0	18,748	19,117	0.004	0.223	0.227
2010	78,998	0	17	0	13,780	0	34,157	47,937	0.174	0.432	0.607
2011	77,881	0	8	0	48	0	7,545	7,594	0.001	0.097	0.098
2012	75,843	0	11	0	232,481	0	82,180	314,661	3.065	1.084	4.149
2013	79,044	1	7	61,968	9,732	23,852	11,433	106,984	0.907	0.446	1.353
<b>MA Total:</b>	<b>395,893</b>	<b>1</b>	<b>56</b>	<b>61,968</b>	<b>256,410</b>	<b>23,852</b>	<b>154,063</b>	<b>496,293</b>	<b>0.804</b>	<b>0.449</b>	<b>1.254</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.744	0.698	.
(14) Massachusetts Credibility:	0.170	0.250	.
(15) Countrywide Pure Premium:	0.910	0.596	1.506
(16) Countrywide Indicated Relativity:	0.929	1.050	.
(17) Countrywide Credibility:	0.420	0.380	.
(18) Countrywide Lost-Time Claims:	1016.0	.	.
(19) Pure Premium Underlying Present Rate:	0.827	0.530	1.356
(20) Relativity to Underlying Present Rate:	0.931	0.882	.
(21) Credibility to Underlying Relativity:	0.410	0.370	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.899	0.900	.
(24) Balanced Formula Relativity:	0.886	0.894	0.889

Class(es): 3169 STOVE MFG		Effective: 7/1/2016							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)
2009	359,446	1	81	117,214	284,565	16,489	248,337	666,604	1.118	0.737	1.855
2010	389,987	2	79	311,750	407,660	170,363	231,138	1,120,911	1.845	1.030	2.874
2011	378,917	2	84	96,387	113,396	34,152	189,946	433,881	0.554	0.591	1.145
2012	381,248	3	66	37,800	489,648	85,353	379,395	992,195	1.383	1.219	2.602
2013	374,708	2	63	210,690	528,217	84,545	412,643	1,236,095	1.972	1.327	3.299
<b>MA Total:</b>	<b>1,884,306</b>	<b>10</b>	<b>373</b>	<b>773,840</b>	<b>1,823,485</b>	<b>390,902</b>	<b>1,461,459</b>	<b>4,449,686</b>	<b>1.378</b>	<b>0.983</b>	<b>2.361</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.276	1.527	.
(14) Massachusetts Credibility:	0.390	0.590	.
(15) Countrywide Pure Premium:	1.405	0.883	2.288
(16) Countrywide Indicated Relativity:	1.435	1.556	.
(17) Countrywide Credibility:	0.310	0.210	.
(18) Countrywide Lost-Time Claims:	5127.0	.	.
(19) Pure Premium Underlying Present Rate:	1.328	0.889	2.217
(20) Relativity to Underlying Present Rate:	1.497	1.481	.
(21) Credibility to Underlying Relativity:	0.300	0.200	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.391	1.524	.
(24) Balanced Formula Relativity:	1.372	1.514	1.425

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	1,287,554	3	81	71,278	468,248	27,150	316,328	883,004	0.419	0.267	0.686
2010	1,754,055	2	108	34,490	771,881	13,464	393,932	1,213,767	0.460	0.232	0.692
2011	1,480,717	0	105	0	587,004	0	382,703	969,708	0.396	0.258	0.655
2012	1,468,313	4	79	591,941	169,967	90,963	363,742	1,216,614	0.519	0.310	0.829
2013	1,510,562	5	110	398,830	187,076	96,910	219,012	901,827	0.388	0.209	0.597
<b>MA Total:</b>	<b>7,501,201</b>	<b>14</b>	<b>483</b>	<b>1,096,539</b>	<b>2,184,177</b>	<b>228,486</b>	<b>1,675,718</b>	<b>5,184,919</b>	<b>0.437</b>	<b>0.254</b>	<b>0.691</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.405	0.394	.
(14) Massachusetts Credibility:	0.480	0.660	.
(15) Countrywide Pure Premium:	0.979	0.552	1.531
(16) Countrywide Indicated Relativity:	0.999	0.973	.
(17) Countrywide Credibility:	0.260	0.170	.
(18) Countrywide Lost-Time Claims:	4006.0	.	.
(19) Pure Premium Underlying Present Rate:	0.569	0.298	0.867
(20) Relativity to Underlying Present Rate:	0.641	0.496	.
(21) Credibility to Underlying Relativity:	0.260	0.170	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.621	0.510	.
(24) Balanced Formula Relativity:	0.612	0.507	0.573

Class(es):		Effective: 7/1/2016							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)
2009	128,202	0	27	0	40,403	0	37,844	78,247	0.315	0.295	0.610
2010	297,505	1	45	412	598,814	13,644	305,509	918,380	2.014	1.073	3.087
2011	308,467	2	52	148,861	699,874	34,192	333,644	1,216,571	2.751	1.192	3.944
2012	156,480	2	48	169,121	188,190	123,323	94,839	575,474	2.283	1.394	3.678
2013	154,440	0	33	0	33,757	0	44,598	78,354	0.219	0.289	0.507
<b>MA Total:</b>	<b>1,045,094</b>	<b>5</b>	<b>205</b>	<b>318,394</b>	<b>1,561,038</b>	<b>171,160</b>	<b>816,434</b>	<b>2,867,026</b>	<b>1.798</b>	<b>0.945</b>	<b>2.743</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.665	1.468	.
(14) Massachusetts Credibility:	0.290	0.450	.
(15) Countrywide Pure Premium:	1.101	0.681	1.782
(16) Countrywide Indicated Relativity:	1.124	1.200	.
(17) Countrywide Credibility:	0.360	0.280	.
(18) Countrywide Lost-Time Claims:	352.00	.	.
(19) Pure Premium Underlying Present Rate:	1.142	0.829	1.971
(20) Relativity to Underlying Present Rate:	1.286	1.381	.
(21) Credibility to Underlying Relativity:	0.350	0.270	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.338	1.370	.
(24) Balanced Formula Relativity:	1.319	1.360	1.335

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## Calculation of Class Relativities

Class(es): 3188 PLUMBERS SUPPLIES MFG-NOC		Effective: 7/1/2016							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)
2009	18,914	0	5	0	10,108	0	12,963	23,070	0.534	0.685	1.220
2010	32,255	0	3	0	0	0	5,160	5,160	0.000	0.160	0.160
2011	29,712	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	23,754	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	18,059	0	3	0	1,322	0	973	2,295	0.073	0.054	0.127
<b>MA Total:</b>	<b>122,693</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>11,430</b>	<b>0</b>	<b>19,096</b>	<b>30,525</b>	<b>0.093</b>	<b>0.156</b>	<b>0.249</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.086	0.242	.
(14) Massachusetts Credibility:	0.120	0.170	.
(15) Countrywide Pure Premium:	0.662	0.430	1.092
(16) Countrywide Indicated Relativity:	0.676	0.758	.
(17) Countrywide Credibility:	0.440	0.420	.
(18) Countrywide Lost-Time Claims:	294.00	.	.
(19) Pure Premium Underlying Present Rate:	1.050	0.625	1.674
(20) Relativity to Underlying Present Rate:	1.183	1.041	.
(21) Credibility to Underlying Relativity:	0.440	0.410	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.829	0.786	.
(24) Balanced Formula Relativity:	0.817	0.781	0.804

Class(es): 3200 ARMS MFG-SMALL		Effective: 7/1/2016							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)
2009	92,817	2	24	160,533	19,052	51,809	38,578	269,973	1.935	0.974	2.909
2010	118,221	0	21	0	287,618	0	81,876	369,495	2.433	0.693	3.125
2011	174,009	0	39	0	94,648	0	102,033	196,680	0.544	0.586	1.130
2012	221,072	1	64	39,378	172,395	15,301	106,569	333,643	0.958	0.551	1.509
2013	78,866	0	14	0	7,638	0	19,894	27,532	0.097	0.252	0.349
<b>MA Total:</b>	<b>684,985</b>	<b>3</b>	<b>162</b>	<b>199,911</b>	<b>581,351</b>	<b>67,110</b>	<b>348,951</b>	<b>1,197,323</b>	<b>1.141</b>	<b>0.607</b>	<b>1.748</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.056	0.944	.
(14) Massachusetts Credibility:	0.230	0.380	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.178	1.323	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	1.061	0.807	1.868
(20) Relativity to Underlying Present Rate:	1.196	1.344	.
(21) Credibility to Underlying Relativity:	0.770	0.620	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.164	1.192	.
(24) Balanced Formula Relativity:	1.147	1.184	1.161

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## Calculation of Class Relativities

Class(es): 3220 CAN MFG		Effective: 7/1/2016							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)
2009	80	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	63,105	4	9	1,101,880	35,770	239,557	18,937	1,396,145	18,028	4,096	22,124
2012	103,474	0	13	0	252,835	0	77,257	330,092	2,443	0,747	3,190
2013	97,625	1	10	123,696	14,987	8,438	19,396	166,517	1,421	0,285	1,706
<b>MA Total:</b>	<b>264,284</b>	<b>5</b>	<b>32</b>	<b>1,225,576</b>	<b>303,592</b>	<b>247,996</b>	<b>115,590</b>	<b>1,892,754</b>	<b>5,786</b>	<b>1,376</b>	<b>7,162</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.356	2.137	.
(14) Massachusetts Credibility:	0.180	0.260	.
(15) Countrywide Pure Premium:	0.858	0.385	1.243
(16) Countrywide Indicated Relativity:	0.876	0.679	.
(17) Countrywide Credibility:	0.410	0.370	.
(18) Countrywide Lost-Time Claims:	270.00	.	.
(19) Pure Premium Underlying Present Rate:	1.407	0.855	2.262
(20) Relativity to Underlying Present Rate:	1.586	1.424	.
(21) Credibility to Underlying Relativity:	0.410	0.370	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.973	1.334	.
(24) Balanced Formula Relativity:	1.946	1.325	1.714

Class(es): 3255 WIRE CLOTH MFG		Effective: 7/1/2016							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)
2009	2,614	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	1,812	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	1,158	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	1,634	0	1	0	0	0	906	906	0.000	0,554	0,554
2013	1,948	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>9,166</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>906</b>	<b>906</b>	<b>0.000</b>	<b>0,099</b>	<b>0,099</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.154	.
(14) Massachusetts Credibility:	0.050	0.070	.
(15) Countrywide Pure Premium:	1.159	0.564	1.722
(16) Countrywide Indicated Relativity:	1.183	0.994	.
(17) Countrywide Credibility:	0.210	0.220	.
(18) Countrywide Lost-Time Claims:	23.000	.	.
(19) Pure Premium Underlying Present Rate:	1.295	0.822	2.117
(20) Relativity to Underlying Present Rate:	1.460	1.369	.
(21) Credibility to Underlying Relativity:	0.740	0.710	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.329	1.202	.
(24) Balanced Formula Relativity:	1.310	1.193	1.267



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## Calculation of Class Relativities

Class(es): 3257 WIRE GOODS MFG - NOC		Effective: 7/1/2016							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)
2009	178.347	1	24	7.049	522.123	3.960	97.831	630.964	2.967	0.571	3.538
2010	193.311	1	32	94.726	388.939	13.247	156.818	653.731	2.502	0.880	3.382
2011	163.233	2	25	185.042	107.460	65.781	55.319	413.603	1.792	0.742	2.534
2012	183.881	1	42	121.599	150.779	42.827	122.896	438.101	1.481	0.901	2.383
2013	205.653	1	27	12.567	37.217	31.645	30.656	112.084	0.242	0.303	0.545
<b>MA Total:</b>	<b>924.424</b>	<b>6</b>	<b>150</b>	<b>420.984</b>	<b>1,206.519</b>	<b>157.460</b>	<b>463.520</b>	<b>2,248.483</b>	<b>1.761</b>	<b>0.672</b>	<b>2.432</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.630	1.044	.
(14) Massachusetts Credibility:	0.280	0.410	.
(15) Countrywide Pure Premium:	1.172	0.758	1.930
(16) Countrywide Indicated Relativity:	1.196	1.337	.
(17) Countrywide Credibility:	0.360	0.300	.
(18) Countrywide Lost-Time Claims:	906.00	.	.
(19) Pure Premium Underlying Present Rate:	1.269	0.727	1.996
(20) Relativity to Underlying Present Rate:	1.430	1.211	.
(21) Credibility to Underlying Relativity:	0.360	0.290	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.402	1.180	.
(24) Balanced Formula Relativity:	1.382	1.172	1.304

Class(es): 3270 EYELET MFG		Effective: 7/1/2016							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)
2009	10.527	0	2	0	0	0	222	222	0.000	0.021	0.021
2010	11.165	0	2	0	0	0	841	841	0.000	0.075	0.075
2011	11.923	0	1	0	0	0	567	567	0.000	0.048	0.048
2012	8.897	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	5.234	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>47.746</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,629</b>	<b>1,629</b>	<b>0.000</b>	<b>0.034</b>	<b>0.034</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.053	.
(14) Massachusetts Credibility:	0.080	0.130	.
(15) Countrywide Pure Premium:	0.948	0.667	1.615
(16) Countrywide Indicated Relativity:	0.968	1.176	.
(17) Countrywide Credibility:	0.420	0.440	.
(18) Countrywide Lost-Time Claims:	134.00	.	.
(19) Pure Premium Underlying Present Rate:	1.088	0.780	1.868
(20) Relativity to Underlying Present Rate:	1.227	1.299	.
(21) Credibility to Underlying Relativity:	0.500	0.430	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.020	1.083	.
(24) Balanced Formula Relativity:	1.006	1.075	1.032

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	6,792	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	5,957	0	1	0	0	0	140	140	0.000	0.024	0.024
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>12,749</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>140</b>	<b>140</b>	<b>0.000</b>	<b>0.011</b>	<b>0.011</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.017	.
(14) Massachusetts Credibility:	0.060	0.090	.
(15) Countrywide Pure Premium:	1.569	1.332	2.902
(16) Countrywide Indicated Relativity:	1.602	2.349	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	244.00	.	.
(19) Pure Premium Underlying Present Rate:	2.212	1.384	3.596
(20) Relativity to Underlying Present Rate:	2.493	2.306	.
(21) Credibility to Underlying Relativity:	0.470	0.450	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.925	2.120	.
(24) Balanced Formula Relativity:	1.898	2.105	1.975

Class(es):		Effective: 7/1/2016							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)
2009	181,246	0	41	0	87,813	0	108,404	196,217	0.484	0.598	1.083
2010	193,357	0	39	0	358,749	0	519,561	878,311	1.855	2.687	4.542
2011	210,916	0	44	0	364,289	0	174,002	538,291	1.727	0.825	2.552
2012	196,336	1	53	111,400	83,648	4,161	118,075	317,283	0.993	0.623	1.616
2013	196,174	1	31	261,350	54,855	28,811	102,073	447,089	1.612	0.667	2.279
<b>MA Total:</b>	<b>978,030</b>	<b>2</b>	<b>208</b>	<b>372,750</b>	<b>949,354</b>	<b>32,972</b>	<b>1,022,115</b>	<b>2,377,190</b>	<b>1.352</b>	<b>1.079</b>	<b>2.431</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.251	1.676	.
(14) Massachusetts Credibility:	0.310	0.460	.
(15) Countrywide Pure Premium:	2.548	1.280	3.828
(16) Countrywide Indicated Relativity:	2.601	2.257	.
(17) Countrywide Credibility:	0.350	0.270	.
(18) Countrywide Lost-Time Claims:	217.00	.	.
(19) Pure Premium Underlying Present Rate:	1.450	0.933	2.383
(20) Relativity to Underlying Present Rate:	1.634	1.554	.
(21) Credibility to Underlying Relativity:	0.340	0.270	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.854	1.800	.
(24) Balanced Formula Relativity:	1.828	1.788	1.813

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## Calculation of Class Relativities

Class(es): 3336 TYPE FOUNDRY		Effective: 7/1/2016							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)
2009	5.555	0	1	0	171.806	0	22.618	194.424	30.930	4.072	35.002
2010	5.350	0	2	0	3.885	0	6.506	10.391	0.726	1.216	1.942
2011	5.154	0	3	0	58.204	0	18.422	76.626	11.292	3.574	14.866
2012	6.167	0	3	0	17.392	0	7.739	25.131	2.820	1.255	4.075
2013	7.023	0	2	0	5.295	0	2.215	7.510	0.754	0.315	1.069
<b>MA Total:</b>	<b>29.249</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>256.582</b>	<b>0</b>	<b>57.501</b>	<b>314.083</b>	<b>8.772</b>	<b>1.966</b>	<b>10.738</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	8.121	3.054	.
(14) Massachusetts Credibility:	0.080	0.110	.
(15) Countrywide Pure Premium:	1.787	0.756	2.542
(16) Countrywide Indicated Relativity:	1.824	1.332	.
(17) Countrywide Credibility:	0.460	0.450	.
(18) Countrywide Lost-Time Claims:	237.00	.	.
(19) Pure Premium Underlying Present Rate:	1.649	0.941	2.590
(20) Relativity to Underlying Present Rate:	1.859	1.568	.
(21) Credibility to Underlying Relativity:	0.460	0.440	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.344	1.625	.
(24) Balanced Formula Relativity:	2.311	1.614	2.051

Class(es): 3365 WELDING OR CUTTING - NOC & DRIVERS		Effective: 7/1/2016							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)
2009	89.068	2	31	234.773	236.892	53.912	108.389	633.966	5.296	1.822	7.118
2010	96.034	1	27	24.481	32.908	3.064	45.148	105.602	0.598	0.502	1.100
2011	107.897	1	26	265.743	100.607	73.495	90.173	530.019	3.395	1.517	4.912
2012	121.714	1	17	317.376	387.567	55.978	285.393	1,046.315	5.792	2.805	8.597
2013	122.859	1	31	101.588	803.022	22.979	321.150	1,248.738	7.363	2.801	10.164
<b>MA Total:</b>	<b>537.573</b>	<b>6</b>	<b>132</b>	<b>943.962</b>	<b>1,560.996</b>	<b>209.429</b>	<b>850.253</b>	<b>3,564.640</b>	<b>4.660</b>	<b>1.971</b>	<b>6.631</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.506	1.268	.
(14) Massachusetts Credibility:	0.340	0.460	.
(15) Countrywide Pure Premium:	3.296	1.620	4.916
(16) Countrywide Indicated Relativity:	1.062	1.041	.
(17) Countrywide Credibility:	0.330	0.270	.
(18) Countrywide Lost-Time Claims:	1015.0	.	.
(19) Pure Premium Underlying Present Rate:	3.464	1.693	5.157
(20) Relativity to Underlying Present Rate:	1.333	1.221	.
(21) Credibility to Underlying Relativity:	0.330	0.270	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.303	1.194	.
(24) Balanced Formula Relativity:	1.323	1.198	1.281

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## Calculation of Class Relativities

Class(es): 3372 ELECTROPLATING		Effective: 7/1/2016							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)
2009	483.202	2	71	96.590	148.898	27.453	204.213	477.154	0.508	0.479	0.987
2010	504.786	1	77	94.276	309.448	29.141	317.014	749.880	0.800	0.686	1.486
2011	524.523	1	71	121.706	730.668	21.905	873.312	1,747.590	1.625	1.707	3.332
2012	537.618	2	65	211.496	61.640	49.961	136.632	459.729	0.508	0.347	0.855
2013	546.683	0	77	0	378.706	0	518.917	897.623	0.693	0.949	1.642
<b>MA Total:</b>	<b>2,596.812</b>	<b>6</b>	<b>361</b>	<b>524.069</b>	<b>1,629,358</b>	<b>128,461</b>	<b>2,050,088</b>	<b>4,331,975</b>	<b>0.829</b>	<b>0.839</b>	<b>1.668</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.768	1.303	.
(14) Massachusetts Credibility:	0.400	0.630	.
(15) Countrywide Pure Premium:	1.504	0.999	2.502
(16) Countrywide Indicated Relativity:	1.535	1.761	.
(17) Countrywide Credibility:	0.300	0.190	.
(18) Countrywide Lost-Time Claims:	889.00	.	.
(19) Pure Premium Underlying Present Rate:	1.034	0.763	1.797
(20) Relativity to Underlying Present Rate:	1.165	1.271	.
(21) Credibility to Underlying Relativity:	0.300	0.180	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.117	1.384	.
(24) Balanced Formula Relativity:	1.102	1.375	1.204

Class(es): 3373 GALVANIZING OR TINNING - NOT ELECTROLYTIC		Effective: 7/1/2016							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)
2009	12.775	0	1	0	57.130	0	4.261	61.391	4.472	0.334	4.805
2010	11.200	0	1	0	0	0	767	767	0.000	0.068	0.068
2011	12.269	0	2	0	3.512	0	4.214	7.726	0.286	0.343	0.630
2012	17.048	0	2	0	1.339	0	2.483	3.822	0.079	0.146	0.224
2013	9.306	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>62.599</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>61.981</b>	<b>0</b>	<b>11.725</b>	<b>73,706</b>	<b>0.990</b>	<b>0.187</b>	<b>1.177</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.917	0.291	.
(14) Massachusetts Credibility:	0.120	0.170	.
(15) Countrywide Pure Premium:	1.826	1.037	2.863
(16) Countrywide Indicated Relativity:	1.864	1.828	.
(17) Countrywide Credibility:	0.440	0.420	.
(18) Countrywide Lost-Time Claims:	154.00	.	.
(19) Pure Premium Underlying Present Rate:	1.962	1.221	3.182
(20) Relativity to Underlying Present Rate:	2.211	2.034	.
(21) Credibility to Underlying Relativity:	0.440	0.410	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.903	1.651	.
(24) Balanced Formula Relativity:	1.877	1.640	1.788

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## Calculation of Class Relativities

Class(es): 3381 SILVERWARE MFG		Effective: 7/1/2016							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)
2009	14,226	0	3	0	8,004	0	6,413	14,417	0.563	0.451	1.013
2010	5,850	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	4,893	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	5,810	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	5,499	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>36,278</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>8,004</b>	<b>0</b>	<b>6,413</b>	<b>14,417</b>	<b>0.221</b>	<b>0.177</b>	<b>0.397</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.204	0.275	.
(14) Massachusetts Credibility:	0.080	0.120	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.393	1.393	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	1.254	0.849	2.104
(20) Relativity to Underlying Present Rate:	1.414	1.415	.
(21) Credibility to Underlying Relativity:	0.920	0.880	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.317	1.278	.
(24) Balanced Formula Relativity:	1.299	1.270	1.288

Class(es): 3383 JEWELRY MFG		Effective: 7/1/2016							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)
2009	356,720	0	31	0	45,294	0	20,012	65,305	0.127	0.056	0.183
2010	375,402	0	41	0	450,235	0	205,171	655,406	1.199	0.547	1.746
2011	378,913	0	33	0	91,693	0	50,617	142,310	0.242	0.134	0.376
2012	595,970	5	81	765,268	633,715	251,320	284,020	1,934,324	2.347	0.898	3.246
2013	637,557	1	73	189,170	745,063	24,773	289,670	1,248,675	1.465	0.493	1.959
<b>MA Total:</b>	<b>2,344,561</b>	<b>6</b>	<b>259</b>	<b>954,437</b>	<b>1,966,000</b>	<b>276,093</b>	<b>849,490</b>	<b>4,046,021</b>	<b>1.246</b>	<b>0.480</b>	<b>1.726</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.153	0.746	.
(14) Massachusetts Credibility:	0.290	0.430	.
(15) Countrywide Pure Premium:	0.588	0.394	0.981
(16) Countrywide Indicated Relativity:	0.600	0.694	.
(17) Countrywide Credibility:	0.360	0.290	.
(18) Countrywide Lost-Time Claims:	343.00	.	.
(19) Pure Premium Underlying Present Rate:	0.506	0.333	0.839
(20) Relativity to Underlying Present Rate:	0.571	0.554	.
(21) Credibility to Underlying Relativity:	0.350	0.280	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.750	0.677	.
(24) Balanced Formula Relativity:	0.740	0.673	0.715

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## Calculation of Class Relativities

Class(es): 3385 WATCH MFG		Effective: 7/1/2016							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)
2009	30.763	0	1	0	638	0	1,908	2,546	0.021	0.062	0.083
2010	31.565	0	2	0	0	0	1,434	1,434	0.000	0.045	0.045
2011	25.703	0	2	0	0	0	1,174	1,174	0.000	0.046	0.046
2012	26.063	0	2	0	588	0	1,046	1,634	0.023	0.040	0.063
2013	27.418	0	2	0	0	0	1,045	1,045	0.000	0.038	0.038
<b>MA Total:</b>	<b>141,512</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>1,226</b>	<b>0</b>	<b>6,607</b>	<b>7,832</b>	<b>0.009</b>	<b>0.047</b>	<b>0.055</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.008	0.073	.
(14) Massachusetts Credibility:	0.080	0.120	.
(15) Countrywide Pure Premium:	0.498	0.206	0.704
(16) Countrywide Indicated Relativity:	0.508	0.363	.
(17) Countrywide Credibility:	0.210	0.220	.
(18) Countrywide Lost-Time Claims:	23.000	.	.
(19) Pure Premium Underlying Present Rate:	0.372	0.249	0.621
(20) Relativity to Underlying Present Rate:	0.419	0.416	.
(21) Credibility to Underlying Relativity:	0.710	0.660	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.405	0.363	.
(24) Balanced Formula Relativity:	0.399	0.360	0.385

Class(es): 3507 CONSTRUCTION OR AGRICULTURAL MACHINERY MFG		Effective: 7/1/2016							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)
2009	32.958	0	5	0	12,724	0	11,200	23,925	0.386	0.340	0.726
2010	34.735	0	8	0	0	0	3,875	3,875	0.000	0.112	0.112
2011	31.473	0	4	0	0	0	3,083	3,083	0.000	0.098	0.098
2012	37.035	1	6	204,601	0	20,360	6,849	231,810	5.524	0.735	6.259
2013	52.458	0	16	0	96,055	0	51,864	147,919	1.831	0.989	2.820
<b>MA Total:</b>	<b>188,659</b>	<b>1</b>	<b>39</b>	<b>204,601</b>	<b>108,780</b>	<b>20,360</b>	<b>76,871</b>	<b>410,611</b>	<b>1.661</b>	<b>0.515</b>	<b>2.176</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.538	0.801	.
(14) Massachusetts Credibility:	0.150	0.240	.
(15) Countrywide Pure Premium:	1.431	0.805	2.236
(16) Countrywide Indicated Relativity:	1.461	1.420	.
(17) Countrywide Credibility:	0.430	0.380	.
(18) Countrywide Lost-Time Claims:	4875.0	.	.
(19) Pure Premium Underlying Present Rate:	1.277	0.946	2.223
(20) Relativity to Underlying Present Rate:	1.439	1.575	.
(21) Credibility to Underlying Relativity:	0.420	0.380	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.463	1.330	.
(24) Balanced Formula Relativity:	1.443	1.321	1.398

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Manufacturing		
3515 TEXTILE MACHINERY MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	30,021	0	11	0	42,946	0	34,574	77,520	1,431	1,152	2,582
2010	38,315	0	19	0	47,076	0	33,117	80,193	1,229	0,864	2,093
2011	31,416	0	11	0	14,077	0	15,911	29,989	0,448	0,506	0,955
2012	33,559	0	15	0	317,887	0	87,597	405,484	9,472	2,610	12,083
2013	33,773	0	19	0	20,514	0	27,380	47,894	0,607	0,811	1,418
<b>MA Total:</b>	<b>167,084</b>	<b>0</b>	<b>75</b>	<b>0</b>	<b>442,501</b>	<b>0</b>	<b>198,579</b>	<b>641,080</b>	<b>2,648</b>	<b>1,188</b>	<b>3,837</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.452	1.846	.
(14) Massachusetts Credibility:	0.130	0.210	.
(15) Countrywide Pure Premium:	0.969	0.775	1.744
(16) Countrywide Indicated Relativity:	0.989	1.366	.
(17) Countrywide Credibility:	0.320	0.340	.
(18) Countrywide Lost-Time Claims:	65,000	.	.
(19) Pure Premium Underlying Present Rate:	1.020	0.744	1.764
(20) Relativity to Underlying Present Rate:	1.149	1.239	.
(21) Credibility to Underlying Relativity:	0.550	0.450	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.267	1.410	.
(24) Balanced Formula Relativity:	1.250	1.400	1.306

Class(es):		Effective: 7/1/2016							Manufacturing		
3548 PRINTING OR BOOKBINDING MACHINE 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)
2009	4,704,495	11	514	815,672	1,759,322	201,196	1,851,792	4,627,981	0,547	0,436	0,984
2010	5,201,433	13	577	860,938	2,919,198	828,725	1,961,488	6,570,349	0,727	0,536	1,263
2011	5,564,694	13	661	1,991,190	4,297,748	498,524	2,755,020	9,542,481	1,130	0,585	1,715
2012	5,590,461	14	570	1,911,996	3,901,924	508,438	2,387,324	8,709,683	1,040	0,518	1,558
2013	6,053,004	8	533	1,360,512	5,816,005	435,515	2,427,008	10,039,040	1,186	0,473	1,659
<b>MA Total:</b>	<b>27,114,088</b>	<b>59</b>	<b>2,855</b>	<b>6,940,309</b>	<b>18,694,196</b>	<b>2,472,397</b>	<b>11,382,631</b>	<b>39,489,533</b>	<b>0,945</b>	<b>0,511</b>	<b>1,456</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.875	0.794	.
(14) Massachusetts Credibility:	0.840	1.000	.
(15) Countrywide Pure Premium:	0.921	0.534	1.455
(16) Countrywide Indicated Relativity:	0.940	0.942	.
(17) Countrywide Credibility:	0.080	0.000	.
(18) Countrywide Lost-Time Claims:	17018	.	.
(19) Pure Premium Underlying Present Rate:	0.656	0.457	1.113
(20) Relativity to Underlying Present Rate:	0.739	0.762	.
(21) Credibility to Underlying Relativity:	0.080	0.000	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.870	0.794	.
(24) Balanced Formula Relativity:	0.858	0.788	0.832

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Manufacturing		
3558 BOOT OR SHOE MACHINERY MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	13,164	0	5	0	0	0	1,899	1,899	0.000	0.144	0.144
2010	9,679	0	2	0	22,471	0	29,970	52,441	2.322	3.096	5.418
2011	9,780	0	1	0	0	0	598	598	0.000	0.061	0.061
2012	1,695	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	2,219	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>36,536</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>22,471</b>	<b>0</b>	<b>32,467</b>	<b>54,938</b>	<b>0.615</b>	<b>0.889</b>	<b>1.504</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.569	1.380	.
(14) Massachusetts Credibility:	0.050	0.080	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.369	0.579	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.332	0.353	0.685
(20) Relativity to Underlying Present Rate:	0.374	0.588	.
(21) Credibility to Underlying Relativity:	0.950	0.920	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.384	0.651	.
(24) Balanced Formula Relativity:	0.379	0.647	0.479

Class(es):		Effective: 7/1/2016							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)
2009	4,207	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	6,100	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	5,200	0	1	0	0	0	393	393	0.000	0.075	0.075
2012	6,485	0	1	0	0	0	553	553	0.000	0.085	0.085
2013	4,046	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>26,038</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>945</b>	<b>945</b>	<b>0.000</b>	<b>0.036</b>	<b>0.036</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.056	.
(14) Massachusetts Credibility:	0.050	0.070	.
(15) Countrywide Pure Premium:	0.222	0.108	0.330
(16) Countrywide Indicated Relativity:	0.227	0.190	.
(17) Countrywide Credibility:	0.100	0.110	.
(18) Countrywide Lost-Time Claims:	4.000	.	.
(19) Pure Premium Underlying Present Rate:	0.475	0.304	0.779
(20) Relativity to Underlying Present Rate:	0.535	0.506	.
(21) Credibility to Underlying Relativity:	0.850	0.820	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.478	0.440	.
(24) Balanced Formula Relativity:	0.471	0.437	0.458



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## Calculation of Class Relativities

Class(es): 3612 PUMP MFG		Effective: 7/1/2016							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)
2009	144,719	0	16	0	16,688	0	14,962	31,649	0.115	0.103	0.219
2010	183,768	0	19	0	113,737	0	142,703	256,440	0.619	0.777	1.395
2011	280,271	1	30	241,257	59,522	36,113	62,736	399,628	1.073	0.353	1.426
2012	265,296	1	25	72,254	32,998	37,376	101,979	244,606	0.397	0.525	0.922
2013	292,947	0	25	0	462,366	0	440,376	902,743	1.578	1.503	3.082
<b>MA Total:</b>	<b>1,167,001</b>	<b>2</b>	<b>115</b>	<b>313,510</b>	<b>685,310</b>	<b>73,489</b>	<b>762,757</b>	<b>1,835,066</b>	<b>0.856</b>	<b>0.717</b>	<b>1.572</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.792	1.113	.
(14) Massachusetts Credibility:	0.260	0.380	.
(15) Countrywide Pure Premium:	1.081	0.606	1.687
(16) Countrywide Indicated Relativity:	1.104	1.068	.
(17) Countrywide Credibility:	0.370	0.310	.
(18) Countrywide Lost-Time Claims:	1520.0	.	.
(19) Pure Premium Underlying Present Rate:	0.787	0.490	1.277
(20) Relativity to Underlying Present Rate:	0.886	0.817	.
(21) Credibility to Underlying Relativity:	0.370	0.310	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.942	1.007	.
(24) Balanced Formula Relativity:	0.929	1.000	0.956

Class(es): 3620 BOILERMAKING		Effective: 7/1/2016							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)
2009	99,805	0	25	0	75,732	0	57,822	133,554	0.759	0.579	1.338
2010	137,463	0	39	0	293,375	0	187,885	481,260	2.134	1.367	3.501
2011	147,119	4	33	677,872	515,725	1,109,218	361,585	2,664,400	8.113	9.997	18.111
2012	152,820	1	22	123,544	75,048	21,651	40,638	260,881	1.300	0.408	1.707
2013	179,144	0	18	0	69,149	0	129,761	198,910	0.386	0.724	1.110
<b>MA Total:</b>	<b>716,351</b>	<b>5</b>	<b>137</b>	<b>801,416</b>	<b>1,029,029</b>	<b>1,130,869</b>	<b>777,691</b>	<b>3,739,004</b>	<b>2.555</b>	<b>2.664</b>	<b>5.220</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.365	4.139	.
(14) Massachusetts Credibility:	0.330	0.590	.
(15) Countrywide Pure Premium:	1.668	0.982	2.649
(16) Countrywide Indicated Relativity:	1.703	1.731	.
(17) Countrywide Credibility:	0.340	0.210	.
(18) Countrywide Lost-Time Claims:	1211.0	.	.
(19) Pure Premium Underlying Present Rate:	2.306	2.386	4.691
(20) Relativity to Underlying Present Rate:	2.598	3.975	.
(21) Credibility to Underlying Relativity:	0.330	0.200	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.217	3.600	.
(24) Balanced Formula Relativity:	2.186	3.576	2.705

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## Calculation of Class Relativities

Class(es): 3634 VALVE MFG		Effective: 7/1/2016							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)
2009	183.161	2	19	384.867	78.945	68.814	44.045	576.672	2.532	0.616	3.148
2010	230.560	1	28	146.482	238.555	37.457	99.150	521.644	1.670	0.593	2.263
2011	293.642	0	22	0	236.754	0	204.827	441.581	0.806	0.698	1.504
2012	332.456	0	22	0	66.558	0	65.666	132.224	0.200	0.198	0.398
2013	441.782	0	33	0	270.147	0	183.747	453.894	0.611	0.416	1.027
<b>MA Total:</b>	<b>1,481,601</b>	<b>3</b>	<b>124</b>	<b>531,349</b>	<b>890,960</b>	<b>106,271</b>	<b>597,435</b>	<b>2,126,014</b>	<b>0.960</b>	<b>0.475</b>	<b>1.435</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.889	0.738	.
(14) Massachusetts Credibility:	0.290	0.420	.
(15) Countrywide Pure Premium:	0.751	0.437	1.188
(16) Countrywide Indicated Relativity:	0.767	0.771	.
(17) Countrywide Credibility:	0.360	0.290	.
(18) Countrywide Lost-Time Claims:	801.00	.	.
(19) Pure Premium Underlying Present Rate:	0.810	0.495	1.305
(20) Relativity to Underlying Present Rate:	0.913	0.825	.
(21) Credibility to Underlying Relativity:	0.350	0.290	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.853	0.773	.
(24) Balanced Formula Relativity:	0.842	0.767	0.814

Class(es): 3635 GEAR MFG OR GRINDING		Effective: 7/1/2016							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)
2009	183.540	1	41	127.598	68.814	38.061	101.094	335.567	1.070	0.758	1.828
2010	222.095	1	47	23.128	127.747	43.732	113.091	307.698	0.679	0.706	1.385
2011	242.217	2	51	34.770	140.973	62.563	182.329	420.634	0.726	1.011	1.737
2012	252.636	1	48	25.851	841.702	1.107	367.051	1,235.711	3.434	1.457	4.891
2013	257.744	1	47	12.394	225.798	644	282.707	521.543	0.924	1.099	2.023
<b>MA Total:</b>	<b>1,158,232</b>	<b>6</b>	<b>234</b>	<b>223,741</b>	<b>1,405,033</b>	<b>146,107</b>	<b>1,046,272</b>	<b>2,821,153</b>	<b>1.406</b>	<b>1.029</b>	<b>2.436</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.302	1.599	.
(14) Massachusetts Credibility:	0.310	0.550	.
(15) Countrywide Pure Premium:	1.209	0.689	1.898
(16) Countrywide Indicated Relativity:	1.235	1.214	.
(17) Countrywide Credibility:	0.350	0.230	.
(18) Countrywide Lost-Time Claims:	382.00	.	.
(19) Pure Premium Underlying Present Rate:	1.271	1.214	2.485
(20) Relativity to Underlying Present Rate:	1.433	2.022	.
(21) Credibility to Underlying Relativity:	0.340	0.220	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.323	1.604	.
(24) Balanced Formula Relativity:	1.305	1.593	1.412

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## Calculation of Class Relativities

Class(es): 3642 BATTERY MFG-DRY		Effective: 7/1/2016							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)
2009	146.316	2	6	420.374	90.803	62.661	57.595	631.434	3.494	0.822	4.316
2010	149.297	0	10	0	1.353	0	11.330	12.683	0.009	0.076	0.085
2011	170.172	0	6	0	112.721	0	34.651	147.373	0.662	0.204	0.866
2012	317.808	0	15	0	13.661	0	18.116	31.778	0.043	0.057	0.100
2013	157.524	0	5	0	51.567	0	30.994	82.561	0.327	0.197	0.524
<b>MA Total:</b>	<b>941.117</b>	<b>2</b>	<b>42</b>	<b>420.374</b>	<b>270.106</b>	<b>62.661</b>	<b>152.687</b>	<b>905.828</b>	<b>0.734</b>	<b>0.229</b>	<b>0.963</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.679	0.355	.
(14) Massachusetts Credibility:	0.210	0.280	.
(15) Countrywide Pure Premium:	0.491	0.302	0.793
(16) Countrywide Indicated Relativity:	0.501	0.532	.
(17) Countrywide Credibility:	0.360	0.360	.
(18) Countrywide Lost-Time Claims:	87.000	.	.
(19) Pure Premium Underlying Present Rate:	0.565	0.285	0.851
(20) Relativity to Underlying Present Rate:	0.637	0.476	.
(21) Credibility to Underlying Relativity:	0.430	0.360	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.597	0.462	.
(24) Balanced Formula Relativity:	0.589	0.459	0.540

Class(es): 3643 ELECTRIC POWER OR TRANSMISSION EQUIP MFG		Effective: 7/1/2016							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)
2009	570.200	0	63	0	664.435	0	189.213	853.647	1.165	0.332	1.497
2010	674.101	3	63	54.794	144.155	66.773	211.548	477.270	0.295	0.413	0.708
2011	700.154	1	35	128.507	47.522	27.224	93.826	297.079	0.251	0.173	0.424
2012	807.895	3	60	779.385	695.770	443.019	243.692	2,161.866	1.826	0.850	2.676
2013	882.250	1	97	37.181	496.100	1.592	343.130	878.004	0.604	0.391	0.995
<b>MA Total:</b>	<b>3,634.600</b>	<b>8</b>	<b>318</b>	<b>999.867</b>	<b>2,047.982</b>	<b>538.609</b>	<b>1,081.408</b>	<b>4,667.866</b>	<b>0.839</b>	<b>0.446</b>	<b>1.284</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.776	0.692	.
(14) Massachusetts Credibility:	0.360	0.490	.
(15) Countrywide Pure Premium:	1.158	0.568	1.727
(16) Countrywide Indicated Relativity:	1.183	1.002	.
(17) Countrywide Credibility:	0.320	0.260	.
(18) Countrywide Lost-Time Claims:	1792.0	.	.
(19) Pure Premium Underlying Present Rate:	0.569	0.298	0.867
(20) Relativity to Underlying Present Rate:	0.641	0.496	.
(21) Credibility to Underlying Relativity:	0.320	0.250	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.863	0.724	.
(24) Balanced Formula Relativity:	0.851	0.719	0.802

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## Calculation of Class Relativities

Class(es): 3647 BATTERY MFG-STORAGE		Effective: 7/1/2016							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)
2009	334	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	1,519	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	4,065	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	10,773	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	3,280	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>19,971</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.060	0.090	.
(15) Countrywide Pure Premium:	0.898	0.495	1.393
(16) Countrywide Indicated Relativity:	0.917	0.872	.
(17) Countrywide Credibility:	0.470	0.460	.
(18) Countrywide Lost-Time Claims:	349.00	.	.
(19) Pure Premium Underlying Present Rate:	0.991	0.691	1.682
(20) Relativity to Underlying Present Rate:	1.117	1.152	.
(21) Credibility to Underlying Relativity:	0.470	0.450	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.956	0.919	.
(24) Balanced Formula Relativity:	0.943	0.913	0.932

Class(es): 3648 AUTOMOTIVE LIGHTING, IGNITION APPARATUS MFG NOC		Effective: 7/1/2016							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)
2009	383	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	395	0	1	0	749	0	1,134	1,883	1,897	2,870	4,766
2011	2,822	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	1,014	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	417	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>5,032</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>749</b>	<b>0</b>	<b>1,134</b>	<b>1,883</b>	<b>0.149</b>	<b>0.225</b>	<b>0.374</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.138	0.350	.
(14) Massachusetts Credibility:	0.030	0.040	.
(15) Countrywide Pure Premium:	0.624	0.425	1.049
(16) Countrywide Indicated Relativity:	0.637	0.750	.
(17) Countrywide Credibility:	0.490	0.480	.
(18) Countrywide Lost-Time Claims:	441.00	.	.
(19) Pure Premium Underlying Present Rate:	0.599	0.462	1.061
(20) Relativity to Underlying Present Rate:	0.675	0.770	.
(21) Credibility to Underlying Relativity:	0.480	0.480	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.640	0.743	.
(24) Balanced Formula Relativity:	0.631	0.738	0.671

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	5,168,858	10	270	1,215,744	1,204,480	1,155,927	780,659	4,356,810	0.468	0.375	0.843
2010	5,608,677	9	302	661,599	2,257,437	359,084	1,133,355	4,411,477	0.520	0.266	0.787
2011	5,426,674	8	269	957,264	1,222,781	211,340	983,870	3,375,255	0.402	0.220	0.622
2012	5,243,901	6	193	530,531	1,480,001	477,413	952,043	3,439,987	0.383	0.273	0.656
2013	5,192,873	11	200	2,259,521	790,463	572,667	715,664	4,338,314	0.587	0.248	0.835
<b>MA Total:</b>	<b>26,640,983</b>	<b>44</b>	<b>1,234</b>	<b>5,624,659</b>	<b>6,955,162</b>	<b>2,776,432</b>	<b>4,565,591</b>	<b>19,921,843</b>	<b>0.472</b>	<b>0.276</b>	<b>0.748</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.437	0.428	.
(14) Massachusetts Credibility:	0.620	0.960	.
(15) Countrywide Pure Premium:	0.372	0.228	0.600
(16) Countrywide Indicated Relativity:	0.380	0.402	.
(17) Countrywide Credibility:	0.190	0.020	.
(18) Countrywide Lost-Time Claims:	2952.0	.	.
(19) Pure Premium Underlying Present Rate:	0.315	0.218	0.532
(20) Relativity to Underlying Present Rate:	0.355	0.363	.
(21) Credibility to Underlying Relativity:	0.190	0.020	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.411	0.426	.
(24) Balanced Formula Relativity:	0.405	0.423	0.412

Class(es):		Effective: 7/1/2016							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)
2009	4,214,999	7	214	394,580	585,012	240,428	662,761	1,882,782	0.232	0.214	0.447
2010	5,336,794	7	231	1,261,842	519,624	395,989	532,278	2,709,732	0.334	0.174	0.508
2011	5,544,189	7	237	485,750	859,403	372,179	580,756	2,298,088	0.243	0.172	0.415
2012	5,402,205	4	241	531,965	2,226,088	152,891	1,033,422	3,944,365	0.511	0.220	0.730
2013	5,670,288	8	199	918,489	881,537	411,304	728,900	2,940,230	0.317	0.201	0.519
<b>MA Total:</b>	<b>26,168,474</b>	<b>33</b>	<b>1,122</b>	<b>3,592,625</b>	<b>5,071,664</b>	<b>1,572,792</b>	<b>3,538,117</b>	<b>13,775,198</b>	<b>0.331</b>	<b>0.195</b>	<b>0.526</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.307	0.303	.
(14) Massachusetts Credibility:	0.620	0.950	.
(15) Countrywide Pure Premium:	0.401	0.249	0.650
(16) Countrywide Indicated Relativity:	0.410	0.438	.
(17) Countrywide Credibility:	0.190	0.030	.
(18) Countrywide Lost-Time Claims:	2124.0	.	.
(19) Pure Premium Underlying Present Rate:	0.315	0.218	0.532
(20) Relativity to Underlying Present Rate:	0.355	0.363	.
(21) Credibility to Underlying Relativity:	0.190	0.020	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.335	0.309	.
(24) Balanced Formula Relativity:	0.331	0.307	0.322

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	1,976,497	9	330	972,887	3,596,737	210,035	2,795,417	7,575,076	2,312	1,521	3,833
2010	2,083,974	15	324	2,830,639	2,666,456	1,162,949	1,576,192	8,236,237	2,638	1,314	3,952
2011	2,173,583	12	329	2,699,605	3,795,497	810,669	2,077,508	9,383,280	2,988	1,329	4,317
2012	2,273,673	15	317	2,620,559	4,103,996	851,424	2,664,967	10,240,946	2,958	1,547	4,504
2013	2,526,844	10	313	1,246,246	6,730,870	559,275	2,960,742	11,497,132	3,157	1,393	4,550
<b>MA Total:</b>	<b>11,034,571</b>	<b>61</b>	<b>1,613</b>	<b>10,369,936</b>	<b>20,893,557</b>	<b>3,594,352</b>	<b>12,074,826</b>	<b>46,932,671</b>	<b>2,833</b>	<b>1,420</b>	<b>4,253</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.916	0.913	.
(14) Massachusetts Credibility:	0.910	1.000	.
(15) Countrywide Pure Premium:	2.237	1.071	3.308
(16) Countrywide Indicated Relativity:	0.721	0.688	.
(17) Countrywide Credibility:	0.050	0.000	.
(18) Countrywide Lost-Time Claims:	6954.0	.	.
(19) Pure Premium Underlying Present Rate:	1.940	1.058	2.999
(20) Relativity to Underlying Present Rate:	0.746	0.764	.
(21) Credibility to Underlying Relativity:	0.040	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.899	0.913	.
(24) Balanced Formula Relativity:	0.914	0.917	0.915

Class(es):		Effective: 7/1/2016							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)
2009	28,919	0	8	0	8,837	0	16,888	25,724	0.306	0.584	0.890
2010	83,742	3	20	212,376	189,433	79,922	96,592	578,323	4.798	2.108	6.906
2011	68,554	1	13	26,355	5,752	19,310	18,383	69,800	0.468	0.550	1.018
2012	66,743	3	7	1,050,747	92,235	137,362	52,725	1,333,069	17.125	2,848	19,973
2013	67,705	1	7	120,663	130,223	31,169	48,381	330,437	3.706	1.175	4.881
<b>MA Total:</b>	<b>315,664</b>	<b>8</b>	<b>55</b>	<b>1,410,142</b>	<b>426,480</b>	<b>267,762</b>	<b>232,969</b>	<b>2,337,353</b>	<b>5,818</b>	<b>1,586</b>	<b>7,405</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.881	1.020	.
(14) Massachusetts Credibility:	0.340	0.430	.
(15) Countrywide Pure Premium:	2.560	1.069	3.629
(16) Countrywide Indicated Relativity:	0.825	0.687	.
(17) Countrywide Credibility:	0.330	0.290	.
(18) Countrywide Lost-Time Claims:	655.00	.	.
(19) Pure Premium Underlying Present Rate:	5.953	2.399	8.352
(20) Relativity to Underlying Present Rate:	2.290	1.731	.
(21) Credibility to Underlying Relativity:	0.330	0.280	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.668	1.122	.
(24) Balanced Formula Relativity:	1.694	1.127	1.504

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## Calculation of Class Relativities

Class(es): 3808 AUTOMOBILE MFG OR ASSEMBLY		Effective: 7/1/2016							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)
2009	101.095	1	35	337.156	137.840	56.685	62.649	594.330	4.699	1.180	5.879
2010	130.900	0	57	0	46.321	0	99.024	145.345	0.354	0.756	1.110
2011	119.558	0	43	0	12.689	0	35.161	47.850	0.106	0.294	0.400
2012	90.519	0	50	0	28.698	0	80.883	109.582	0.317	0.894	1.211
2013	115.524	0	26	0	74.875	0	169.439	244.314	0.648	1.467	2.115
<b>MA Total:</b>	<b>557.596</b>	<b>1</b>	<b>211</b>	<b>337.156</b>	<b>300.423</b>	<b>56.685</b>	<b>447.156</b>	<b>1,141.420</b>	<b>1.143</b>	<b>0.904</b>	<b>2.047</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.059	1.404	.
(14) Massachusetts Credibility:	0.250	0.350	.
(15) Countrywide Pure Premium:	1.651	0.818	2.469
(16) Countrywide Indicated Relativity:	1.686	1.441	.
(17) Countrywide Credibility:	0.380	0.330	.
(18) Countrywide Lost-Time Claims:	3387.0	.	.
(19) Pure Premium Underlying Present Rate:	1.511	0.842	2.353
(20) Relativity to Underlying Present Rate:	1.703	1.402	.
(21) Credibility to Underlying Relativity:	0.370	0.320	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.535	1.416	.
(24) Balanced Formula Relativity:	1.514	1.406	1.474

Class(es): 3821 AUTOMOBILE DISMANTLING & DRIVERS		Effective: 7/1/2016							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)
2009	168.988	1	44	110.580	50.877	25.346	69.593	256.396	0.955	0.562	1.517
2010	182.144	1	38	72.961	117.015	28.284	128.332	346.591	1.043	0.860	1.903
2011	191.480	1	47	33.018	575.555	6.454	274.012	889.039	3.178	1.465	4.643
2012	175.047	0	42	0	226.092	0	190.012	416.104	1.292	1.085	2.377
2013	174.556	0	28	0	63.708	0	164.988	228.696	0.365	0.945	1.310
<b>MA Total:</b>	<b>892.215</b>	<b>3</b>	<b>199</b>	<b>216.559</b>	<b>1,033.246</b>	<b>60.083</b>	<b>826.938</b>	<b>2,136.826</b>	<b>1.401</b>	<b>0.994</b>	<b>2.395</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.473	1.656	.
(14) Massachusetts Credibility:	0.340	0.540	.
(15) Countrywide Pure Premium:	2.953	1.733	4.686
(16) Countrywide Indicated Relativity:	3.079	2.837	.
(17) Countrywide Credibility:	0.330	0.230	.
(18) Countrywide Lost-Time Claims:	1000.0	.	.
(19) Pure Premium Underlying Present Rate:	1.998	1.537	3.535
(20) Relativity to Underlying Present Rate:	2.579	2.853	.
(21) Credibility to Underlying Relativity:	0.330	0.230	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.368	2.203	.
(24) Balanced Formula Relativity:	2.355	2.205	2.297

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Manufacturing		
3826 AIRCRAFT ENGINE MFG											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	2,080,754	21	276	3,265,204	2,311,275	978,106	2,429,918	8,984,502	2,680	1,638	4,318
2010	1,919,404	17	305	1,713,116	4,410,275	664,835	3,251,466	10,039,692	3,190	2,040	5,231
2011	2,020,234	15	309	2,516,702	2,190,625	982,234	2,584,662	8,274,223	2,330	1,766	4,096
2012	1,903,231	15	243	1,787,526	2,180,587	810,928	2,008,647	6,787,688	2,085	1,481	3,566
2013	1,849,583	14	284	1,817,569	4,157,264	1,052,668	2,670,436	9,697,937	3,230	2,013	5,243
<b>MA Total:</b>	<b>9,773,205</b>	<b>82</b>	<b>1,417</b>	<b>11,100,116</b>	<b>15,250,026</b>	<b>4,488,771</b>	<b>12,945,129</b>	<b>43,784,043</b>	<b>2,696</b>	<b>1,784</b>	<b>4,480</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.496	2.771	.
(14) Massachusetts Credibility:	0.900	1.000	.
(15) Countrywide Pure Premium:	0.412	0.189	0.601
(16) Countrywide Indicated Relativity:	0.421	0.333	.
(17) Countrywide Credibility:	0.050	0.000	.
(18) Countrywide Lost-Time Claims:	375.00	.	.
(19) Pure Premium Underlying Present Rate:	2.149	1.478	3.627
(20) Relativity to Underlying Present Rate:	2.422	2.463	.
(21) Credibility to Underlying Relativity:	0.050	0.000	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.388	2.771	.
(24) Balanced Formula Relativity:	2.355	2.752	2.504

Class(es):		Effective: 7/1/2016							Manufacturing		
3841 TUBULAR METAL PRODUCTS MFG OR ASSEMBLY											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	56,231	0	8	0	40,558	0	9,405	49,963	0.721	0.167	0.889
2010	59,128	0	8	0	7,969	0	7,442	15,411	0.135	0.126	0.261
2011	56,334	0	7	0	0	0	3,312	3,312	0.000	0.059	0.059
2012	51,296	0	3	0	1,681	0	12,493	14,174	0.033	0.244	0.276
2013	46,193	0	2	0	0	0	1,005	1,005	0.000	0.022	0.022
<b>MA Total:</b>	<b>269,182</b>	<b>0</b>	<b>28</b>	<b>0</b>	<b>50,208</b>	<b>0</b>	<b>33,657</b>	<b>83,865</b>	<b>0.187</b>	<b>0.125</b>	<b>0.312</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.173	0.194	.
(14) Massachusetts Credibility:	0.140	0.220	.
(15) Countrywide Pure Premium:	0.498	0.515	1.013
(16) Countrywide Indicated Relativity:	0.508	0.908	.
(17) Countrywide Credibility:	0.250	0.260	.
(18) Countrywide Lost-Time Claims:	35.000	.	.
(19) Pure Premium Underlying Present Rate:	0.704	0.521	1.225
(20) Relativity to Underlying Present Rate:	0.793	0.868	.
(21) Credibility to Underlying Relativity:	0.610	0.520	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.635	0.730	.
(24) Balanced Formula Relativity:	0.626	0.725	0.663



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	285.959	1	46	205.682	241.667	108.249	235.215	790.813	1.564	1.201	2.765
2010	325.671	4	38	323.397	201.834	142.539	151.555	819.325	1.613	0.903	2.516
2011	326.814	1	47	366.623	414.379	123.502	184.883	1,089.387	2.390	0.944	3.333
2012	344.864	1	27	267.514	406.645	114.158	194.567	982.884	1.955	0.895	2.850
2013	389.795	1	38	244.981	454.522	88.170	394.797	1,182.470	1.795	1.239	3.034
<b>MA Total:</b>	<b>1,673,104</b>	<b>8</b>	<b>196</b>	<b>1,408,196</b>	<b>1,719,047</b>	<b>576,618</b>	<b>1,161,018</b>	<b>4,864,878</b>	<b>1.869</b>	<b>1.039</b>	<b>2.908</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.662	0.665	.
(14) Massachusetts Credibility:	0.440	0.580	.
(15) Countrywide Pure Premium:	3.417	1.877	5.294
(16) Countrywide Indicated Relativity:	1.323	1.326	.
(17) Countrywide Credibility:	0.280	0.210	.
(18) Countrywide Lost-Time Claims:	920.00	.	.
(19) Pure Premium Underlying Present Rate:	2.117	0.971	3.089
(20) Relativity to Underlying Present Rate:	0.908	0.701	.
(21) Credibility to Underlying Relativity:	0.280	0.210	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.916	0.811	.
(24) Balanced Formula Relativity:	0.905	0.809	0.871

Class(es):		Effective: 7/1/2016							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)
2009	11.541	0	6	0	0	0	3.470	3.470	0.000	0.301	0.301
2010	12.862	0	6	0	8.631	0	43.938	52.568	0.671	3.416	4.087
2011	11.703	0	5	0	585	0	3.325	3.910	0.050	0.284	0.334
2012	13.269	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	12.117	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>61.493</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>9.216</b>	<b>0</b>	<b>50.732</b>	<b>59.948</b>	<b>0.150</b>	<b>0.825</b>	<b>0.975</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.139	1.282	.
(14) Massachusetts Credibility:	0.110	0.170	.
(15) Countrywide Pure Premium:	2.057	1.397	3.454
(16) Countrywide Indicated Relativity:	2.100	2.463	.
(17) Countrywide Credibility:	0.450	0.420	.
(18) Countrywide Lost-Time Claims:	275.00	.	.
(19) Pure Premium Underlying Present Rate:	1.864	1.273	3.136
(20) Relativity to Underlying Present Rate:	2.100	2.121	.
(21) Credibility to Underlying Relativity:	0.440	0.410	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.884	2.122	.
(24) Balanced Formula Relativity:	1.858	2.107	1.951

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	4.923	0	1	0	0	0	941	941	0.000	0.191	0.191
2010	10.973	0	1	0	553	0	4,548	5,101	0.050	0.414	0.465
2011	36.915	0	3	0	90,595	0	40,425	131,020	2.454	1.095	3.549
2012	6.510	0	1	0	0	0	799	799	0.000	0.123	0.123
2013	4.733	0	1	0	0	0	337	337	0.000	0.071	0.071
<b>MA Total:</b>	<b>64,054</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>91,147</b>	<b>0</b>	<b>47,050</b>	<b>138,198</b>	<b>1.423</b>	<b>0.735</b>	<b>2.158</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.317	1.141	.
(14) Massachusetts Credibility:	0.100	0.150	.
(15) Countrywide Pure Premium:	1.681	0.850	2.531
(16) Countrywide Indicated Relativity:	1.716	1.499	.
(17) Countrywide Credibility:	0.400	0.430	.
(18) Countrywide Lost-Time Claims:	119.00	.	.
(19) Pure Premium Underlying Present Rate:	1.314	0.801	2.115
(20) Relativity to Underlying Present Rate:	1.481	1.335	.
(21) Credibility to Underlying Relativity:	0.500	0.420	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.559	1.376	.
(24) Balanced Formula Relativity:	1.537	1.367	1.474

Class(es):		Effective: 7/1/2016							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)
2009	251.380	1	62	336.083	518.573	67.168	394.785	1,316.610	3.400	1.838	5.238
2010	285.634	3	49	111.895	675.244	24.111	467.238	1,278.487	2.756	1.720	4.476
2011	161.217	1	38	33.237	877.964	93.242	541.207	1,545.651	5.652	3.935	9.587
2012	152.147	2	35	58.088	480.937	41.804	460.544	1,041.373	3.543	3.302	6.845
2013	155.112	2	40	270.121	530.502	123.822	305.144	1,229.588	5.162	2.766	7.927
<b>MA Total:</b>	<b>1,005,490</b>	<b>9</b>	<b>224</b>	<b>809,424</b>	<b>3,083,220</b>	<b>350,147</b>	<b>2,168,918</b>	<b>6,411,709</b>	<b>3.871</b>	<b>2.505</b>	<b>6.377</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.584	3.892	.
(14) Massachusetts Credibility:	0.380	0.610	.
(15) Countrywide Pure Premium:	3.064	1.690	4.754
(16) Countrywide Indicated Relativity:	3.129	2.980	.
(17) Countrywide Credibility:	0.310	0.200	.
(18) Countrywide Lost-Time Claims:	2272.0	.	.
(19) Pure Premium Underlying Present Rate:	2.416	1.821	4.237
(20) Relativity to Underlying Present Rate:	2.723	3.035	.
(21) Credibility to Underlying Relativity:	0.310	0.190	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	3.176	3.547	.
(24) Balanced Formula Relativity:	3.132	3.522	3.278

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## Calculation of Class Relativities

Class(es): 4036 PLASTERBOARD OR PLASTER BLOCK MFG & DRIVERS									Effective: 7/1/2016			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)			
2009	6.951	0	1	0	0	0	326	326	0.000	0.047	0.047			
2010	8.504	0	1	0	0	0	599	599	0.000	0.070	0.070			
2011	10.922	0	0	0	0	0	0	0	0.000	0.000	0.000			
2012	11.371	0	0	0	0	0	0	0	0.000	0.000	0.000			
2013	11.496	0	0	0	0	0	0	0	0.000	0.000	0.000			
<b>MA Total:</b>	<b>49,244</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>925</b>	<b>925</b>	<b>0.000</b>	<b>0.019</b>	<b>0.019</b>			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.029	.
(14) Massachusetts Credibility:	0.090	0.110	.
(15) Countrywide Pure Premium:	1.129	0.611	1.740
(16) Countrywide Indicated Relativity:	1.153	1.077	.
(17) Countrywide Credibility:	0.460	0.450	.
(18) Countrywide Lost-Time Claims:	201.00	.	.
(19) Pure Premium Underlying Present Rate:	1.488	0.582	2.070
(20) Relativity to Underlying Present Rate:	1.677	0.970	.
(21) Credibility to Underlying Relativity:	0.450	0.440	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.285	0.915	.
(24) Balanced Formula Relativity:	1.267	0.909	1.133

Class(es): 4038 PLASTER STATUARY OR ORNAMENT MFG									Effective: 7/1/2016			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)			
2009	19.296	0	1	0	0	0	410	410	0.000	0.021	0.021			
2010	20.294	1	0	121.151	0	129.103	0	250.254	5.970	6.362	12.332			
2011	17.974	0	0	0	0	0	0	0	0.000	0.000	0.000			
2012	17.308	0	0	0	0	0	0	0	0.000	0.000	0.000			
2013	15.298	0	0	0	0	0	0	0	0.000	0.000	0.000			
<b>MA Total:</b>	<b>90,169</b>	<b>1</b>	<b>1</b>	<b>121,151</b>	<b>0</b>	<b>129,103</b>	<b>410</b>	<b>250,664</b>	<b>1,344</b>	<b>1,436</b>	<b>2,780</b>			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.244	2.231	.
(14) Massachusetts Credibility:	0.110	0.160	.
(15) Countrywide Pure Premium:	2.788	0.980	3.769
(16) Countrywide Indicated Relativity:	2.847	1.729	.
(17) Countrywide Credibility:	0.300	0.320	.
(18) Countrywide Lost-Time Claims:	58.000	.	.
(19) Pure Premium Underlying Present Rate:	1.079	0.674	1.753
(20) Relativity to Underlying Present Rate:	1.216	1.123	.
(21) Credibility to Underlying Relativity:	0.590	0.520	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.708	1.494	.
(24) Balanced Formula Relativity:	1.685	1.484	1.610

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	38,343	0	3	0	2,885	0	16,398	19,283	0.075	0.428	0.503
2010	32,392	0	1	0	1,445	0	952	2,398	0.045	0.029	0.074
2011	50,266	1	13	80,888	21,785	33,050	66,664	202,387	2.043	1.984	4.026
2012	47,359	0	5	0	22,344	0	27,732	50,076	0.472	0.586	1.057
2013	59,234	0	7	0	17,680	0	57,004	74,684	0.298	0.962	1.261
<b>MA Total:</b>	<b>227,594</b>	<b>1</b>	<b>29</b>	<b>80,888</b>	<b>66,140</b>	<b>33,050</b>	<b>168,749</b>	<b>348,827</b>	<b>0.646</b>	<b>0.887</b>	<b>1.533</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.598	1.377	.
(14) Massachusetts Credibility:	0.140	0.210	.
(15) Countrywide Pure Premium:	0.911	0.408	1.318
(16) Countrywide Indicated Relativity:	0.930	0.718	.
(17) Countrywide Credibility:	0.260	0.280	.
(18) Countrywide Lost-Time Claims:	41.000	.	.
(19) Pure Premium Underlying Present Rate:	0.831	0.540	1.371
(20) Relativity to Underlying Present Rate:	0.936	0.900	.
(21) Credibility to Underlying Relativity:	0.600	0.510	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.887	0.949	.
(24) Balanced Formula Relativity:	0.875	0.943	0.900

Class(es):		Effective: 7/1/2016							Manufacturing		
4061 POTTERY MFG: EARTHENWARE-GLAZD OR PORCELN-HAND MOLDED OR CAST											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	17,484	0	2	0	0	0	1,165	1,165	0.000	0.067	0.067
2010	10,331	0	2	0	0	0	339	339	0.000	0.033	0.033
2011	30,269	0	3	0	0	0	1,131	1,131	0.000	0.037	0.037
2012	39,662	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	43,212	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>140,958</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,635</b>	<b>2,635</b>	<b>0.000</b>	<b>0.019</b>	<b>0.019</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.029	.
(14) Massachusetts Credibility:	0.110	0.200	.
(15) Countrywide Pure Premium:	1.072	0.619	1.691
(16) Countrywide Indicated Relativity:	1.095	1.091	.
(17) Countrywide Credibility:	0.450	0.400	.
(18) Countrywide Lost-Time Claims:	281.00	.	.
(19) Pure Premium Underlying Present Rate:	0.852	0.774	1.626
(20) Relativity to Underlying Present Rate:	0.960	1.289	.
(21) Credibility to Underlying Relativity:	0.440	0.400	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.915	0.958	.
(24) Balanced Formula Relativity:	0.902	0.951	0.921

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## Calculation of Class Relativities

Class(es): 4112 INCANDESCENT LAMP MFG		Effective: 7/1/2016							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)
2009	117.159	0	6	0	7.941	0	28.305	36.246	0.068	0.242	0.309
2010	103.028	0	14	0	12.519	0	30.089	42.607	0.122	0.292	0.414
2011	182.773	0	2	0	0	0	262	262	0.000	0.001	0.001
2012	201.629	0	3	0	2.123	0	12.397	14.520	0.011	0.061	0.072
2013	70.148	0	3	0	0	0	1.574	1.574	0.000	0.022	0.022
<b>MA Total:</b>	<b>674.738</b>	<b>0</b>	<b>28</b>	<b>0</b>	<b>22.583</b>	<b>0</b>	<b>72.626</b>	<b>95.209</b>	<b>0.033</b>	<b>0.108</b>	<b>0.141</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.031	0.167	.
(14) Massachusetts Credibility:	0.140	0.210	.
(15) Countrywide Pure Premium:	0.424	0.207	0.631
(16) Countrywide Indicated Relativity:	0.433	0.364	.
(17) Countrywide Credibility:	0.390	0.400	.
(18) Countrywide Lost-Time Claims:	109.00	.	.
(19) Pure Premium Underlying Present Rate:	0.316	0.187	0.503
(20) Relativity to Underlying Present Rate:	0.356	0.312	.
(21) Credibility to Underlying Relativity:	0.470	0.390	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.340	0.303	.
(24) Balanced Formula Relativity:	0.336	0.300	0.322

Class(es): 4114 GLASSWARE MFG-NOC		Effective: 7/1/2016							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)
2009	4.338	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	24.754	0	2	0	0	0	2.619	2.619	0.000	0.106	0.106
2011	135.079	1	17	21.627	19.998	16.668	33.685	91.978	0.308	0.373	0.681
2012	153.657	0	18	0	43.619	0	23.862	67.481	0.284	0.155	0.439
2013	136.015	1	13	82.294	8.672	25.239	9.193	125.398	0.669	0.253	0.922
<b>MA Total:</b>	<b>453.842</b>	<b>2</b>	<b>50</b>	<b>103.921</b>	<b>72.289</b>	<b>41.907</b>	<b>69.359</b>	<b>287.476</b>	<b>0.388</b>	<b>0.245</b>	<b>0.633</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.359	0.381	.
(14) Massachusetts Credibility:	0.200	0.290	.
(15) Countrywide Pure Premium:	1.384	0.772	2.156
(16) Countrywide Indicated Relativity:	1.413	1.362	.
(17) Countrywide Credibility:	0.400	0.360	.
(18) Countrywide Lost-Time Claims:	329.00	.	.
(19) Pure Premium Underlying Present Rate:	1.113	0.612	1.725
(20) Relativity to Underlying Present Rate:	1.255	1.019	.
(21) Credibility to Underlying Relativity:	0.400	0.350	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.139	0.957	.
(24) Balanced Formula Relativity:	1.123	0.951	1.059

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## Calculation of Class Relativities

Class(es): 4130 GLASS MERCHANT		Effective: 7/1/2016							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)
2009	175.599	0	50	0	191.555	0	139.162	330.717	1.091	0.793	1.883
2010	165.879	0	25	0	65.782	0	85.589	151.371	0.397	0.516	0.913
2011	172.898	0	40	0	421.910	0	274.486	696.397	2.440	1.588	4.028
2012	188.031	3	35	158.962	24.632	136.621	57.357	377.572	0.976	1.032	2.008
2013	193.870	0	25	0	461.661	0	167.295	628.956	2.381	0.863	3.244
<b>MA Total:</b>	<b>896.277</b>	<b>3</b>	<b>175</b>	<b>158.962</b>	<b>1,165,540</b>	<b>136,621</b>	<b>723,890</b>	<b>2,185,013</b>	<b>1.478</b>	<b>0.960</b>	<b>2.438</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.368	1.492	.
(14) Massachusetts Credibility:	0.330	0.490	.
(15) Countrywide Pure Premium:	1.600	0.943	2.544
(16) Countrywide Indicated Relativity:	1.634	1.663	.
(17) Countrywide Credibility:	0.340	0.260	.
(18) Countrywide Lost-Time Claims:	698.00	.	.
(19) Pure Premium Underlying Present Rate:	1.900	1.219	3.119
(20) Relativity to Underlying Present Rate:	2.141	2.030	.
(21) Credibility to Underlying Relativity:	0.330	0.250	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.714	1.671	.
(24) Balanced Formula Relativity:	1.690	1.659	1.679

Class(es): 4133 CATHEDRAL OR ART GLASS WINDOW MFG		Effective: 7/1/2016							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)
2009	9.924	0	1	0	0	0	97	97	0.000	0.010	0.010
2010	8.315	1	0	68.033	0	10.613	0	78.646	8.182	1.276	9.458
2011	8.692	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	8.411	0	1	0	7.925	0	273	8.198	0.942	0.032	0.975
2013	10.431	0	1	0	124	0	717	841	0.012	0.069	0.081
<b>MA Total:</b>	<b>45.773</b>	<b>1</b>	<b>3</b>	<b>68.033</b>	<b>8,049</b>	<b>10,613</b>	<b>1,088</b>	<b>87,782</b>	<b>1.662</b>	<b>0.256</b>	<b>1.918</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.539	0.397	.
(14) Massachusetts Credibility:	0.070	0.110	.
(15) Countrywide Pure Premium:	0.863	0.439	1.302
(16) Countrywide Indicated Relativity:	0.881	0.773	.
(17) Countrywide Credibility:	0.200	0.210	.
(18) Countrywide Lost-Time Claims:	20.000	.	.
(19) Pure Premium Underlying Present Rate:	0.761	0.529	1.290
(20) Relativity to Underlying Present Rate:	0.857	0.881	.
(21) Credibility to Underlying Relativity:	0.730	0.680	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.910	0.805	.
(24) Balanced Formula Relativity:	0.897	0.800	0.861

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## Calculation of Class Relativities

Class(es): 4150 OPTICAL GOODS MFG-NOC		Effective: 7/1/2016							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)
2009	1,542,080	3	107	325,251	282,696	94,335	261,189	963,471	0.394	0.231	0.625
2010	1,704,120	4	102	230,167	218,497	57,153	228,950	734,768	0.263	0.168	0.431
2011	2,049,053	4	103	460,969	373,766	86,434	277,997	1,199,166	0.407	0.178	0.585
2012	1,802,998	2	103	74,866	502,314	14,865	319,523	911,568	0.320	0.185	0.506
2013	1,755,277	1	104	12,003	469,023	18,391	291,091	790,507	0.274	0.176	0.450
<b>MA Total:</b>	<b>8,853,528</b>	<b>14</b>	<b>519</b>	<b>1,103,255</b>	<b>1,846,296</b>	<b>271,178</b>	<b>1,378,751</b>	<b>4,599,479</b>	<b>0.333</b>	<b>0.186</b>	<b>0.520</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.308	0.290	.
(14) Massachusetts Credibility:	0.410	0.580	.
(15) Countrywide Pure Premium:	0.382	0.212	0.594
(16) Countrywide Indicated Relativity:	0.390	0.375	.
(17) Countrywide Credibility:	0.300	0.210	.
(18) Countrywide Lost-Time Claims:	360.00	.	.
(19) Pure Premium Underlying Present Rate:	0.326	0.183	0.509
(20) Relativity to Underlying Present Rate:	0.368	0.305	.
(21) Credibility to Underlying Relativity:	0.290	0.210	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.350	0.311	.
(24) Balanced Formula Relativity:	0.345	0.308	0.331

Class(es): 4239 PAPER MFG		Effective: 7/1/2016							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)
2009	421,013	0	52	0	95,282	0	106,849	202,131	0.226	0.254	0.480
2010	448,955	1	78	449,114	440,130	169,780	474,855	1,533,879	1.981	1.436	3.417
2011	446,925	1	54	433,261	563,618	236,294	290,025	1,523,198	2.231	1.178	3.408
2012	410,086	0	48	0	262,486	0	241,135	503,622	0.640	0.588	1.228
2013	160,672	0	26	0	17,273	0	42,314	59,588	0.108	0.263	0.371
<b>MA Total:</b>	<b>1,887,652</b>	<b>2</b>	<b>258</b>	<b>882,375</b>	<b>1,378,790</b>	<b>406,074</b>	<b>1,155,179</b>	<b>3,822,418</b>	<b>1.198</b>	<b>0.827</b>	<b>2.025</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.109	1.285	.
(14) Massachusetts Credibility:	0.380	0.590	.
(15) Countrywide Pure Premium:	1.319	0.575	1.894
(16) Countrywide Indicated Relativity:	1.346	1.014	.
(17) Countrywide Credibility:	0.310	0.210	.
(18) Countrywide Lost-Time Claims:	1499.0	.	.
(19) Pure Premium Underlying Present Rate:	1.276	0.897	2.173
(20) Relativity to Underlying Present Rate:	1.438	1.494	.
(21) Credibility to Underlying Relativity:	0.310	0.200	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.285	1.270	.
(24) Balanced Formula Relativity:	1.267	1.261	1.265

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## Calculation of Class Relativities

Class(es): 4243 BOX MFG-FOLDING PAPER-NOC		Effective: 7/1/2016							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)
2009	290.765	1	46	42.530	385.465	79.996	211.188	719.179	1.472	1.001	2.473
2010	303.972	4	58	118.841	950.846	99.837	249.178	1,418.702	3.519	1.148	4.667
2011	272.750	4	56	203.866	656.291	92.318	202.570	1,155.045	3.154	1.081	4.235
2012	271.995	2	38	374.604	844.049	341.895	297.157	1,857.705	4.480	2.349	6.830
2013	226.968	1	30	86.756	528.571	30.925	138.217	784.469	2.711	0.745	3.456
<b>MA Total:</b>	<b>1,366.451</b>	<b>12</b>	<b>228</b>	<b>826.597</b>	<b>3,365,222</b>	<b>644.971</b>	<b>1,098,309</b>	<b>5,935.100</b>	<b>3.068</b>	<b>1.276</b>	<b>4.343</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.840	1.982	.
(14) Massachusetts Credibility:	0.360	0.540	.
(15) Countrywide Pure Premium:	1.007	0.564	1.571
(16) Countrywide Indicated Relativity:	1.028	0.995	.
(17) Countrywide Credibility:	0.320	0.230	.
(18) Countrywide Lost-Time Claims:	1069.0	.	.
(19) Pure Premium Underlying Present Rate:	1.522	0.999	2.520
(20) Relativity to Underlying Present Rate:	1.715	1.664	.
(21) Credibility to Underlying Relativity:	0.320	0.230	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.900	1.682	.
(24) Balanced Formula Relativity:	1.874	1.670	1.798

Class(es): 4244 CORRUGATED OR FIBERBOARD CONTAINER MFG		Effective: 7/1/2016							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)
2009	159.797	0	44	0	573.922	0	314.063	887.985	3.592	1.965	5.557
2010	256.927	0	54	0	195.708	0	246.296	442.004	0.762	0.959	1.720
2011	372.179	0	44	0	171.916	0	172.637	344.553	0.462	0.464	0.926
2012	356.482	0	32	0	243.327	0	166.976	410.302	0.683	0.468	1.151
2013	338.472	0	36	0	524.828	0	278.665	803.493	1.551	0.823	2.374
<b>MA Total:</b>	<b>1,483.857</b>	<b>0</b>	<b>210</b>	<b>0</b>	<b>1,709,700</b>	<b>0</b>	<b>1,178,637</b>	<b>2,888.337</b>	<b>1.152</b>	<b>0.794</b>	<b>1.947</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.067	1.234	.
(14) Massachusetts Credibility:	0.350	0.570	.
(15) Countrywide Pure Premium:	1.164	0.651	1.815
(16) Countrywide Indicated Relativity:	1.188	1.148	.
(17) Countrywide Credibility:	0.330	0.220	.
(18) Countrywide Lost-Time Claims:	971.00	.	.
(19) Pure Premium Underlying Present Rate:	1.362	1.042	2.404
(20) Relativity to Underlying Present Rate:	1.535	1.736	.
(21) Credibility to Underlying Relativity:	0.320	0.210	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.257	1.321	.
(24) Balanced Formula Relativity:	1.239	1.312	1.266



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## Calculation of Class Relativities

Class(es): 4250 PAPER COATING		Effective: 7/1/2016							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)
2009	778,123	1	106	151,131	823,409	69,068	513,701	1,557,310	1,252	0,749	2,001
2010	798,512	6	93	999,006	467,216	635,138	400,196	2,501,556	1,836	1,297	3,133
2011	817,487	1	88	21,439	881,533	29,533	734,585	1,667,089	1,105	0,935	2,039
2012	858,569	3	75	569,453	1,153,690	488,652	637,385	2,849,180	2,007	1,312	3,319
2013	890,994	1	82	39,660	573,417	24,071	304,270	941,417	0,688	0,369	1,057
<b>MA Total:</b>	<b>4,143,685</b>	<b>12</b>	<b>444</b>	<b>1,780,688</b>	<b>3,899,265</b>	<b>1,246,461</b>	<b>2,590,136</b>	<b>9,516,550</b>	<b>1,371</b>	<b>0,926</b>	<b>2,297</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.269	1.438	.
(14) Massachusetts Credibility:	0.450	0.700	.
(15) Countrywide Pure Premium:	0.722	0.348	1.070
(16) Countrywide Indicated Relativity:	0.737	0.614	.
(17) Countrywide Credibility:	0.280	0.150	.
(18) Countrywide Lost-Time Claims:	513.00	.	.
(19) Pure Premium Underlying Present Rate:	0.903	0.644	1.547
(20) Relativity to Underlying Present Rate:	1.018	1.073	.
(21) Credibility to Underlying Relativity:	0.270	0.150	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.052	1.260	.
(24) Balanced Formula Relativity:	1.038	1.251	1.118

Class(es): 4251 STATIONERY MFG		Effective: 7/1/2016							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)
2009	185,919	0	11	0	26,908	0	27,125	54,033	0,145	0,146	0,291
2010	294,153	2	44	39,930	674,950	11,285	229,233	955,397	2,430	0,818	3,248
2011	149,016	0	7	0	45,333	0	25,883	71,215	0,304	0,174	0,478
2012	147,754	0	7	0	758,929	0	137,553	896,482	5,136	0,931	6,067
2013	138,854	0	8	0	15,327	0	12,062	27,389	0,110	0,087	0,197
<b>MA Total:</b>	<b>915,695</b>	<b>2</b>	<b>77</b>	<b>39,930</b>	<b>1,521,447</b>	<b>11,285</b>	<b>431,855</b>	<b>2,004,517</b>	<b>1,705</b>	<b>0,484</b>	<b>2,189</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.578	0.752	.
(14) Massachusetts Credibility:	0.250	0.360	.
(15) Countrywide Pure Premium:	1.309	0.708	2.018
(16) Countrywide Indicated Relativity:	1.337	1.249	.
(17) Countrywide Credibility:	0.380	0.320	.
(18) Countrywide Lost-Time Claims:	328.00	.	.
(19) Pure Premium Underlying Present Rate:	0.894	0.529	1.423
(20) Relativity to Underlying Present Rate:	1.007	0.881	.
(21) Credibility to Underlying Relativity:	0.370	0.320	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.275	0.952	.
(24) Balanced Formula Relativity:	1.258	0.946	1.141

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## Calculation of Class Relativities

Class(es): 4273 BAG MFG-PAPER OR PLASTIC		Effective: 7/1/2016							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)
2009	37,745	0	10	0	17,492	0	13,275	30,767	0.463	0.352	0.815
2010	40,087	0	9	0	4,474	0	11,609	16,083	0.112	0.290	0.401
2011	39,265	0	11	0	2,802	0	8,331	11,133	0.071	0.212	0.284
2012	46,639	0	13	0	13,851	0	22,769	36,620	0.297	0.488	0.785
2013	45,097	1	15	45,438	96,703	26,213	49,152	217,506	3.152	1.671	4.823
<b>MA Total:</b>	<b>208,833</b>	<b>1</b>	<b>58</b>	<b>45,438</b>	<b>135,321</b>	<b>26,213</b>	<b>105,137</b>	<b>312,109</b>	<b>0.866</b>	<b>0.629</b>	<b>1.495</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.801	0.977	.
(14) Massachusetts Credibility:	0.140	0.220	.
(15) Countrywide Pure Premium:	1.052	0.570	1.622
(16) Countrywide Indicated Relativity:	1.074	1.005	.
(17) Countrywide Credibility:	0.430	0.390	.
(18) Countrywide Lost-Time Claims:	579.00	.	.
(19) Pure Premium Underlying Present Rate:	0.978	0.681	1.659
(20) Relativity to Underlying Present Rate:	1.102	1.134	.
(21) Credibility to Underlying Relativity:	0.430	0.390	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.048	1.049	.
(24) Balanced Formula Relativity:	1.034	1.042	1.037

Class(es): 4279 PAPER GOODS MFG NOC		Effective: 7/1/2016							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)
2009	331,608	0	58	0	168,799	0	199,482	368,281	0.509	0.602	1.111
2010	329,240	2	51	126,623	200,111	14,187	188,377	529,297	0.992	0.615	1.608
2011	325,187	2	47	69,477	204,966	126,237	206,385	607,065	0.844	1.023	1.867
2012	317,224	1	46	52,038	62,208	2,229	102,073	218,548	0.360	0.329	0.689
2013	349,353	1	39	35,344	222,467	13,290	143,566	414,667	0.738	0.449	1.187
<b>MA Total:</b>	<b>1,652,612</b>	<b>6</b>	<b>241</b>	<b>283,483</b>	<b>858,551</b>	<b>155,943</b>	<b>839,882</b>	<b>2,137,858</b>	<b>0.691</b>	<b>0.603</b>	<b>1.294</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.640	0.936	.
(14) Massachusetts Credibility:	0.330	0.520	.
(15) Countrywide Pure Premium:	1.189	0.657	1.846
(16) Countrywide Indicated Relativity:	1.214	1.158	.
(17) Countrywide Credibility:	0.340	0.240	.
(18) Countrywide Lost-Time Claims:	995.00	.	.
(19) Pure Premium Underlying Present Rate:	1.068	0.751	1.819
(20) Relativity to Underlying Present Rate:	1.204	1.251	.
(21) Credibility to Underlying Relativity:	0.330	0.240	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.021	1.065	.
(24) Balanced Formula Relativity:	1.007	1.058	1.026

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## Calculation of Class Relativities

Class(es): 4282 DRESS PATTERN MFG-PAPER		Effective: 7/1/2016							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)
2009	515	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	520	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	1,674	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	2,241	0	1	0	0	0	925	925	0.000	0.413	0.413
2013	10,227	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>15,177</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>925</b>	<b>925</b>	<b>0.000</b>	<b>0.061</b>	<b>0.061</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.095	.
(14) Massachusetts Credibility:	0.030	0.050	.
(15) Countrywide Pure Premium:	0.079	0.143	0.222
(16) Countrywide Indicated Relativity:	0.081	0.252	.
(17) Countrywide Credibility:	0.130	0.140	.
(18) Countrywide Lost-Time Claims:	7.000	.	.
(19) Pure Premium Underlying Present Rate:	0.397	0.253	0.650
(20) Relativity to Underlying Present Rate:	0.447	0.422	.
(21) Credibility to Underlying Relativity:	0.840	0.810	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.386	0.382	.
(24) Balanced Formula Relativity:	0.381	0.379	0.380

Class(es): 4283 BUILDING OR ROOFING PAPER OR FELT PREPARATION-NO INSTALLATION		Effective: 7/1/2016							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)
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	90	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	536	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	3,170	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	13,526	0	3	0	10,341	0	4,401	14,741	0.765	0.325	1.090
<b>MA Total:</b>	<b>17,322</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>10,341</b>	<b>0</b>	<b>4,401</b>	<b>14,741</b>	<b>0.597</b>	<b>0.254</b>	<b>0.851</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.553	0.395	.
(14) Massachusetts Credibility:	0.060	0.080	.
(15) Countrywide Pure Premium:	0.692	0.446	1.138
(16) Countrywide Indicated Relativity:	0.707	0.786	.
(17) Countrywide Credibility:	0.380	0.400	.
(18) Countrywide Lost-Time Claims:	101.00	.	.
(19) Pure Premium Underlying Present Rate:	1.153	0.671	1.824
(20) Relativity to Underlying Present Rate:	1.299	1.118	.
(21) Credibility to Underlying Relativity:	0.560	0.520	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.029	0.928	.
(24) Balanced Formula Relativity:	1.015	0.921	0.980

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## Calculation of Class Relativities

Class(es): 4299 PRINTING		Effective: 7/1/2016							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)
2009	2,175,170	9	281	1,293,961	1,432,506	377,745	974,357	4,078,569	1,253	0.622	1.875
2010	2,119,728	9	224	902,589	856,705	683,846	654,860	3,098,000	0.830	0.632	1.462
2011	2,216,521	15	243	1,334,582	934,117	615,010	620,477	3,504,186	1.024	0.557	1.581
2012	2,135,761	7	189	1,350,667	649,356	634,116	667,526	3,301,664	0.936	0.609	1.546
2013	2,261,978	8	300	956,259	1,427,025	151,963	1,405,591	3,940,837	1.054	0.689	1.742
<b>MA Total:</b>	<b>10,909,158</b>	<b>48</b>	<b>1,237</b>	<b>5,838,058</b>	<b>5,299,709</b>	<b>2,462,680</b>	<b>4,322,811</b>	<b>17,923,257</b>	<b>1.021</b>	<b>0.622</b>	<b>1.643</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.945	0.966	.
(14) Massachusetts Credibility:	0.640	0.900	.
(15) Countrywide Pure Premium:	0.977	0.556	1.533
(16) Countrywide Indicated Relativity:	0.998	0.980	.
(17) Countrywide Credibility:	0.180	0.050	.
(18) Countrywide Lost-Time Claims:	5374.0	.	.
(19) Pure Premium Underlying Present Rate:	0.816	0.453	1.269
(20) Relativity to Underlying Present Rate:	0.920	0.754	.
(21) Credibility to Underlying Relativity:	0.180	0.050	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.950	0.956	.
(24) Balanced Formula Relativity:	0.937	0.950	0.942

Class(es): 4301 WALLPAPER MFG		Effective: 7/1/2016							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)
2009	154	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	99	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	16	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>269</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	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:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	2.819	2.435	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.540	1.485	4.025
(20) Relativity to Underlying Present Rate:	2.862	2.474	.
(21) Credibility to Underlying Relativity:	0.990	0.980	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.833	2.425	.
(24) Balanced Formula Relativity:	2.794	2.408	2.650

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## Calculation of Class Relativities

Class(es): 4304 NEWSPAPER PUBLISHING		Effective: 7/1/2016							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)
2009	198.733	1	32	37.665	19.400	19.156	83.826	160.047	0.287	0.518	0.805
2010	216.181	2	39	201.975	9.605	248.364	39.046	498.990	0.979	1.329	2.308
2011	245.890	5	32	721.910	157.449	964.780	155.589	1,999.728	3.576	4.556	8.133
2012	209.545	7	34	1,095.620	124.212	709.484	99.904	2,029.220	5.821	3.863	9.684
2013	217.445	3	42	302.350	937.867	248.446	329.753	1,818.415	5.704	2.659	8.363
<b>MA Total:</b>	<b>1,087.794</b>	<b>18</b>	<b>179</b>	<b>2,359,519</b>	<b>1,248,533</b>	<b>2,190,229</b>	<b>708,118</b>	<b>6,506.399</b>	<b>3.317</b>	<b>2.664</b>	<b>5.981</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.070	4.139	.
(14) Massachusetts Credibility:	0.320	0.490	.
(15) Countrywide Pure Premium:	1.907	1.243	3.150
(16) Countrywide Indicated Relativity:	1.947	2.191	.
(17) Countrywide Credibility:	0.340	0.260	.
(18) Countrywide Lost-Time Claims:	1514.0	.	.
(19) Pure Premium Underlying Present Rate:	1.418	1.008	2.426
(20) Relativity to Underlying Present Rate:	1.598	1.679	.
(21) Credibility to Underlying Relativity:	0.340	0.250	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.188	3.018	.
(24) Balanced Formula Relativity:	2.158	2.997	2.471

Class(es): 4307 BOOKBINDING		Effective: 7/1/2016							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)
2009	202.250	0	18	0	74.690	0	29.130	103.820	0.369	0.144	0.513
2010	195.513	1	23	96.470	158.837	3.869	107.043	366.219	1.306	0.567	1.873
2011	143.463	3	13	64.268	30.427	156.190	70.336	321.222	0.660	1.579	2.239
2012	156.720	1	8	245.556	33.027	25.564	33.649	337.795	1.778	0.378	2.155
2013	149.370	0	10	0	235.658	0	168.419	404.077	1.578	1.128	2.705
<b>MA Total:</b>	<b>847.316</b>	<b>5</b>	<b>72</b>	<b>406.294</b>	<b>532.639</b>	<b>185.623</b>	<b>408.577</b>	<b>1,533.133</b>	<b>1.108</b>	<b>0.701</b>	<b>1.809</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.026	1.089	.
(14) Massachusetts Credibility:	0.220	0.330	.
(15) Countrywide Pure Premium:	0.800	0.487	1.288
(16) Countrywide Indicated Relativity:	0.817	0.859	.
(17) Countrywide Credibility:	0.390	0.340	.
(18) Countrywide Lost-Time Claims:	293.00	.	.
(19) Pure Premium Underlying Present Rate:	0.709	0.460	1.169
(20) Relativity to Underlying Present Rate:	0.799	0.766	.
(21) Credibility to Underlying Relativity:	0.390	0.330	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.856	0.905	.
(24) Balanced Formula Relativity:	0.844	0.898	0.864

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	104	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	104	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	114	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	115	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	118	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>556</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.020	0.010	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	1.679	0.400	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	1.513	0.244	1.756
(20) Relativity to Underlying Present Rate:	1.705	0.406	.
(21) Credibility to Underlying Relativity:	0.980	0.990	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.671	0.402	.
(24) Balanced Formula Relativity:	1.647	0.399	1.181

Class(es):		Effective: 7/1/2016							Manufacturing		
4350 ELECTROTYPING											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	1	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	3	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	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:	0.313	0.249	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.282	0.152	0.433
(20) Relativity to Underlying Present Rate:	0.317	0.253	.
(21) Credibility to Underlying Relativity:	1.000	1.000	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.317	0.253	.
(24) Balanced Formula Relativity:	0.313	0.251	0.290

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## Calculation of Class Relativities

Class(es): 4351 PHOTOENGRAVING		Effective: 7/1/2016							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)
2009	246,799	0	17	0	3,407	0	21,856	25,263	0.014	0.089	0.102
2010	280,999	1	13	53,970	47,335	16,051	15,741	133,099	0.361	0.113	0.474
2011	240,577	0	25	0	79,591	0	18,371	97,962	0.331	0.076	0.407
2012	243,488	0	15	0	10,187	0	7,746	17,933	0.042	0.032	0.074
2013	264,619	1	25	87,031	40,561	120,665	42,803	291,059	0.482	0.618	1.100
<b>MA Total:</b>	<b>1,276,482</b>	<b>2</b>	<b>95</b>	<b>141,001</b>	<b>181,081</b>	<b>136,716</b>	<b>106,517</b>	<b>565,315</b>	<b>0.252</b>	<b>0.191</b>	<b>0.443</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.234	0.296	.
(14) Massachusetts Credibility:	0.230	0.300	.
(15) Countrywide Pure Premium:	0.267	0.236	0.503
(16) Countrywide Indicated Relativity:	0.273	0.416	.
(17) Countrywide Credibility:	0.260	0.270	.
(18) Countrywide Lost-Time Claims:	38.000	.	.
(19) Pure Premium Underlying Present Rate:	0.551	0.243	0.795
(20) Relativity to Underlying Present Rate:	0.622	0.405	.
(21) Credibility to Underlying Relativity:	0.510	0.430	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.442	0.376	.
(24) Balanced Formula Relativity:	0.436	0.373	0.412

Class(es): 4352 ENGRAVING		Effective: 7/1/2016							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)
2009	66,594	0	1	0	0	0	1,201	1,201	0.000	0.018	0.018
2010	54,318	0	4	0	3,004	0	2,614	5,618	0.055	0.048	0.103
2011	58,801	0	3	0	394	0	2,677	3,071	0.007	0.046	0.052
2012	52,698	0	4	0	67,822	0	66,090	133,912	1.287	1.254	2.541
2013	46,244	0	1	0	0	0	224	224	0.000	0.005	0.005
<b>MA Total:</b>	<b>278,655</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>71,220</b>	<b>0</b>	<b>72,806</b>	<b>144,026</b>	<b>0.256</b>	<b>0.261</b>	<b>0.517</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.237	0.406	.
(14) Massachusetts Credibility:	0.110	0.180	.
(15) Countrywide Pure Premium:	2.193	0.588	2.781
(16) Countrywide Indicated Relativity:	2.239	1.038	.
(17) Countrywide Credibility:	0.340	0.360	.
(18) Countrywide Lost-Time Claims:	80.000	.	.
(19) Pure Premium Underlying Present Rate:	0.375	0.301	0.676
(20) Relativity to Underlying Present Rate:	0.423	0.501	.
(21) Credibility to Underlying Relativity:	0.550	0.460	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.020	0.677	.
(24) Balanced Formula Relativity:	1.006	0.672	0.881

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Manufacturing		
4360 MOTION PICTURE: DEVLPMNT OF NEGATIVES, PRINTING & ALL SUB OP											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	145,841	0	4	0	26,329	0	8,680	35,009	0.181	0.060	0.240
2010	126,006	0	4	0	11,357	0	8,154	19,511	0.090	0.065	0.155
2011	113,434	0	3	0	27,934	0	35,322	63,256	0.246	0.311	0.558
2012	125,451	0	3	0	1,354	0	8,356	9,710	0.011	0.067	0.077
2013	577,792	0	5	0	0	0	30,648	30,648	0.000	0.053	0.053
<b>MA Total:</b>	<b>1,088,524</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>66,974</b>	<b>0</b>	<b>91,159</b>	<b>158,133</b>	<b>0.062</b>	<b>0.084</b>	<b>0.145</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.057	0.130	.
(14) Massachusetts Credibility:	0.220	0.340	.
(15) Countrywide Pure Premium:	0.430	0.231	0.662
(16) Countrywide Indicated Relativity:	0.439	0.408	.
(17) Countrywide Credibility:	0.390	0.330	.
(18) Countrywide Lost-Time Claims:	176.00	.	.
(19) Pure Premium Underlying Present Rate:	0.553	0.400	0.952
(20) Relativity to Underlying Present Rate:	0.623	0.666	.
(21) Credibility to Underlying Relativity:	0.390	0.330	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.427	0.399	.
(24) Balanced Formula Relativity:	0.421	0.396	0.411

Class(es):		Effective: 7/1/2016							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)
2009	715,567	1	23	102,598	53,761	31,425	101,799	289,583	0.219	0.186	0.405
2010	664,240	1	41	93,405	24,766	21,168	52,118	191,457	0.178	0.110	0.288
2011	641,074	2	33	132,618	19,780	19,602	40,197	212,196	0.238	0.093	0.331
2012	646,987	1	19	30,880	71,952	58,598	49,161	210,591	0.159	0.167	0.325
2013	615,430	1	23	305,697	68,033	424,887	61,283	859,899	0.607	0.790	1.397
<b>MA Total:</b>	<b>3,283,297</b>	<b>6</b>	<b>139</b>	<b>665,198</b>	<b>238,291</b>	<b>555,679</b>	<b>304,558</b>	<b>1,763,726</b>	<b>0.275</b>	<b>0.262</b>	<b>0.537</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.276	4.559	.
(14) Massachusetts Credibility:	0.250	0.420	.
(15) Countrywide Pure Premium:	0.373	0.261	0.635
(16) Countrywide Indicated Relativity:	5.478	5.298	.
(17) Countrywide Credibility:	0.380	0.290	.
(18) Countrywide Lost-Time Claims:	701.00	.	.
(19) Pure Premium Underlying Present Rate:	0.268	0.228	0.496
(20) Relativity to Underlying Present Rate:	4.010	4.476	.
(21) Credibility to Underlying Relativity:	0.370	0.290	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	4.385	4.749	.
(24) Balanced Formula Relativity:	4.370	4.752	4.525



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	6.773	0	1	0	0	0	678	678	0.000	0.100	0.100
2010	7.685	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	10.871	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	9.920	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	8.720	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>43,970</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>678</b>	<b>678</b>	<b>0.000</b>	<b>0.015</b>	<b>0.015</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.026	.
(14) Massachusetts Credibility:	0.050	0.070	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.370	0.355	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.288	0.192	0.481
(20) Relativity to Underlying Present Rate:	0.372	0.357	.
(21) Credibility to Underlying Relativity:	0.950	0.930	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.354	0.334	.
(24) Balanced Formula Relativity:	0.352	0.334	0.345

Class(es):		Effective: 7/1/2016							Manufacturing		
4410 RUBBER 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)
2009	401.442	1	65	174.302	430.221	33.658	188.995	827.175	1.506	0.555	2.061
2010	330.791	2	73	230.650	211.919	26.479	162.529	631.578	1.338	0.571	1.909
2011	480.166	3	88	914.061	323.419	207.135	352.801	1,797.416	2.577	1.166	3.743
2012	482.498	0	73	0	215.092	0	193.762	408.854	0.446	0.402	0.847
2013	575.690	1	95	59.730	286.474	19.406	252.185	617.794	0.601	0.472	1.073
<b>MA Total:</b>	<b>2,270.587</b>	<b>7</b>	<b>394</b>	<b>1,378.744</b>	<b>1,467.125</b>	<b>286.678</b>	<b>1,150.271</b>	<b>4,282.818</b>	<b>1.253</b>	<b>0.633</b>	<b>1.886</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.160	0.983	.
(14) Massachusetts Credibility:	0.460	0.680	.
(15) Countrywide Pure Premium:	1.569	0.933	2.503
(16) Countrywide Indicated Relativity:	1.602	1.646	.
(17) Countrywide Credibility:	0.270	0.160	.
(18) Countrywide Lost-Time Claims:	2500.0	.	.
(19) Pure Premium Underlying Present Rate:	1.744	1.082	2.825
(20) Relativity to Underlying Present Rate:	1.965	1.802	.
(21) Credibility to Underlying Relativity:	0.270	0.160	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.497	1.220	.
(24) Balanced Formula Relativity:	1.476	1.212	1.377

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Manufacturing		
4417 BOOT OR SHOE MFG-RUBBER											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	952	0	1	0	0	0	511	511	0.000	0.537	0.537
2012	259	0	1	0	0	0	263	263	0.000	1.015	1.015
2013	157	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>1,369</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>774</b>	<b>774</b>	<b>0.000</b>	<b>0.566</b>	<b>0.566</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.879	.
(14) Massachusetts Credibility:	0.030	0.040	.
(15) Countrywide Pure Premium:	1.958	0.329	2.286
(16) Countrywide Indicated Relativity:	1.999	0.579	.
(17) Countrywide Credibility:	0.100	0.110	.
(18) Countrywide Lost-Time Claims:	4.000	.	.
(19) Pure Premium Underlying Present Rate:	2.214	1.308	3.522
(20) Relativity to Underlying Present Rate:	2.495	2.179	.
(21) Credibility to Underlying Relativity:	0.870	0.850	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.371	1.951	.
(24) Balanced Formula Relativity:	2.338	1.938	2.188

Class(es):		Effective: 7/1/2016							Manufacturing		
4432 FOUNTAIN PEN 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)
2009	42,475	0	4	0	35,886	0	14,839	50,725	0.845	0.349	1.194
2010	35,688	0	3	0	44,400	0	15,785	60,185	1.244	0.442	1.686
2011	44,121	0	4	0	6,593	0	5,622	12,214	0.149	0.127	0.277
2012	56,910	0	2	0	588	0	3,568	4,156	0.010	0.063	0.073
2013	57,316	0	5	0	8,799	0	21,626	30,425	0.154	0.377	0.531
<b>MA Total:</b>	<b>236,511</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>96,266</b>	<b>0</b>	<b>61,438</b>	<b>157,704</b>	<b>0.407</b>	<b>0.260</b>	<b>0.667</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.377	0.404	.
(14) Massachusetts Credibility:	0.110	0.170	.
(15) Countrywide Pure Premium:	0.462	0.326	0.788
(16) Countrywide Indicated Relativity:	0.472	0.575	.
(17) Countrywide Credibility:	0.250	0.260	.
(18) Countrywide Lost-Time Claims:	35.000	.	.
(19) Pure Premium Underlying Present Rate:	0.507	0.331	0.838
(20) Relativity to Underlying Present Rate:	0.572	0.551	.
(21) Credibility to Underlying Relativity:	0.640	0.570	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.525	0.532	.
(24) Balanced Formula Relativity:	0.518	0.528	0.522

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	35,122	0	5	0	304	0	1,609	1,913	0.009	0.046	0.054
2010	31,680	1	4	239,244	154,655	35,863	42,204	471,965	12.434	2.464	14.898
2011	38,625	1	5	184,837	92,755	51,159	85,637	414,387	7.187	3.542	10.729
2012	37,248	0	7	0	7,344	0	13,996	21,340	0.197	0.376	0.573
2013	41,169	0	4	0	0	0	2,353	2,353	0.000	0.057	0.057
<b>MA Total:</b>	<b>183,844</b>	<b>2</b>	<b>25</b>	<b>424,080</b>	<b>255,059</b>	<b>87,022</b>	<b>145,798</b>	<b>911,959</b>	<b>3.694</b>	<b>1.266</b>	<b>4.960</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.420	1.967	.
(14) Massachusetts Credibility:	0.160	0.260	.
(15) Countrywide Pure Premium:	0.711	0.657	1.369
(16) Countrywide Indicated Relativity:	0.726	1.159	.
(17) Countrywide Credibility:	0.180	0.190	.
(18) Countrywide Lost-Time Claims:	15.000	.	.
(19) Pure Premium Underlying Present Rate:	1.453	1.183	2.636
(20) Relativity to Underlying Present Rate:	1.637	1.971	.
(21) Credibility to Underlying Relativity:	0.660	0.550	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.759	1.816	.
(24) Balanced Formula Relativity:	1.734	1.803	1.760

Class(es):		Effective: 7/1/2016							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)
2009	478,303	9	133	1,025,846	436,959	455,629	474,712	2,393,145	3.058	1.945	5.003
2010	519,447	5	139	337,247	658,188	67,233	456,605	1,519,273	1.916	1.008	2.925
2011	574,879	9	96	940,166	790,502	119,040	457,902	2,307,609	3.010	1.004	4.014
2012	637,446	2	93	62,267	294,214	27,434	180,423	564,338	0.559	0.326	0.885
2013	559,636	3	88	765,048	789,005	315,672	330,135	2,199,860	2.777	1.154	3.931
<b>MA Total:</b>	<b>2,769,711</b>	<b>28</b>	<b>549</b>	<b>3,130,574</b>	<b>2,968,867</b>	<b>985,008</b>	<b>1,899,777</b>	<b>8,984,226</b>	<b>2.202</b>	<b>1.042</b>	<b>3.244</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.039	1.618	.
(14) Massachusetts Credibility:	0.480	0.710	.
(15) Countrywide Pure Premium:	1.289	0.834	2.122
(16) Countrywide Indicated Relativity:	1.316	1.470	.
(17) Countrywide Credibility:	0.260	0.150	.
(18) Countrywide Lost-Time Claims:	1600.0	.	.
(19) Pure Premium Underlying Present Rate:	1.579	0.989	2.569
(20) Relativity to Underlying Present Rate:	1.780	1.648	.
(21) Credibility to Underlying Relativity:	0.260	0.140	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.783	1.600	.
(24) Balanced Formula Relativity:	1.759	1.589	1.695

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	626.730	8	128	1,049,608	612,780	448,658	382,321	2,493,367	2,652	1,326	3,978
2010	654,601	3	125	187,332	308,035	115,019	284,574	894,960	0,757	0,610	1,367
2011	615,528	2	120	86,936	561,582	32,114	438,755	1,119,387	1,054	0,765	1,819
2012	495,097	3	87	334,551	652,817	135,624	388,485	1,511,476	1,994	1,059	3,053
2013	628,200	1	104	65,618	782,356	24,697	491,772	1,364,444	1,350	0,822	2,172
<b>MA Total:</b>	<b>3,020,157</b>	<b>17</b>	<b>564</b>	<b>1,724,045</b>	<b>2,917,570</b>	<b>756,112</b>	<b>1,985,907</b>	<b>7,383,635</b>	<b>1,537</b>	<b>0,908</b>	<b>2,445</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.423	1.410	.
(14) Massachusetts Credibility:	0.450	0.740	.
(15) Countrywide Pure Premium:	1.251	0.782	2.033
(16) Countrywide Indicated Relativity:	1.277	1.378	.
(17) Countrywide Credibility:	0.280	0.130	.
(18) Countrywide Lost-Time Claims:	2103.0	.	.
(19) Pure Premium Underlying Present Rate:	1.224	0.984	2.208
(20) Relativity to Underlying Present Rate:	1.379	1.639	.
(21) Credibility to Underlying Relativity:	0.270	0.130	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.370	1.436	.
(24) Balanced Formula Relativity:	1.351	1.426	1.379

Class(es):		Effective: 7/1/2016							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)
2009	265.417	0	28	0	73,378	0	71,865	145,244	0,276	0,271	0,547
2010	436,481	3	47	382,297	323,458	54,203	126,221	886,179	1,617	0,413	2,030
2011	471,547	1	48	57,794	249,338	18,453	137,711	463,296	0,651	0,331	0,983
2012	527,935	0	60	0	258,673	0	373,047	631,720	0,490	0,707	1,197
2013	503,677	1	57	168,554	217,861	46,474	136,806	569,694	0,767	0,364	1,131
<b>MA Total:</b>	<b>2,205,057</b>	<b>5</b>	<b>240</b>	<b>608,645</b>	<b>1,122,708</b>	<b>119,130</b>	<b>845,650</b>	<b>2,696,132</b>	<b>0,785</b>	<b>0,438</b>	<b>1,223</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.727	0.680	.
(14) Massachusetts Credibility:	0.370	0.530	.
(15) Countrywide Pure Premium:	1.140	0.660	1.801
(16) Countrywide Indicated Relativity:	1.164	1.164	.
(17) Countrywide Credibility:	0.320	0.240	.
(18) Countrywide Lost-Time Claims:	469.00	.	.
(19) Pure Premium Underlying Present Rate:	1.039	0.590	1.629
(20) Relativity to Underlying Present Rate:	1.170	0.983	.
(21) Credibility to Underlying Relativity:	0.310	0.230	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.004	0.866	.
(24) Balanced Formula Relativity:	0.990	0.860	0.942

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## Calculation of Class Relativities

Class(es): 4484 PLASTICS MFG: MOLDED PRODUCTS NOC		Effective: 7/1/2016							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)
2009	1,626,038	7	234	501,055	2,200,798	677,149	923,410	4,302,411	1,662	0,984	2,646
2010	1,819,501	5	274	184,415	1,558,162	99,543	779,763	2,621,883	0,958	0,483	1,441
2011	1,779,198	12	262	1,084,552	1,306,139	361,866	1,198,958	3,951,514	1,344	0,877	2,221
2012	1,767,294	10	225	910,061	1,291,565	259,877	745,671	3,207,174	1,246	0,569	1,815
2013	1,794,262	7	206	454,918	674,642	129,316	606,932	1,865,809	0,630	0,410	1,040
<b>MA Total:</b>	<b>8,786,293</b>	<b>41</b>	<b>1,201</b>	<b>3,135,001</b>	<b>7,031,305</b>	<b>1,527,750</b>	<b>4,254,734</b>	<b>15,948,791</b>	<b>1,157</b>	<b>0,658</b>	<b>1,815</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.071	1.022	.
(14) Massachusetts Credibility:	0.620	0.970	.
(15) Countrywide Pure Premium:	1.159	0.730	1.889
(16) Countrywide Indicated Relativity:	1.183	1.287	.
(17) Countrywide Credibility:	0.190	0.020	.
(18) Countrywide Lost-Time Claims:	7836.0	.	.
(19) Pure Premium Underlying Present Rate:	0.945	0.671	1.616
(20) Relativity to Underlying Present Rate:	1.065	1.117	.
(21) Credibility to Underlying Relativity:	0.190	0.010	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.091	1.029	.
(24) Balanced Formula Relativity:	1.076	1.022	1.056

Class(es): 4493 FABRIC COATING OR IMPREGNATING NOC		Effective: 7/1/2016							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)
2009	362,073	3	89	59,086	86,256	68,110	102,213	315,665	0,401	0,470	0,872
2010	368,142	2	90	317,007	644,156	84,143	545,673	1,590,979	2,611	1,711	4,322
2011	357,725	2	73	23,000	333,626	54,593	274,003	685,223	0,997	0,919	1,916
2012	398,319	2	107	102,500	280,439	28,242	222,497	633,678	0,961	0,629	1,591
2013	408,848	0	57	0	175,883	0	119,829	295,711	0,430	0,293	0,723
<b>MA Total:</b>	<b>1,895,107</b>	<b>9</b>	<b>416</b>	<b>501,594</b>	<b>1,520,358</b>	<b>235,089</b>	<b>1,264,215</b>	<b>3,521,255</b>	<b>1,067</b>	<b>0,791</b>	<b>1,858</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.988	1.229	.
(14) Massachusetts Credibility:	0.370	0.610	.
(15) Countrywide Pure Premium:	1.448	0.702	2.150
(16) Countrywide Indicated Relativity:	1.478	1.238	.
(17) Countrywide Credibility:	0.320	0.200	.
(18) Countrywide Lost-Time Claims:	157.00	.	.
(19) Pure Premium Underlying Present Rate:	1.230	0.981	2.211
(20) Relativity to Underlying Present Rate:	1.386	1.634	.
(21) Credibility to Underlying Relativity:	0.310	0.190	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.268	1.308	.
(24) Balanced Formula Relativity:	1.251	1.299	1.269

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Goods and Services		
4511 ANALYTICAL CHEMIST											
		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)
2009	4,734,995	1	110	128,724	442,772	41,122	529,573	1,142,191	0.121	0.121	0.241
2010	5,451,733	0	95	0	468,693	0	272,815	741,508	0.086	0.050	0.136
2011	4,885,684	1	100	104,043	299,968	83,781	318,593	806,385	0.083	0.082	0.165
2012	5,986,136	4	110	120,786	408,175	183,945	360,875	1,073,782	0.088	0.091	0.179
2013	5,936,209	3	111	352,755	165,376	253,424	220,478	992,033	0.087	0.080	0.167
<b>MA Total:</b>	<b>26,994,757</b>	<b>9</b>	<b>526</b>	<b>706,308</b>	<b>1,784,984</b>	<b>562,272</b>	<b>1,702,334</b>	<b>4,755,899</b>	<b>0.092</b>	<b>0.084</b>	<b>0.176</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.097	0.140	.
(14) Massachusetts Credibility:	0.450	0.660	.
(15) Countrywide Pure Premium:	0.229	0.151	0.380
(16) Countrywide Indicated Relativity:	0.239	0.247	.
(17) Countrywide Credibility:	0.280	0.170	.
(18) Countrywide Lost-Time Claims:	1418.0	.	.
(19) Pure Premium Underlying Present Rate:	0.139	0.085	0.225
(20) Relativity to Underlying Present Rate:	0.180	0.158	.
(21) Credibility to Underlying Relativity:	0.270	0.170	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.159	0.161	.
(24) Balanced Formula Relativity:	0.158	0.161	0.159

Class(es):		Effective: 7/1/2016							Goods and Services		
4512 BIOMEDICAL RESEARCH LABS-INCL OUTSIDE OPERATNS											
		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)
2009	5,808,621	1	102	23,554	450,105	5,366	697,532	1,176,558	0.082	0.121	0.203
2010	6,048,504	1	96	2,916	247,961	12,817	200,706	464,400	0.041	0.035	0.077
2011	8,083,552	2	112	422,617	68,606	188,025	178,990	858,239	0.061	0.045	0.106
2012	6,632,185	0	86	0	68,185	0	138,748	206,933	0.010	0.021	0.031
2013	9,156,498	0	85	0	228,214	0	162,111	390,325	0.025	0.018	0.043
<b>MA Total:</b>	<b>35,729,360</b>	<b>4</b>	<b>481</b>	<b>449,088</b>	<b>1,063,071</b>	<b>206,209</b>	<b>1,378,088</b>	<b>3,096,455</b>	<b>0.042</b>	<b>0.044</b>	<b>0.087</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.044	0.074	.
(14) Massachusetts Credibility:	0.350	0.560	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.072	0.079	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.056	0.043	0.099
(20) Relativity to Underlying Present Rate:	0.072	0.079	.
(21) Credibility to Underlying Relativity:	0.650	0.440	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.063	0.076	.
(24) Balanced Formula Relativity:	0.062	0.076	0.068

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## Calculation of Class Relativities

Class(es): 4557 INK MFG		Effective: 7/1/2016							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)
2009	308.136	1	21	216.726	167.606	44.185	42.835	471.351	1.247	0.282	1.530
2010	677.555	3	98	238.623	628.438	116.820	240.060	1,223.941	1.280	0.527	1.806
2011	688.303	5	94	834.037	182.480	417.519	207.401	1,641.437	1.477	0.908	2.385
2012	641.594	1	81	1.550	261.066	3.166	271.489	537.271	0.409	0.428	0.837
2013	380.076	2	52	626.846	168.436	266.990	138.554	1,200.825	2.092	1.067	3.159
<b>MA Total:</b>	<b>2,695.664</b>	<b>12</b>	<b>346</b>	<b>1,917.781</b>	<b>1,408.026</b>	<b>848.680</b>	<b>900.338</b>	<b>5,074.825</b>	<b>1.234</b>	<b>0.649</b>	<b>1.883</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.142	1.008	.
(14) Massachusetts Credibility:	0.370	0.550	.
(15) Countrywide Pure Premium:	0.921	0.497	1.418
(16) Countrywide Indicated Relativity:	0.941	0.876	.
(17) Countrywide Credibility:	0.320	0.230	.
(18) Countrywide Lost-Time Claims:	510.00	.	.
(19) Pure Premium Underlying Present Rate:	0.822	0.522	1.344
(20) Relativity to Underlying Present Rate:	0.927	0.870	.
(21) Credibility to Underlying Relativity:	0.310	0.220	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.011	0.947	.
(24) Balanced Formula Relativity:	0.997	0.941	0.976

Class(es): 4558 PAINT MFG		Effective: 7/1/2016							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)
2009	72.585	1	7	11.141	37.628	477	25.383	74.630	0.672	0.356	1.028
2010	78.148	1	7	7.729	1.910	37.798	5.391	52.829	0.123	0.553	0.676
2011	75.761	0	3	0	10.132	0	41.772	51.905	0.134	0.551	0.685
2012	75.903	0	4	0	3.170	0	4.135	7.304	0.042	0.054	0.096
2013	85.298	0	8	0	17.997	0	27.226	45.222	0.211	0.319	0.530
<b>MA Total:</b>	<b>387.695</b>	<b>2</b>	<b>29</b>	<b>18.870</b>	<b>70.837</b>	<b>38.275</b>	<b>103.908</b>	<b>231.890</b>	<b>0.231</b>	<b>0.367</b>	<b>0.598</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.214	0.570	.
(14) Massachusetts Credibility:	0.150	0.240	.
(15) Countrywide Pure Premium:	0.758	0.419	1.177
(16) Countrywide Indicated Relativity:	0.773	0.739	.
(17) Countrywide Credibility:	0.430	0.380	.
(18) Countrywide Lost-Time Claims:	405.00	.	.
(19) Pure Premium Underlying Present Rate:	0.655	0.461	1.116
(20) Relativity to Underlying Present Rate:	0.738	0.769	.
(21) Credibility to Underlying Relativity:	0.420	0.380	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.675	0.710	.
(24) Balanced Formula Relativity:	0.665	0.705	0.680

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	45,919	0	5	0	241,562	0	67,023	308,585	5,261	1,460	6,720
2010	45,676	0	7	0	198,066	0	29,478	227,544	4,336	0,645	4,982
2011	48,412	0	0	0	0	0	0	0	0,000	0,000	0,000
2012	46,510	0	4	0	113,845	0	34,810	148,655	2,448	0,748	3,196
2013	43,040	0	0	0	0	0	0	0	0,000	0,000	0,000
<b>MA Total:</b>	<b>229,558</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>553,474</b>	<b>0</b>	<b>131,310</b>	<b>684,784</b>	<b>2,411</b>	<b>0,572</b>	<b>2,983</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.232	0.889	.
(14) Massachusetts Credibility:	0.180	0.250	.
(15) Countrywide Pure Premium:	2.165	1.130	3.295
(16) Countrywide Indicated Relativity:	2.210	1.992	.
(17) Countrywide Credibility:	0.410	0.380	.
(18) Countrywide Lost-Time Claims:	533.00	.	.
(19) Pure Premium Underlying Present Rate:	1.526	0.836	2.363
(20) Relativity to Underlying Present Rate:	1.720	1.394	.
(21) Credibility to Underlying Relativity:	0.410	0.370	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.013	1.495	.
(24) Balanced Formula Relativity:	1.985	1.485	1.798

Class(es):		Effective: 7/1/2016							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)
2009	827,425	0	62	0	117,562	0	122,156	239,718	0.142	0.148	0.290
2010	527,732	6	37	558,646	24,399	187,059	33,065	803,169	1.105	0.417	1.522
2011	1,536,996	2	42	116,967	259,772	86,505	168,274	631,518	0.245	0.166	0.411
2012	1,679,751	1	35	6,746	120,941	7,115	55,191	189,993	0.076	0.037	0.113
2013	1,025,609	0	41	0	32,897	0	81,726	114,623	0.032	0.080	0.112
<b>MA Total:</b>	<b>5,597,512</b>	<b>9</b>	<b>217</b>	<b>682,359</b>	<b>555,572</b>	<b>280,679</b>	<b>460,411</b>	<b>1,979,021</b>	<b>0.221</b>	<b>0.132</b>	<b>0.354</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.205	0.206	.
(14) Massachusetts Credibility:	0.400	0.620	.
(15) Countrywide Pure Premium:	0.424	0.258	0.682
(16) Countrywide Indicated Relativity:	0.433	0.456	.
(17) Countrywide Credibility:	0.300	0.190	.
(18) Countrywide Lost-Time Claims:	1897.0	.	.
(19) Pure Premium Underlying Present Rate:	0.477	0.344	0.821
(20) Relativity to Underlying Present Rate:	0.538	0.573	.
(21) Credibility to Underlying Relativity:	0.300	0.190	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.373	0.323	.
(24) Balanced Formula Relativity:	0.368	0.321	0.350



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	82,429	2	17	58,135	220,940	52,558	264,705	596,339	3,386	3,849	7,235
2010	156,848	1	39	7,383	64,427	9,300	159,474	240,584	0,458	1,076	1,534
2011	170,281	1	34	152,075	851,364	53,555	400,172	1,457,167	5,893	2,665	8,557
2012	152,871	3	35	482,443	843,092	150,071	227,915	1,703,521	8,671	2,473	11,144
2013	145,252	3	29	276,401	242,151	93,996	302,799	915,346	3,570	2,732	6,302
<b>MA Total:</b>	<b>707,682</b>	<b>10</b>	<b>154</b>	<b>976,437</b>	<b>2,221,974</b>	<b>359,480</b>	<b>1,355,066</b>	<b>4,912,958</b>	<b>4,520</b>	<b>2,423</b>	<b>6,942</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.184	3.764	.
(14) Massachusetts Credibility:	0.280	0.440	.
(15) Countrywide Pure Premium:	1.469	0.708	2.177
(16) Countrywide Indicated Relativity:	1.500	1.248	.
(17) Countrywide Credibility:	0.360	0.280	.
(18) Countrywide Lost-Time Claims:	702.00	.	.
(19) Pure Premium Underlying Present Rate:	1.571	1.169	2.740
(20) Relativity to Underlying Present Rate:	1.770	1.948	.
(21) Credibility to Underlying Relativity:	0.360	0.280	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	2.349	2.551	.
(24) Balanced Formula Relativity:	2.316	2.533	2.397

Class(es):		Effective: 7/1/2016							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)
2009	30,824	0	2	0	0	0	3,100	3,100	0.000	0.101	0.101
2010	27,077	1	2	275,455	106,155	112,995	13,948	508,553	14.093	4.688	18.782
2011	27,065	0	1	0	579	0	1,240	1,819	0.021	0.046	0.067
2012	17,929	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	43,947	0	2	0	0	0	721	721	0.000	0.016	0.016
<b>MA Total:</b>	<b>146,843</b>	<b>1</b>	<b>7</b>	<b>275,455</b>	<b>106,734</b>	<b>112,995</b>	<b>19,009</b>	<b>514,192</b>	<b>2.603</b>	<b>0.899</b>	<b>3.502</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.409	1.397	.
(14) Massachusetts Credibility:	0.120	0.170	.
(15) Countrywide Pure Premium:	0.676	0.489	1.165
(16) Countrywide Indicated Relativity:	0.690	0.863	.
(17) Countrywide Credibility:	0.290	0.300	.
(18) Countrywide Lost-Time Claims:	51.000	.	.
(19) Pure Premium Underlying Present Rate:	0.879	0.508	1.387
(20) Relativity to Underlying Present Rate:	0.990	0.846	.
(21) Credibility to Underlying Relativity:	0.590	0.530	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.074	0.945	.
(24) Balanced Formula Relativity:	1.059	0.938	1.014

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	44,738	0	11	0	65,052	0	79,807	144,859	1,454	1,784	3,238	
2010	44,107	0	16	0	244,549	0	95,363	339,912	5,544	2,162	7,707	
2011	46,413	1	18	3,060	70,400	955	148,715	223,131	1,583	3,225	4,808	
2012	50,236	1	14	110,192	31,363	14,117	36,785	192,456	2,818	1,013	3,831	
2013	53,599	0	10	0	139,605	0	50,212	189,817	2,605	0,937	3,541	
<b>MA Total:</b>	<b>239,093</b>	<b>2</b>	<b>69</b>	<b>113,252</b>	<b>550,969</b>	<b>15,072</b>	<b>410,882</b>	<b>1,090,175</b>	<b>2,778</b>	<b>1,782</b>	<b>4,560</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.572	2.768	.
(14) Massachusetts Credibility:	0.240	0.360	.
(15) Countrywide Pure Premium:	3.237	1.818	5.055
(16) Countrywide Indicated Relativity:	3.305	3.206	.
(17) Countrywide Credibility:	0.380	0.320	.
(18) Countrywide Lost-Time Claims:	340.00	.	.
(19) Pure Premium Underlying Present Rate:	3.261	2.118	5.379
(20) Relativity to Underlying Present Rate:	3.675	3.528	.
(21) Credibility to Underlying Relativity:	0.380	0.320	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	3.269	3.151	.
(24) Balanced Formula Relativity:	3.224	3.130	3.189

Class(es):		Effective: 7/1/2016							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)	
2009	267,732	1	7	482,907	597	16,622	14,489	514,615	1,806	0,116	1,922	
2010	284,609	0	5	0	92,374	0	22,538	114,912	0,325	0,079	0,404	
2011	258,513	2	7	144,003	1,211	68,461	14,629	228,304	0,562	0,321	0,883	
2012	274,869	0	13	0	24,851	0	28,215	53,066	0,090	0,103	0,193	
2013	314,706	0	6	0	0	0	8,853	8,853	0,000	0,028	0,028	
<b>MA Total:</b>	<b>1,400,429</b>	<b>3</b>	<b>38</b>	<b>626,911</b>	<b>119,032</b>	<b>85,083</b>	<b>88,724</b>	<b>919,750</b>	<b>0,533</b>	<b>0,124</b>	<b>0,657</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.493	0.193	.
(14) Massachusetts Credibility:	0.200	0.250	.
(15) Countrywide Pure Premium:	0.257	0.164	0.421
(16) Countrywide Indicated Relativity:	0.262	0.289	.
(17) Countrywide Credibility:	0.400	0.380	.
(18) Countrywide Lost-Time Claims:	175.00	.	.
(19) Pure Premium Underlying Present Rate:	0.337	0.144	0.480
(20) Relativity to Underlying Present Rate:	0.379	0.239	.
(21) Credibility to Underlying Relativity:	0.400	0.370	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.355	0.247	.
(24) Balanced Formula Relativity:	0.350	0.245	0.311

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	308.732	1	9	155.687	8.489	20.557	10.897	195.629	0.532	0.102	0.634
2010	773.031	4	25	445.430	42.644	213.010	50.041	751.125	0.631	0.340	0.972
2011	850.720	2	57	275.004	274.983	46.860	223.039	819.886	0.646	0.317	0.964
2012	872.064	1	38	489.892	258.749	87.385	115.302	951.327	0.858	0.232	1.091
2013	717.593	1	35	54.307	381.220	29.019	277.090	741.636	0.607	0.427	1.034
<b>MA Total:</b>	<b>3,522,141</b>	<b>9</b>	<b>164</b>	<b>1,420,319</b>	<b>966,084</b>	<b>396,831</b>	<b>676,369</b>	<b>3,459,604</b>	<b>0.678</b>	<b>0.305</b>	<b>0.982</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.627	0.473	.
(14) Massachusetts Credibility:	0.310	0.480	.
(15) Countrywide Pure Premium:	0.349	0.231	0.580
(16) Countrywide Indicated Relativity:	0.356	0.407	.
(17) Countrywide Credibility:	0.350	0.260	.
(18) Countrywide Lost-Time Claims:	736.00	.	.
(19) Pure Premium Underlying Present Rate:	0.416	0.285	0.701
(20) Relativity to Underlying Present Rate:	0.469	0.475	.
(21) Credibility to Underlying Relativity:	0.340	0.260	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.478	0.457	.
(24) Balanced Formula Relativity:	0.472	0.454	0.465

Class(es):		Effective: 7/1/2016							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)
2009	151.537	0	23	0	26.477	0	57.492	83.970	0.175	0.379	0.554
2010	167.306	0	12	0	102.916	0	44.602	147.518	0.615	0.267	0.882
2011	172.331	2	16	183.417	98.712	56.546	202.744	541.420	1.637	1.505	3.142
2012	170.727	1	16	12.803	21.207	548	23.256	57.814	0.199	0.139	0.339
2013	179.979	1	26	128.101	229.363	59.278	148.347	565.088	1.986	1.154	3.140
<b>MA Total:</b>	<b>841,881</b>	<b>4</b>	<b>93</b>	<b>324,322</b>	<b>478,675</b>	<b>116,372</b>	<b>476,441</b>	<b>1,395,810</b>	<b>0.954</b>	<b>0.704</b>	<b>1.658</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.883	1.094	.
(14) Massachusetts Credibility:	0.220	0.340	.
(15) Countrywide Pure Premium:	0.995	0.591	1.586
(16) Countrywide Indicated Relativity:	1.016	1.043	.
(17) Countrywide Credibility:	0.390	0.330	.
(18) Countrywide Lost-Time Claims:	457.00	.	.
(19) Pure Premium Underlying Present Rate:	0.729	0.528	1.256
(20) Relativity to Underlying Present Rate:	0.821	0.879	.
(21) Credibility to Underlying Relativity:	0.390	0.330	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.911	1.006	.
(24) Balanced Formula Relativity:	0.898	0.999	0.936

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	19,283	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	19,344	0	1	0	4,798	0	1,414	6,212	0.248	0.073	0.321
2011	12,335	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	12,334	0	1	0	202,396	0	107,772	310,168	16,410	8,738	25,148
2013	17,540	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>80,835</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>207,194</b>	<b>0</b>	<b>109,186</b>	<b>316,380</b>	<b>2.563</b>	<b>1.351</b>	<b>3.914</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.373	2.098	.
(14) Massachusetts Credibility:	0.070	0.100	.
(15) Countrywide Pure Premium:	0.472	0.200	0.672
(16) Countrywide Indicated Relativity:	0.482	0.353	.
(17) Countrywide Credibility:	0.470	0.450	.
(18) Countrywide Lost-Time Claims:	500.00	.	.
(19) Pure Premium Underlying Present Rate:	0.418	0.236	0.654
(20) Relativity to Underlying Present Rate:	0.471	0.393	.
(21) Credibility to Underlying Relativity:	0.460	0.450	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.610	0.545	.
(24) Balanced Formula Relativity:	0.601	0.541	0.579

Class(es):		Effective: 7/1/2016							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)
2009	7,658	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	11,027	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	9,977	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	6,605	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	6,337	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>41,604</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.080	0.110	.
(15) Countrywide Pure Premium:	1.214	0.508	1.722
(16) Countrywide Indicated Relativity:	1.240	0.895	.
(17) Countrywide Credibility:	0.420	0.440	.
(18) Countrywide Lost-Time Claims:	129.00	.	.
(19) Pure Premium Underlying Present Rate:	1.223	0.595	1.818
(20) Relativity to Underlying Present Rate:	1.378	0.992	.
(21) Credibility to Underlying Relativity:	0.500	0.450	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.210	0.840	.
(24) Balanced Formula Relativity:	1.193	0.834	1.059

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## Calculation of Class Relativities

Class(es): 4771 EXPLOSIVES OR AMMUNITION MFG: NOC - & DRIVERS									Effective: 7/1/2016			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)			
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000			
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000			
2011	0	0	0	0	0	0	0	0	0.000	0.000	0.000			
2012	0	0	0	0	0	0	0	0	0.000	0.000	0.000			
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000			
<b>MA Total:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>.</b>	<b>.</b>	<b>.</b>			

	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:	1.362	0.724	2.086
(16) Countrywide Indicated Relativity:	1.391	1.276	.
(17) Countrywide Credibility:	0.500	0.500	.
(18) Countrywide Lost-Time Claims:	468.00	.	.
(19) Pure Premium Underlying Present Rate:	7.591	0.788	8.379
(20) Relativity to Underlying Present Rate:	8.554	1.313	.
(21) Credibility to Underlying Relativity:	0.500	0.500	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	4.973	1.294	.
(24) Balanced Formula Relativity:	4.904	1.285	3.553

Class(es): 4825 DRUG, MEDICINE OR PHARM PREP MFG & INCIDENTAL MFG INGREDIENTS									Effective: 7/1/2016			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)			
2009	1,255,954	2	34	315,667	25,085	608,792	78,376	1,027,920	0.271	0.547	0.818			
2010	2,654,673	5	62	1,448,951	35,372	636,527	183,092	2,303,941	0.559	0.309	0.868			
2011	3,995,700	7	137	788,582	764,932	261,324	734,359	2,549,197	0.389	0.249	0.638			
2012	2,807,236	1	61	1,560	437,689	7,223	215,914	662,387	0.156	0.079	0.236			
2013	2,577,211	0	43	0	243,439	0	160,085	403,524	0.094	0.062	0.157			
<b>MA Total:</b>	<b>13,290,773</b>	<b>15</b>	<b>337</b>	<b>2,554,760</b>	<b>1,506,518</b>	<b>1,513,866</b>	<b>1,371,826</b>	<b>6,946,970</b>	<b>0.306</b>	<b>0.217</b>	<b>0.523</b>			

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.283	0.337	.
(14) Massachusetts Credibility:	0.470	0.750	.
(15) Countrywide Pure Premium:	0.414	0.249	0.663
(16) Countrywide Indicated Relativity:	0.423	0.438	.
(17) Countrywide Credibility:	0.270	0.130	.
(18) Countrywide Lost-Time Claims:	576.00	.	.
(19) Pure Premium Underlying Present Rate:	0.314	0.238	0.552
(20) Relativity to Underlying Present Rate:	0.354	0.397	.
(21) Credibility to Underlying Relativity:	0.260	0.120	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.339	0.358	.
(24) Balanced Formula Relativity:	0.335	0.355	0.342

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	965,246	1	30	169,166	163,083	81,310	124,011	537,569	0.344	0.213	0.557
2010	659,579	0	24	0	14,427	0	38,147	52,574	0.022	0.058	0.080
2011	755,253	0	32	0	149,962	0	117,405	267,367	0.199	0.155	0.354
2012	780,680	1	27	165,233	372,992	87,999	192,420	818,644	0.689	0.359	1.049
2013	656,693	1	20	51,380	196,164	19,381	102,906	369,831	0.377	0.186	0.563
<b>MA Total:</b>	<b>3,817,452</b>	<b>3</b>	<b>133</b>	<b>385,778</b>	<b>896,627</b>	<b>188,691</b>	<b>574,889</b>	<b>2,045,985</b>	<b>0.336</b>	<b>0.200</b>	<b>0.536</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.311	0.311	.
(14) Massachusetts Credibility:	0.350	0.490	.
(15) Countrywide Pure Premium:	0.675	0.354	1.030
(16) Countrywide Indicated Relativity:	0.690	0.624	.
(17) Countrywide Credibility:	0.330	0.260	.
(18) Countrywide Lost-Time Claims:	1907.0	.	.
(19) Pure Premium Underlying Present Rate:	0.529	0.284	0.813
(20) Relativity to Underlying Present Rate:	0.596	0.474	.
(21) Credibility to Underlying Relativity:	0.320	0.250	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.527	0.433	.
(24) Balanced Formula Relativity:	0.520	0.430	0.486

Class(es):		Effective: 7/1/2016							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)
2009	177,971	2	25	95,709	209,626	26,860	145,538	477,733	1.716	0.969	2.684
2010	179,647	0	17	0	109,642	0	108,850	218,491	0.610	0.606	1.216
2011	167,829	1	11	111,386	1,602	8,075	13,084	134,147	0.673	0.126	0.799
2012	183,097	0	15	0	1,086,949	0	289,163	1,376,112	5.936	1.579	7.516
2013	242,302	0	15	0	469,491	0	120,871	590,362	1.938	0.499	2.436
<b>MA Total:</b>	<b>950,846</b>	<b>3</b>	<b>83</b>	<b>207,095</b>	<b>1,877,310</b>	<b>34,935</b>	<b>677,506</b>	<b>2,796,845</b>	<b>2.192</b>	<b>0.749</b>	<b>2.941</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.709	0.482	.
(14) Massachusetts Credibility:	0.410	0.500	.
(15) Countrywide Pure Premium:	3.537	1.605	5.142
(16) Countrywide Indicated Relativity:	1.140	1.031	.
(17) Countrywide Credibility:	0.300	0.250	.
(18) Countrywide Lost-Time Claims:	291.00	.	.
(19) Pure Premium Underlying Present Rate:	3.003	1.190	4.193
(20) Relativity to Underlying Present Rate:	1.155	0.858	.
(21) Credibility to Underlying Relativity:	0.290	0.250	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.968	0.713	.
(24) Balanced Formula Relativity:	0.983	0.716	0.894

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## Calculation of Class Relativities

Class(es): 5022 MASONRY NOC		Effective: 7/1/2016							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)
2009	771,691	13	100	2,099,008	3,525,735	1,251,019	1,600,294	8,476,056	7,289	3,695	10,984
2010	864,617	7	100	1,111,461	2,620,688	308,211	924,107	4,964,467	4,317	1,425	5,742
2011	906,716	14	134	1,724,658	4,058,774	653,965	1,680,790	8,118,186	6,378	2,575	8,953
2012	1,070,288	10	123	1,378,888	2,933,274	1,031,804	1,642,213	6,986,180	4,029	2,498	6,527
2013	1,106,291	10	131	2,421,958	4,783,881	1,516,855	1,637,927	10,360,621	6,514	2,852	9,365
<b>MA Total:</b>	<b>4,719,604</b>	<b>54</b>	<b>588</b>	<b>8,735,973</b>	<b>17,922,352</b>	<b>4,761,854</b>	<b>7,485,332</b>	<b>38,905,510</b>	<b>5,648</b>	<b>2,595</b>	<b>8,243</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.826	1.669	.
(14) Massachusetts Credibility:	0.890	1.000	.
(15) Countrywide Pure Premium:	4.873	2.250	7.123
(16) Countrywide Indicated Relativity:	1.571	1.446	.
(17) Countrywide Credibility:	0.060	0.000	.
(18) Countrywide Lost-Time Claims:	4819.0	.	.
(19) Pure Premium Underlying Present Rate:	4.333	1.947	6.281
(20) Relativity to Underlying Present Rate:	1.667	1.405	.
(21) Credibility to Underlying Relativity:	0.050	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.803	1.669	.
(24) Balanced Formula Relativity:	1.831	1.675	1.779

Class(es): 5037 PAINTING: METAL STRUCTURES-OVER 2 STORIES IN HEIGHT & DRIVERS		Effective: 7/1/2016							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)
2009	35,252	3	2	1,030,400	80,687	569,441	50,243	1,730,771	31,519	17,579	49,097
2010	65,604	1	5	168,670	453,135	26,907	99,179	747,891	9,478	1,922	11,400
2011	51,806	0	9	0	80,536	0	80,177	160,712	1,555	1,548	3,102
2012	69,799	0	10	0	1,478,249	0	465,071	1,943,320	21,179	6,663	27,842
2013	95,019	2	11	1,217,733	511,101	246,929	345,861	2,321,625	18,195	6,239	24,433
<b>MA Total:</b>	<b>317,480</b>	<b>6</b>	<b>37</b>	<b>2,416,803</b>	<b>2,603,708</b>	<b>843,277</b>	<b>1,040,531</b>	<b>6,904,319</b>	<b>15,814</b>	<b>5,934</b>	<b>21,747</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.112	3.816	.
(14) Massachusetts Credibility:	0.440	0.540	.
(15) Countrywide Pure Premium:	11.385	4.415	15.800
(16) Countrywide Indicated Relativity:	3.670	2.837	.
(17) Countrywide Credibility:	0.280	0.230	.
(18) Countrywide Lost-Time Claims:	75,000	.	.
(19) Pure Premium Underlying Present Rate:	10.865	4.321	15.185
(20) Relativity to Underlying Present Rate:	4.180	3.117	.
(21) Credibility to Underlying Relativity:	0.280	0.230	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	4.447	3.430	.
(24) Balanced Formula Relativity:	4.518	3.443	4.158

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	53,245	11	48	1,606,511	1,996,273	437,593	633,413	4,673,790	67,665	20,115	87,779
2010	50,861	3	27	969,664	1,854,713	182,083	441,142	3,447,601	55,532	12,254	67,785
2011	55,344	0	44	0	3,174,120	0	1,457,582	4,631,701	57,352	26,337	83,689
2012	75,779	1	28	383,360	2,198,591	105,424	726,944	3,414,319	34,072	10,984	45,057
2013	115,903	4	34	1,195,121	1,181,086	485,111	417,977	3,279,295	20,502	7,792	28,293
<b>MA Total:</b>	<b>351,131</b>	<b>19</b>	<b>181</b>	<b>4,154,657</b>	<b>10,404,782</b>	<b>1,210,210</b>	<b>3,677,057</b>	<b>19,446,706</b>	<b>41,464</b>	<b>13,919</b>	<b>55,383</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	13.404	8.951	.
(14) Massachusetts Credibility:	0.720	0.900	.
(15) Countrywide Pure Premium:	5.232	2.364	7.596
(16) Countrywide Indicated Relativity:	1.687	1.519	.
(17) Countrywide Credibility:	0.140	0.050	.
(18) Countrywide Lost-Time Claims:	862.00	.	.
(19) Pure Premium Underlying Present Rate:	34.342	14.188	48.530
(20) Relativity to Underlying Present Rate:	13.213	10.236	.
(21) Credibility to Underlying Relativity:	0.140	0.050	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	11.737	8.644	.
(24) Balanced Formula Relativity:	11.923	8.675	10.836

Class(es):		Effective: 7/1/2016							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)
2009	31,929	2	5	846,020	140,430	115,791	79,074	1,181,316	30,896	6,103	36,999
2010	11,000	0	2	0	278,515	0	51,743	330,258	25,320	4,704	30,024
2011	8,755	0	0	0	0	0	0	0	0,000	0,000	0,000
2012	5,120	2	2	480,213	507,690	297,360	226,500	1,511,764	192,96	102,32	295,28
2013	8,314	0	4	0	49,409	0	14,426	63,835	5,943	1,735	7,678
<b>MA Total:</b>	<b>65,118</b>	<b>4</b>	<b>13</b>	<b>1,326,234</b>	<b>976,045</b>	<b>413,151</b>	<b>371,743</b>	<b>3,087,173</b>	<b>35,356</b>	<b>12,053</b>	<b>47,409</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	11.429	7.751	.
(14) Massachusetts Credibility:	0.240	0.340	.
(15) Countrywide Pure Premium:	3.194	1.380	4.573
(16) Countrywide Indicated Relativity:	1.030	0.886	.
(17) Countrywide Credibility:	0.380	0.330	.
(18) Countrywide Lost-Time Claims:	796.00	.	.
(19) Pure Premium Underlying Present Rate:	11.513	6.784	18.297
(20) Relativity to Underlying Present Rate:	4.430	4.894	.
(21) Credibility to Underlying Relativity:	0.380	0.330	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	4.817	4.543	.
(24) Balanced Formula Relativity:	4.894	4.560	4.782



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	36,392	0	8	0	236,965	0	52,681	289,646	6,511	1,448	7,959
2010	35,832	0	15	0	45,950	0	52,952	98,903	1,282	1,478	2,760
2011	30,279	0	14	0	66,247	0	38,197	104,444	2,188	1,262	3,449
2012	35,484	0	5	0	106,117	0	31,867	137,984	2,991	0,898	3,889
2013	39,003	0	7	0	569,547	0	319,675	889,221	14,603	8,196	22,799
<b>MA Total:</b>	<b>176,989</b>	<b>0</b>	<b>49</b>	<b>0</b>	<b>1,024,826</b>	<b>0</b>	<b>495,372</b>	<b>1,520,198</b>	<b>5,790</b>	<b>2,799</b>	<b>8,589</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.872	1.800	.
(14) Massachusetts Credibility:	0.350	0.510	.
(15) Countrywide Pure Premium:	10.607	6.243	16.850
(16) Countrywide Indicated Relativity:	3.419	4.012	.
(17) Countrywide Credibility:	0.330	0.250	.
(18) Countrywide Lost-Time Claims:	324.00	.	.
(19) Pure Premium Underlying Present Rate:	11.513	6.784	18.297
(20) Relativity to Underlying Present Rate:	4.430	4.894	.
(21) Credibility to Underlying Relativity:	0.320	0.240	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	3.201	3.096	.
(24) Balanced Formula Relativity:	3.252	3.107	3.203

Class(es):		Effective: 7/1/2016							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)
2009	343,750	4	57	1,019,863	1,132,341	367,522	633,593	3,153,318	6,261	2,912	9,173
2010	355,796	2	34	426,169	432,847	117,035	354,258	1,330,309	2,414	1,325	3,739
2011	442,066	1	60	3,895	1,679,588	280	745,398	2,429,161	3,808	1,687	5,495
2012	481,656	5	53	1,544,949	281,046	238,094	194,112	2,258,201	3,791	0,897	4,688
2013	540,029	4	59	478,965	1,373,359	113,200	441,635	2,407,159	3,430	1,027	4,457
<b>MA Total:</b>	<b>2,163,297</b>	<b>16</b>	<b>263</b>	<b>3,473,840</b>	<b>4,899,181</b>	<b>836,131</b>	<b>2,368,995</b>	<b>11,578,148</b>	<b>3,870</b>	<b>1,482</b>	<b>5,352</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.251	0.953	.
(14) Massachusetts Credibility:	0.570	0.690	.
(15) Countrywide Pure Premium:	3.241	1.598	4.838
(16) Countrywide Indicated Relativity:	1.045	1.027	.
(17) Countrywide Credibility:	0.220	0.160	.
(18) Countrywide Lost-Time Claims:	1429.0	.	.
(19) Pure Premium Underlying Present Rate:	3.057	1.183	4.240
(20) Relativity to Underlying Present Rate:	1.176	0.853	.
(21) Credibility to Underlying Relativity:	0.210	0.150	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.190	0.950	.
(24) Balanced Formula Relativity:	1.209	0.953	1.123

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	531,159	6	71	970,384	1,234,475	661,255	404,999	3,271,113	4,151	2,007	6,158
2010	451,526	11	65	1,601,140	592,471	735,770	432,282	3,361,663	4,858	2,587	7,445
2011	580,224	8	115	876,154	3,398,670	716,655	1,159,918	6,151,397	7,368	3,234	10,602
2012	658,054	7	115	1,134,172	1,638,142	354,380	1,135,088	4,261,782	4,213	2,263	6,476
2013	566,667	9	94	1,029,977	800,565	370,959	436,871	2,638,373	3,230	1,426	4,656
<b>MA Total:</b>	<b>2,787,630</b>	<b>41</b>	<b>460</b>	<b>5,611,828</b>	<b>7,664,322</b>	<b>2,839,019</b>	<b>3,569,158</b>	<b>19,684,327</b>	<b>4,763</b>	<b>2,299</b>	<b>7,061</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.540	1.478	.
(14) Massachusetts Credibility:	0.600	0.870	.
(15) Countrywide Pure Premium:	2.725	1.296	4.021
(16) Countrywide Indicated Relativity:	0.878	0.833	.
(17) Countrywide Credibility:	0.200	0.070	.
(18) Countrywide Lost-Time Claims:	1571.0	.	.
(19) Pure Premium Underlying Present Rate:	2.753	1.624	4.376
(20) Relativity to Underlying Present Rate:	1.059	1.171	.
(21) Credibility to Underlying Relativity:	0.200	0.060	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.311	1.415	.
(24) Balanced Formula Relativity:	1.332	1.420	1.361

Class(es):		Effective: 7/1/2016							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)
2009	328,544	2	33	698,261	123,318	84,567	126,828	1,032,974	2,501	0,643	3,144
2010	611,633	6	45	1,772,018	521,298	602,951	284,094	3,180,361	3,749	1,450	5,200
2011	635,473	1	37	337,033	46,194	86,106	147,917	617,250	0,603	0,368	0,971
2012	720,375	4	41	1,148,992	570,723	206,367	263,627	2,189,710	2,387	0,652	3,040
2013	737,213	0	28	0	879,267	0	307,338	1,186,604	1,193	0,417	1,610
<b>MA Total:</b>	<b>3,033,238</b>	<b>13</b>	<b>184</b>	<b>3,956,305</b>	<b>2,140,799</b>	<b>979,991</b>	<b>1,129,804</b>	<b>8,206,899</b>	<b>2,010</b>	<b>0,696</b>	<b>2,706</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.650	0.447	.
(14) Massachusetts Credibility:	0.520	0.680	.
(15) Countrywide Pure Premium:	1.562	0.627	2.189
(16) Countrywide Indicated Relativity:	0.503	0.403	.
(17) Countrywide Credibility:	0.240	0.160	.
(18) Countrywide Lost-Time Claims:	516.00	.	.
(19) Pure Premium Underlying Present Rate:	1.719	0.805	2.524
(20) Relativity to Underlying Present Rate:	0.661	0.581	.
(21) Credibility to Underlying Relativity:	0.240	0.160	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.617	0.462	.
(24) Balanced Formula Relativity:	0.627	0.463	0.572

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	4,724,469	28	605	3,941,593	5,760,157	931,470	3,409,757	14,042,977	2,054	0,919	2,972	
2010	5,102,393	25	673	4,518,511	8,286,049	1,208,478	4,367,178	18,380,216	2,510	1,093	3,602	
2011	5,301,817	23	606	3,076,298	5,492,885	994,031	3,132,578	12,695,791	1,616	0,778	2,395	
2012	5,766,987	20	606	3,323,016	6,883,319	1,090,463	3,812,947	15,109,745	1,770	0,850	2,620	
2013	6,281,962	30	619	5,395,545	7,820,031	1,748,461	3,792,903	18,756,940	2,104	0,882	2,986	
<b>MA Total:</b>	<b>27,177,629</b>	<b>126</b>	<b>3,109</b>	<b>20,254,963</b>	<b>34,242,441</b>	<b>5,972,903</b>	<b>18,515,363</b>	<b>78,985,669</b>	<b>2,005</b>	<b>0,901</b>	<b>2,906</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.648	0.579	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.166	0.965	3.131
(16) Countrywide Indicated Relativity:	0.698	0.620	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	10374	.	.
(19) Pure Premium Underlying Present Rate:	1.618	0.788	2.406
(20) Relativity to Underlying Present Rate:	0.623	0.569	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.648	0.579	.
(24) Balanced Formula Relativity:	0.658	0.582	0.633

Class(es):		Effective: 7/1/2016							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)	
2009	519,505	2	63	929,671	1,632,031	160,377	798,940	3,521,020	4,931	1,847	6,778	
2010	641,992	5	65	967,550	1,898,841	438,351	716,547	4,021,289	4,465	1,799	6,264	
2011	647,171	2	71	68,790	717,824	68,825	243,908	1,099,348	1,215	0,483	1,699	
2012	713,788	9	70	1,834,678	808,855	751,924	530,488	3,925,945	3,704	1,797	5,500	
2013	805,626	3	66	109,561	1,808,876	125,489	620,791	2,664,717	2,381	0,926	3,308	
<b>MA Total:</b>	<b>3,328,081</b>	<b>21</b>	<b>335</b>	<b>3,910,251</b>	<b>6,866,427</b>	<b>1,544,966</b>	<b>2,910,675</b>	<b>15,232,319</b>	<b>3,238</b>	<b>1,339</b>	<b>4,577</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.047	0.861	.
(14) Massachusetts Credibility:	0.630	0.850	.
(15) Countrywide Pure Premium:	2.570	1.003	3.573
(16) Countrywide Indicated Relativity:	0.828	0.644	.
(17) Countrywide Credibility:	0.190	0.080	.
(18) Countrywide Lost-Time Claims:	1008.0	.	.
(19) Pure Premium Underlying Present Rate:	2.564	1.268	3.831
(20) Relativity to Underlying Present Rate:	0.986	0.915	.
(21) Credibility to Underlying Relativity:	0.180	0.070	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.994	0.847	.
(24) Balanced Formula Relativity:	1.010	0.850	0.957

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	5,539,646	25	578	4,525,565	4,830,573	1,707,767	2,498,587	13,562,491	1,689	0,759	2,448
2010	5,798,146	16	616	2,305,677	5,644,163	1,318,470	4,164,715	13,433,025	1,371	0,946	2,317
2011	5,958,742	15	571	2,400,173	6,104,283	1,352,171	3,299,119	13,155,746	1,427	0,781	2,208
2012	6,494,389	31	528	4,581,180	5,143,759	1,731,076	2,790,133	14,246,148	1,497	0,696	2,194
2013	6,946,289	18	599	2,702,367	5,726,960	1,236,515	3,553,610	13,219,453	1,214	0,690	1,903
<b>MA Total:</b>	<b>30,737,212</b>	<b>105</b>	<b>2,892</b>	<b>16,514,962</b>	<b>27,449,739</b>	<b>7,345,999</b>	<b>16,306,164</b>	<b>67,616,864</b>	<b>1,430</b>	<b>0,769</b>	<b>2,200</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.462	0.495	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.751	0.858	2.609
(16) Countrywide Indicated Relativity:	0.564	0.552	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	10047	.	.
(19) Pure Premium Underlying Present Rate:	1.289	0.738	2.027
(20) Relativity to Underlying Present Rate:	0.496	0.532	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.462	0.495	.
(24) Balanced Formula Relativity:	0.470	0.497	0.479

Class(es):		Effective: 7/1/2016							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)
2009	3,627,229	7	161	611,562	1,151,714	498,355	748,306	3,009,937	0,486	0,344	0,830
2010	3,758,302	5	180	985,971	1,523,601	513,476	1,352,783	4,375,830	0,668	0,497	1,164
2011	3,854,839	8	134	1,507,552	924,093	756,682	500,947	3,689,274	0,631	0,326	0,957
2012	3,653,712	9	155	1,062,158	307,785	517,043	363,859	2,250,844	0,375	0,241	0,616
2013	4,374,692	3	139	221,763	1,183,714	62,099	715,593	2,183,168	0,321	0,178	0,499
<b>MA Total:</b>	<b>19,268,774</b>	<b>32</b>	<b>769</b>	<b>4,389,004</b>	<b>5,090,906</b>	<b>2,347,654</b>	<b>3,681,488</b>	<b>15,509,053</b>	<b>0,492</b>	<b>0,313</b>	<b>0,805</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.517	0.521	.
(14) Massachusetts Credibility:	0.640	0.990	.
(15) Countrywide Pure Premium:	0.473	0.237	0.710
(16) Countrywide Indicated Relativity:	0.493	0.389	.
(17) Countrywide Credibility:	0.180	0.010	.
(18) Countrywide Lost-Time Claims:	3737.0	.	.
(19) Pure Premium Underlying Present Rate:	0.465	0.321	0.786
(20) Relativity to Underlying Present Rate:	0.600	0.596	.
(21) Credibility to Underlying Relativity:	0.180	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.528	0.520	.
(24) Balanced Formula Relativity:	0.525	0.520	0.523

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	328,336	1	55	15,013	332,500	2,578	320,055	670,146	1,058	0,983	2,041
2010	384,650	1	71	4,273	693,314	16,026	317,118	1,030,732	1,814	0,866	2,680
2011	318,708	4	70	386,286	288,310	342,073	172,568	1,189,238	2,117	1,615	3,731
2012	295,012	3	52	152,504	68,522	123,866	58,042	402,934	0,749	0,617	1,366
2013	307,799	1	47	173,132	318,948	103,330	150,107	745,516	1,599	0,823	2,422
<b>MA Total:</b>	<b>1,634,505</b>	<b>10</b>	<b>295</b>	<b>731,209</b>	<b>1,701,594</b>	<b>587,873</b>	<b>1,017,890</b>	<b>4,038,567</b>	<b>1,488</b>	<b>0,982</b>	<b>2,471</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.565	1.636	.
(14) Massachusetts Credibility:	0.390	0.560	.
(15) Countrywide Pure Premium:	1.737	0.908	2.645
(16) Countrywide Indicated Relativity:	1.811	1.486	.
(17) Countrywide Credibility:	0.310	0.220	.
(18) Countrywide Lost-Time Claims:	1781.0	.	.
(19) Pure Premium Underlying Present Rate:	1.540	0.904	2.444
(20) Relativity to Underlying Present Rate:	1.987	1.679	.
(21) Credibility to Underlying Relativity:	0.300	0.220	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.768	1.613	.
(24) Balanced Formula Relativity:	1.758	1.614	1.703

Class(es):		Effective: 7/1/2016							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)
2009	265,333	2	68	539,985	1,448,562	241,035	667,163	2,896,745	7,495	3,423	10,917
2010	278,817	5	73	974,973	2,120,007	574,502	1,046,469	4,715,950	11,100	5,814	16,914
2011	412,385	5	140	507,340	2,308,527	299,700	1,239,858	4,355,426	6,828	3,733	10,562
2012	440,752	10	136	2,434,822	3,353,534	715,926	1,321,436	7,825,718	13,133	4,622	17,755
2013	476,217	9	119	1,903,881	2,995,333	411,760	1,332,003	6,642,977	10,288	3,662	13,949
<b>MA Total:</b>	<b>1,873,503</b>	<b>31</b>	<b>536</b>	<b>6,361,002</b>	<b>12,225,962</b>	<b>2,242,923</b>	<b>5,606,929</b>	<b>26,436,816</b>	<b>9,921</b>	<b>4,190</b>	<b>14,111</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.207	2.695	.
(14) Massachusetts Credibility:	0.740	0.970	.
(15) Countrywide Pure Premium:	3.794	1.774	5.569
(16) Countrywide Indicated Relativity:	1.223	1.140	.
(17) Countrywide Credibility:	0.130	0.020	.
(18) Countrywide Lost-Time Claims:	3984.0	.	.
(19) Pure Premium Underlying Present Rate:	6.820	3.188	10.008
(20) Relativity to Underlying Present Rate:	2.624	2.300	.
(21) Credibility to Underlying Relativity:	0.130	0.010	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	2.873	2.659	.
(24) Balanced Formula Relativity:	2.919	2.669	2.835

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	220,608	2	35	168,934	821,616	78,034	513,417	1,582,002	4,490	2,681	7,171	
2010	228,258	3	27	362,764	525,062	83,279	399,643	1,370,748	3,890	2,116	6,005	
2011	240,434	1	24	48,436	675,839	8,635	290,646	1,023,555	3,012	1,245	4,257	
2012	255,765	2	31	126,959	629,511	18,919	292,664	1,068,054	2,958	1,218	4,176	
2013	281,324	1	27	367,287	416,143	73,151	287,853	1,144,434	2,785	1,283	4,068	
<b>MA Total:</b>	<b>1,226,390</b>	<b>9</b>	<b>144</b>	<b>1,074,381</b>	<b>3,068,171</b>	<b>262,019</b>	<b>1,784,223</b>	<b>6,188,793</b>	<b>3,378</b>	<b>1,669</b>	<b>5,046</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.092	1.073	.
(14) Massachusetts Credibility:	0.400	0.550	.
(15) Countrywide Pure Premium:	3.358	1.624	4.982
(16) Countrywide Indicated Relativity:	1.082	1.044	.
(17) Countrywide Credibility:	0.300	0.230	.
(18) Countrywide Lost-Time Claims:	1206.0	.	.
(19) Pure Premium Underlying Present Rate:	2.297	1.187	3.484
(20) Relativity to Underlying Present Rate:	0.884	0.857	.
(21) Credibility to Underlying Relativity:	0.300	0.220	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.027	1.019	.
(24) Balanced Formula Relativity:	1.043	1.022	1.036

Class(es):		Effective: 7/1/2016							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)	
2009	950,466	9	136	979,516	2,098,288	707,895	998,110	4,783,809	3,238	1,795	5,033	
2010	971,837	10	132	1,178,851	2,051,828	337,593	863,464	4,431,736	3,324	1,236	4,560	
2011	1,153,567	15	166	2,688,228	3,007,490	1,293,807	1,049,890	8,039,415	4,937	2,032	6,969	
2012	1,205,586	7	157	1,108,591	3,307,351	826,092	1,729,855	6,971,889	3,663	2,120	5,783	
2013	1,216,691	6	155	1,226,876	3,653,531	536,373	2,083,928	7,500,709	4,011	2,154	6,165	
<b>MA Total:</b>	<b>5,498,147</b>	<b>47</b>	<b>746</b>	<b>7,182,063</b>	<b>14,118,489</b>	<b>3,701,760</b>	<b>6,725,247</b>	<b>31,727,558</b>	<b>3,874</b>	<b>1,896</b>	<b>5,771</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.252	1.220	.
(14) Massachusetts Credibility:	0.850	1.000	.
(15) Countrywide Pure Premium:	3.054	1.409	4.463
(16) Countrywide Indicated Relativity:	0.984	0.905	.
(17) Countrywide Credibility:	0.080	0.000	.
(18) Countrywide Lost-Time Claims:	6886.0	.	.
(19) Pure Premium Underlying Present Rate:	3.249	1.701	4.950
(20) Relativity to Underlying Present Rate:	1.250	1.227	.
(21) Credibility to Underlying Relativity:	0.070	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.231	1.220	.
(24) Balanced Formula Relativity:	1.250	1.224	1.242

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	244,440	3	28	762,948	846,817	142,927	446,305	2,198,996	6,586	2,411	8,996
2010	279,634	2	54	433,533	1,122,174	524,720	587,828	2,668,254	5,563	3,979	9,542
2011	330,861	6	59	857,313	1,842,607	219,733	1,037,209	3,956,862	8,160	3,799	11,959
2012	295,763	1	49	2,845	2,231,975	2,557	679,282	2,916,659	7,556	2,305	9,861
2013	241,376	2	30	1,647,963	429,707	637,821	175,351	2,890,843	8,608	3,369	11,977
<b>MA Total:</b>	<b>1,392,073</b>	<b>14</b>	<b>220</b>	<b>3,704,602</b>	<b>6,473,279</b>	<b>1,527,757</b>	<b>2,925,975</b>	<b>14,631,613</b>	<b>7,311</b>	<b>3,199</b>	<b>10,511</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.363	2.057	.
(14) Massachusetts Credibility:	0.570	0.750	.
(15) Countrywide Pure Premium:	4.815	2.211	7.026
(16) Countrywide Indicated Relativity:	1.552	1.421	.
(17) Countrywide Credibility:	0.220	0.130	.
(18) Countrywide Lost-Time Claims:	1036.0	.	.
(19) Pure Premium Underlying Present Rate:	4.881	2.224	7.105
(20) Relativity to Underlying Present Rate:	1.878	1.605	.
(21) Credibility to Underlying Relativity:	0.210	0.120	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	2.083	1.920	.
(24) Balanced Formula Relativity:	2.116	1.927	2.053

Class(es):		Effective: 7/1/2016							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)
2009	153,769	1	27	110,965	99,153	9,373	104,066	323,558	1,366	0,738	2,104
2010	161,936	1	30	152	76,080	1,912	131,314	209,458	0,471	0,823	1,293
2011	169,161	0	23	0	74,497	0	70,551	145,048	0,440	0,417	0,857
2012	175,421	1	34	220,811	275,728	120,655	133,450	750,643	2,831	1,449	4,279
2013	183,642	0	25	0	395,629	0	298,979	694,608	2,154	1,628	3,782
<b>MA Total:</b>	<b>843,928</b>	<b>3</b>	<b>139</b>	<b>331,929</b>	<b>921,086</b>	<b>131,940</b>	<b>738,360</b>	<b>2,123,316</b>	<b>1,485</b>	<b>1,031</b>	<b>2,516</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.480	0.663	.
(14) Massachusetts Credibility:	0.350	0.480	.
(15) Countrywide Pure Premium:	3.014	1.521	4.535
(16) Countrywide Indicated Relativity:	0.972	0.977	.
(17) Countrywide Credibility:	0.330	0.260	.
(18) Countrywide Lost-Time Claims:	609.00	.	.
(19) Pure Premium Underlying Present Rate:	2.297	1.187	3.484
(20) Relativity to Underlying Present Rate:	0.884	0.857	.
(21) Credibility to Underlying Relativity:	0.320	0.260	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.771	0.795	.
(24) Balanced Formula Relativity:	0.784	0.798	0.788

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	372,494	3	35	1,008,559	761,738	256,519	214,033	2,240,848	4,753	1,263	6,016
2010	390,209	4	34	874,119	633,938	243,054	309,391	2,060,501	3,865	1,416	5,281
2011	425,281	4	44	284,835	1,007,607	136,115	420,862	1,849,419	3,039	1,310	4,349
2012	521,651	5	38	535,790	483,911	170,237	251,521	1,441,459	1,955	0,809	2,763
2013	573,431	4	41	787,159	293,326	171,922	278,942	1,531,350	1,884	0,786	2,671
<b>MA Total:</b>	<b>2,283,066</b>	<b>20</b>	<b>192</b>	<b>3,490,463</b>	<b>3,180,519</b>	<b>977,847</b>	<b>1,474,749</b>	<b>9,123,578</b>	<b>2,922</b>	<b>1,074</b>	<b>3,996</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.945	0.691	.
(14) Massachusetts Credibility:	0.580	0.740	.
(15) Countrywide Pure Premium:	3.117	1.330	4.448
(16) Countrywide Indicated Relativity:	1.005	0.855	.
(17) Countrywide Credibility:	0.210	0.130	.
(18) Countrywide Lost-Time Claims:	1526.0	.	.
(19) Pure Premium Underlying Present Rate:	3.060	1.325	4.385
(20) Relativity to Underlying Present Rate:	1.177	0.956	.
(21) Credibility to Underlying Relativity:	0.210	0.130	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.006	0.747	.
(24) Balanced Formula Relativity:	1.022	0.749	0.931

Class(es):		Effective: 7/1/2016							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)
2009	3,363	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	3,497	0	5	0	189	0	9,064	9,253	0,054	2,592	2,646
2011	3,467	0	2	0	915	0	6,265	7,180	0,264	1,807	2,071
2012	2,464	0	2	0	2,270	0	2,737	5,007	0,921	1,111	2,032
2013	5,485	0	1	0	0	0	3,673	3,673	0,000	0,670	0,670
<b>MA Total:</b>	<b>18,275</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>3,373</b>	<b>0</b>	<b>21,740</b>	<b>25,113</b>	<b>0,185</b>	<b>1,190</b>	<b>1,374</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.060	0.765	.
(14) Massachusetts Credibility:	0.100	0.140	.
(15) Countrywide Pure Premium:	2.784	1.925	4.709
(16) Countrywide Indicated Relativity:	0.897	1.237	.
(17) Countrywide Credibility:	0.210	0.220	.
(18) Countrywide Lost-Time Claims:	23.000	.	.
(19) Pure Premium Underlying Present Rate:	4.320	2.753	7.073
(20) Relativity to Underlying Present Rate:	1.662	1.986	.
(21) Credibility to Underlying Relativity:	0.690	0.640	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.341	1.650	.
(24) Balanced Formula Relativity:	1.363	1.656	1.461



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## Calculation of Class Relativities

Class(es): 5403 CARPENTRY NOC		Effective: 7/1/2016							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)
2009	601.683	9	132	1,548,538	2,698,841	369,842	1,512,287	6,129,509	7,059	3,128	10,187
2010	728,610	17	176	1,461,382	4,653,093	473,213	2,111,151	8,698,839	8,392	3,547	11,939
2011	961,474	9	196	2,228,556	3,840,548	732,916	2,319,538	9,121,558	6,312	3,175	9,487
2012	1,109,893	13	169	3,376,134	5,197,983	887,663	2,093,129	11,554,909	7,725	2,686	10,411
2013	1,429,588	11	200	1,292,136	5,140,017	427,185	2,510,150	9,369,489	4,499	2,055	6,554
<b>MA Total:</b>	<b>4,831,248</b>	<b>59</b>	<b>873</b>	<b>9,906,745</b>	<b>21,530,482</b>	<b>2,890,819</b>	<b>10,546,255</b>	<b>44,874,302</b>	<b>6,507</b>	<b>2,781</b>	<b>9,288</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.103	1.789	.
(14) Massachusetts Credibility:	0.990	1.000	.
(15) Countrywide Pure Premium:	4.155	2.121	6.277
(16) Countrywide Indicated Relativity:	1.339	1.363	.
(17) Countrywide Credibility:	0.010	0.000	.
(18) Countrywide Lost-Time Claims:	6291.0	.	.
(19) Pure Premium Underlying Present Rate:	5.498	2.830	8.329
(20) Relativity to Underlying Present Rate:	2.115	2.042	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	2.096	1.789	.
(24) Balanced Formula Relativity:	2.129	1.795	2.017

Class(es): 5437 CARPENTRY-INSTALL OF CABINET WORK OR INT TRIM		Effective: 7/1/2016							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)
2009	1,819,743	12	223	3,049,551	3,728,700	1,042,643	2,312,903	10,133,798	3,725	1,844	5,569
2010	1,903,930	18	289	2,408,999	5,489,094	1,183,833	2,370,394	11,452,321	4,148	1,867	6,015
2011	2,068,106	10	260	1,253,557	2,335,639	565,041	1,348,456	5,502,693	1,735	0,925	2,661
2012	2,268,308	12	251	2,499,984	4,306,585	740,166	2,754,974	10,301,710	3,001	1,541	4,542
2013	2,381,808	18	241	2,181,754	4,437,074	1,932,495	2,569,996	11,121,320	2,779	1,890	4,669
<b>MA Total:</b>	<b>10,441,895</b>	<b>70</b>	<b>1,264</b>	<b>11,393,844</b>	<b>20,297,093</b>	<b>5,464,180</b>	<b>11,356,724</b>	<b>48,511,841</b>	<b>3,035</b>	<b>1,611</b>	<b>4,646</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.981	1.036	.
(14) Massachusetts Credibility:	0.970	1.000	.
(15) Countrywide Pure Premium:	3.486	1.694	5.180
(16) Countrywide Indicated Relativity:	1.124	1.089	.
(17) Countrywide Credibility:	0.020	0.000	.
(18) Countrywide Lost-Time Claims:	3842.0	.	.
(19) Pure Premium Underlying Present Rate:	2.420	1.154	3.574
(20) Relativity to Underlying Present Rate:	0.931	0.833	.
(21) Credibility to Underlying Relativity:	0.010	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.983	1.036	.
(24) Balanced Formula Relativity:	0.999	1.040	1.013

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## Calculation of Class Relativities

Class(es): 5443 LATHING & DRIVERS		Effective: 7/1/2016							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)
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	167	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	132	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	718	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	1,223	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>2,239</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	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:	2.088	1.121	3.210
(16) Countrywide Indicated Relativity:	0.673	0.721	.
(17) Countrywide Credibility:	0.360	0.380	.
(18) Countrywide Lost-Time Claims:	88.000	.	.
(19) Pure Premium Underlying Present Rate:	2.004	1.121	3.125
(20) Relativity to Underlying Present Rate:	0.771	0.809	.
(21) Credibility to Underlying Relativity:	0.610	0.580	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.713	0.743	.
(24) Balanced Formula Relativity:	0.724	0.746	0.731

Class(es): 5445 WALLBOARD INSTALLATION WITHIN BUILDINGS & DR		Effective: 7/1/2016							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)
2009	1,341,072	8	180	2,164,016	4,327,586	696,031	1,614,413	8,802,045	4,841	1,723	6,563
2010	1,368,240	18	164	3,983,156	3,538,741	1,095,536	1,615,469	10,232,902	5,497	1,981	7,479
2011	1,408,182	7	151	1,789,205	4,214,585	645,751	1,718,917	8,368,458	4,264	1,679	5,943
2012	1,883,047	14	184	3,235,171	5,190,262	1,372,001	1,836,126	11,633,561	4,474	1,704	6,178
2013	1,955,857	8	187	1,454,693	3,725,538	295,484	1,707,636	7,183,351	2,649	1,024	3,673
<b>MA Total:</b>	<b>7,956,397</b>	<b>55</b>	<b>866</b>	<b>12,626,241</b>	<b>20,996,712</b>	<b>4,104,803</b>	<b>8,492,561</b>	<b>46,220,317</b>	<b>4,226</b>	<b>1,583</b>	<b>5,809</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.366	1.018	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	3.779	1.691	5.469
(16) Countrywide Indicated Relativity:	1.218	1.086	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	3872.0	.	.
(19) Pure Premium Underlying Present Rate:	3.831	1.682	5.514
(20) Relativity to Underlying Present Rate:	1.474	1.214	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.366	1.018	.
(24) Balanced Formula Relativity:	1.388	1.022	1.265

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	357,058	6	54	965,709	1,019,598	183,767	349,783	2,518,857	5,560	1,494	7,054
2010	373,275	6	61	419,931	996,956	98,404	454,109	1,969,399	3,796	1,480	5,276
2011	393,394	5	77	1,020,028	670,009	265,840	543,467	2,499,344	4,296	2,057	6,353
2012	494,609	6	84	1,367,671	1,491,406	422,193	732,119	4,013,389	5,780	2,334	8,114
2013	487,603	7	68	1,605,782	768,244	414,611	390,927	3,179,564	4,869	1,652	6,521
<b>MA Total:</b>	<b>2,105,939</b>	<b>30</b>	<b>344</b>	<b>5,379,121</b>	<b>4,946,214</b>	<b>1,384,815</b>	<b>2,470,405</b>	<b>14,180,554</b>	<b>4,903</b>	<b>1,831</b>	<b>6,734</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.585	1.177	.
(14) Massachusetts Credibility:	0.590	0.730	.
(15) Countrywide Pure Premium:	4.492	2.032	6.523
(16) Countrywide Indicated Relativity:	1.448	1.305	.
(17) Countrywide Credibility:	0.210	0.140	.
(18) Countrywide Lost-Time Claims:	1412.0	.	.
(19) Pure Premium Underlying Present Rate:	3.463	1.406	4.869
(20) Relativity to Underlying Present Rate:	1.332	1.014	.
(21) Credibility to Underlying Relativity:	0.200	0.130	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.506	1.174	.
(24) Balanced Formula Relativity:	1.530	1.178	1.412

Class(es):		Effective: 7/1/2016							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)
2009	151,158	4	24	1,195,289	299,707	319,098	124,386	1,938,481	9,890	2,934	12,824
2010	141,396	1	25	170,751	574,488	22,347	276,702	1,044,289	5,271	2,115	7,386
2011	137,258	1	29	52,414	1,095,002	8,993	468,394	1,624,803	8,360	3,478	11,838
2012	134,543	3	20	200,302	428,841	178,577	214,593	1,022,313	4,676	2,922	7,598
2013	122,095	0	19	0	463,270	0	179,331	642,601	3,794	1,469	5,263
<b>MA Total:</b>	<b>686,450</b>	<b>9</b>	<b>117</b>	<b>1,618,757</b>	<b>2,861,309</b>	<b>529,016</b>	<b>1,263,406</b>	<b>6,272,488</b>	<b>6,526</b>	<b>2,611</b>	<b>9,138</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.110	1.679	.
(14) Massachusetts Credibility:	0.440	0.560	.
(15) Countrywide Pure Premium:	3.431	1.204	4.635
(16) Countrywide Indicated Relativity:	1.106	0.774	.
(17) Countrywide Credibility:	0.280	0.220	.
(18) Countrywide Lost-Time Claims:	133.00	.	.
(19) Pure Premium Underlying Present Rate:	5.120	2.205	7.325
(20) Relativity to Underlying Present Rate:	1.970	1.591	.
(21) Credibility to Underlying Relativity:	0.280	0.220	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.789	1.461	.
(24) Balanced Formula Relativity:	1.818	1.466	1.700

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	90.557	0	11	0	324.701	0	87.192	411.893	3.586	0.963	4.548	
2010	136.033	3	13	136.754	22.498	15.651	51.848	226.751	1.171	0.496	1.667	
2011	174.494	4	16	930.857	1,138.403	320.344	480.996	2,870.601	11.859	4.592	16.451	
2012	202.324	3	27	1,064.489	249.965	806.882	187.432	2,308.769	6.497	4.914	11.411	
2013	250.618	2	34	655.130	710.183	329.484	472.043	2,166.840	5.448	3.198	8.646	
<b>MA Total:</b>	<b>854.026</b>	<b>12</b>	<b>101</b>	<b>2,787.230</b>	<b>2,445.750</b>	<b>1,472.361</b>	<b>1,279.512</b>	<b>7,984.853</b>	<b>6.127</b>	<b>3.222</b>	<b>9.350</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.981	2.072	.
(14) Massachusetts Credibility:	0.460	0.670	.
(15) Countrywide Pure Premium:	4.669	2.527	7.196
(16) Countrywide Indicated Relativity:	1.505	1.624	.
(17) Countrywide Credibility:	0.270	0.170	.
(18) Countrywide Lost-Time Claims:	471.00	.	.
(19) Pure Premium Underlying Present Rate:	4.637	2.714	7.351
(20) Relativity to Underlying Present Rate:	1.784	1.958	.
(21) Credibility to Underlying Relativity:	0.270	0.160	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.799	1.978	.
(24) Balanced Formula Relativity:	1.828	1.985	1.880

Class(es):		Effective: 7/1/2016							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)	
2009	2,142.333	23	184	2,992.187	3,644.657	1,237.009	2,507.886	10,381.738	3.098	1.748	4.846	
2010	2,297.933	12	156	1,548.874	5,765.100	728.004	3,199.576	11,241.555	3.183	1.709	4.892	
2011	2,531.626	22	190	3,693.133	5,362.062	1,554.592	3,370.557	13,980.344	3.577	1.945	5.522	
2012	2,606.902	16	156	3,629.459	3,427.771	1,854.900	2,032.116	10,944.246	2.707	1.491	4.198	
2013	2,894.803	13	174	2,455.356	5,791.363	960.963	3,720.121	12,927.803	2.849	1.617	4.466	
<b>MA Total:</b>	<b>12,473.597</b>	<b>86</b>	<b>860</b>	<b>14,319.009</b>	<b>23,990.953</b>	<b>6,335.468</b>	<b>14,830.256</b>	<b>59,475.686</b>	<b>3.071</b>	<b>1.697</b>	<b>4.768</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.993	1.091	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	3.513	1.853	5.366
(16) Countrywide Indicated Relativity:	1.132	1.191	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	5214.0	.	.
(19) Pure Premium Underlying Present Rate:	2.800	1.607	4.407
(20) Relativity to Underlying Present Rate:	1.077	1.159	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.993	1.091	.
(24) Balanced Formula Relativity:	1.009	1.095	1.038

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	508,400	3	65	194,413	1,319,643	197,609	820,953	2,532,618	2,978	2,003	4,982	
2010	527,664	6	67	1,507,117	1,697,539	477,432	625,733	4,307,821	6,073	2,091	8,164	
2011	568,021	8	68	1,657,196	1,473,237	397,955	600,958	4,129,345	5,511	1,759	7,270	
2012	596,066	4	46	772,534	589,233	214,855	219,596	1,796,218	2,285	0,729	3,013	
2013	677,854	2	50	168,941	1,163,304	71,913	437,764	1,841,922	1,965	0,752	2,717	
<b>MA Total:</b>	<b>2,878,004</b>	<b>23</b>	<b>296</b>	<b>4,300,202</b>	<b>6,242,955</b>	<b>1,359,765</b>	<b>2,705,003</b>	<b>14,607,925</b>	<b>3,663</b>	<b>1,412</b>	<b>5,076</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.184	0.908	.
(14) Massachusetts Credibility:	0.660	0.840	.
(15) Countrywide Pure Premium:	3.000	1.265	4.265
(16) Countrywide Indicated Relativity:	0.967	0.813	.
(17) Countrywide Credibility:	0.170	0.080	.
(18) Countrywide Lost-Time Claims:	1270.0	.	.
(19) Pure Premium Underlying Present Rate:	3.361	1.429	4.790
(20) Relativity to Underlying Present Rate:	1.293	1.031	.
(21) Credibility to Underlying Relativity:	0.170	0.080	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.166	0.910	.
(24) Balanced Formula Relativity:	1.184	0.914	1.094

Class(es):		Effective: 7/1/2016							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)	
2009	211,907	5	36	788,269	842,783	503,183	382,226	2,516,462	7,697	4,178	11,875	
2010	257,577	4	50	348,853	498,538	168,374	452,287	1,468,051	3,290	2,410	5,699	
2011	358,437	4	75	856,689	1,439,134	863,617	606,915	3,766,355	6,405	4,103	10,508	
2012	389,341	4	100	166,094	1,260,439	217,284	971,537	2,615,353	3,664	3,053	6,717	
2013	394,475	2	83	76,227	2,201,714	59,595	612,544	2,950,080	5,775	1,704	7,479	
<b>MA Total:</b>	<b>1,611,737</b>	<b>19</b>	<b>344</b>	<b>2,236,131</b>	<b>6,242,608</b>	<b>1,812,054</b>	<b>3,025,510</b>	<b>13,316,303</b>	<b>5,261</b>	<b>3,001</b>	<b>8,262</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.701	1.930	.
(14) Massachusetts Credibility:	0.530	0.850	.
(15) Countrywide Pure Premium:	3.660	1.960	5.620
(16) Countrywide Indicated Relativity:	1.180	1.260	.
(17) Countrywide Credibility:	0.240	0.080	.
(18) Countrywide Lost-Time Claims:	1309.0	.	.
(19) Pure Premium Underlying Present Rate:	3.384	2.631	6.014
(20) Relativity to Underlying Present Rate:	1.302	1.898	.
(21) Credibility to Underlying Relativity:	0.230	0.070	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.484	1.874	.
(24) Balanced Formula Relativity:	1.507	1.881	1.632

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	302,706	2	27	353,085	564,441	55,344	290,517	1,263,388	3,031	1,143	4,174
2010	273,058	2	32	156,450	1,130,390	23,898	455,355	1,766,092	4,713	1,755	6,468
2011	313,823	0	20	0	248,166	0	199,188	447,354	0,791	0,635	1,425
2012	347,552	0	20	0	313,859	0	186,228	500,087	0,903	0,536	1,439
2013	377,985	1	23	65,678	744,460	56,889	359,882	1,226,910	2,143	1,103	3,246
<b>MA Total:</b>	<b>1,615,123</b>	<b>5</b>	<b>122</b>	<b>575,213</b>	<b>3,001,316</b>	<b>136,131</b>	<b>1,491,170</b>	<b>5,203,831</b>	<b>2,214</b>	<b>1,008</b>	<b>3,222</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.716	0.648	.
(14) Massachusetts Credibility:	0.480	0.610	.
(15) Countrywide Pure Premium:	3.373	1.460	4.833
(16) Countrywide Indicated Relativity:	1.087	0.938	.
(17) Countrywide Credibility:	0.260	0.200	.
(18) Countrywide Lost-Time Claims:	145.00	.	.
(19) Pure Premium Underlying Present Rate:	2.653	1.149	3.802
(20) Relativity to Underlying Present Rate:	1.021	0.829	.
(21) Credibility to Underlying Relativity:	0.260	0.190	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.892	0.740	.
(24) Balanced Formula Relativity:	0.906	0.743	0.851

Class(es):		Effective: 7/1/2016							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)
2009	420,424	4	54	584,988	432,311	156,331	199,230	1,372,859	2,420	0,846	3,265
2010	508,303	3	53	719,393	1,002,677	622,154	692,466	3,036,690	3,388	2,586	5,974
2011	486,026	6	61	2,263,540	1,983,324	941,509	1,044,096	6,232,468	8,738	4,085	12,823
2012	536,923	7	55	1,114,455	837,815	290,054	481,285	2,723,609	3,636	1,437	5,073
2013	508,179	0	42	0	275,205	0	331,251	606,457	0,542	0,652	1,193
<b>MA Total:</b>	<b>2,459,854</b>	<b>20</b>	<b>265</b>	<b>4,682,376</b>	<b>4,531,332</b>	<b>2,010,048</b>	<b>2,748,328</b>	<b>13,972,084</b>	<b>3,746</b>	<b>1,934</b>	<b>5,680</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.211	1.244	.
(14) Massachusetts Credibility:	0.630	0.860	.
(15) Countrywide Pure Premium:	3.910	1.898	5.808
(16) Countrywide Indicated Relativity:	1.260	1.220	.
(17) Countrywide Credibility:	0.190	0.070	.
(18) Countrywide Lost-Time Claims:	4765.0	.	.
(19) Pure Premium Underlying Present Rate:	3.432	1.807	5.239
(20) Relativity to Underlying Present Rate:	1.321	1.304	.
(21) Credibility to Underlying Relativity:	0.180	0.070	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.240	1.246	.
(24) Balanced Formula Relativity:	1.260	1.251	1.257

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	209,474	2	19	466,841	387,944	161,518	138,169	1,154,472	4,081	1,431	5,511	
2010	222,556	4	35	919,957	346,279	366,007	337,929	1,970,172	5,690	3,163	8,852	
2011	254,930	4	22	907,534	120,863	675,327	69,136	1,772,860	4,034	2,920	6,954	
2012	211,374	5	20	972,007	915,116	177,152	1,062,204	3,126,479	8,928	5,863	14,791	
2013	214,344	1	18	3	349,591	15,831	85,414	450,840	1,631	0,472	2,103	
<b>MA Total:</b>	<b>1,112,679</b>	<b>16</b>	<b>114</b>	<b>3,266,342</b>	<b>2,119,793</b>	<b>1,395,835</b>	<b>1,692,853</b>	<b>8,474,823</b>	<b>4,841</b>	<b>2,776</b>	<b>7,617</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.565	1.785	.
(14) Massachusetts Credibility:	0.460	0.650	.
(15) Countrywide Pure Premium:	2.576	1.265	3.841
(16) Countrywide Indicated Relativity:	0.830	0.813	.
(17) Countrywide Credibility:	0.270	0.180	.
(18) Countrywide Lost-Time Claims:	1082.0	.	.
(19) Pure Premium Underlying Present Rate:	3.483	1.965	5.448
(20) Relativity to Underlying Present Rate:	1.340	1.418	.
(21) Credibility to Underlying Relativity:	0.270	0.170	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.306	1.548	.
(24) Balanced Formula Relativity:	1.327	1.553	1.402

Class(es):		Effective: 7/1/2016							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)	
2009	179,152	0	36	0	413,472	0	144,328	557,800	2,308	0,806	3,114	
2010	207,529	1	15	3,399	3,449	16,334	11,047	34,228	0,033	0,132	0,165	
2011	86,137	0	11	0	70,127	0	44,968	115,096	0,814	0,522	1,336	
2012	48,277	1	14	5,582	455,065	7,792	295,784	764,222	9,542	6,288	15,830	
2013	49,458	0	12	0	2,404	0	7,506	9,910	0,049	0,152	0,200	
<b>MA Total:</b>	<b>570,553</b>	<b>2</b>	<b>88</b>	<b>8,981</b>	<b>944,517</b>	<b>24,125</b>	<b>503,633</b>	<b>1,481,256</b>	<b>1,671</b>	<b>0,925</b>	<b>2,596</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.540	0.595	.
(14) Massachusetts Credibility:	0.250	0.360	.
(15) Countrywide Pure Premium:	2.507	1.459	3.966
(16) Countrywide Indicated Relativity:	0.808	0.938	.
(17) Countrywide Credibility:	0.380	0.320	.
(18) Countrywide Lost-Time Claims:	580.00	.	.
(19) Pure Premium Underlying Present Rate:	1.498	0.849	2.347
(20) Relativity to Underlying Present Rate:	0.576	0.613	.
(21) Credibility to Underlying Relativity:	0.370	0.320	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.655	0.710	.
(24) Balanced Formula Relativity:	0.666	0.713	0.681

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	1,443,004	6	236	298,121	1,511,669	206,416	934,719	2,950,925	1,254	0,791	2,045
2010	1,431,138	7	252	843,783	2,603,889	310,244	1,776,595	5,534,510	2,409	1,458	3,867
2011	1,648,481	12	259	1,459,860	2,364,282	653,346	1,827,971	6,305,458	2,320	1,505	3,825
2012	1,900,914	6	275	858,169	4,509,941	542,990	1,659,793	7,570,893	2,824	1,159	3,983
2013	2,102,454	16	256	2,190,147	2,298,959	842,081	1,378,174	6,709,361	2,135	1,056	3,191
<b>MA Total:</b>	<b>8,525,991</b>	<b>47</b>	<b>1,278</b>	<b>5,650,080</b>	<b>13,288,741</b>	<b>2,555,076</b>	<b>7,577,251</b>	<b>29,071,148</b>	<b>2,221</b>	<b>1,188</b>	<b>3,410</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.718	0.764	.
(14) Massachusetts Credibility:	0.890	1.000	.
(15) Countrywide Pure Premium:	4.302	2.090	6.392
(16) Countrywide Indicated Relativity:	1.387	1.343	.
(17) Countrywide Credibility:	0.060	0.000	.
(18) Countrywide Lost-Time Claims:	162.00	.	.
(19) Pure Premium Underlying Present Rate:	2.413	1.256	3.668
(20) Relativity to Underlying Present Rate:	0.928	0.906	.
(21) Credibility to Underlying Relativity:	0.050	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.769	0.764	.
(24) Balanced Formula Relativity:	0.781	0.767	0.776

Class(es):		Effective: 7/1/2016							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)
2009	95,669	5	32	581,241	1,897,269	328,134	1,086,099	3,892,744	25,907	14,783	40,690
2010	98,797	13	29	1,551,580	1,578,072	1,309,541	415,866	4,855,058	31,678	17,464	49,142
2011	153,685	13	33	1,850,455	556,837	845,219	449,293	3,701,802	15,664	8,423	24,087
2012	135,692	8	33	1,180,577	1,731,502	1,102,957	1,231,617	5,246,653	21,461	17,205	38,666
2013	150,151	3	36	314,212	870,373	154,787	599,240	1,938,613	7,889	5,022	12,911
<b>MA Total:</b>	<b>633,995</b>	<b>42</b>	<b>163</b>	<b>5,478,065</b>	<b>6,634,052</b>	<b>3,740,638</b>	<b>3,782,115</b>	<b>19,634,871</b>	<b>19,104</b>	<b>11,866</b>	<b>30,970</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	6.176	7.631	.
(14) Massachusetts Credibility:	0.690	1.000	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	6.303	8.390	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	17.196	12.382	29.578
(20) Relativity to Underlying Present Rate:	6.616	8.933	.
(21) Credibility to Underlying Relativity:	0.310	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	6.312	7.631	.
(24) Balanced Formula Relativity:	6.412	7.659	6.829



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	455,262	12	87	2,909,222	1,788,470	1,642,603	1,114,036	7,454,331	10,319	6,055	16,374
2010	475,712	8	83	1,029,435	1,316,412	590,899	1,283,119	4,219,865	4,931	3,939	8,871
2011	519,430	5	78	1,942,279	2,703,585	1,166,774	1,390,489	7,203,128	8,944	4,923	13,867
2012	489,371	4	68	259,957	1,979,338	332,802	1,594,157	4,166,254	4,576	3,938	8,513
2013	530,269	1	68	160,348	2,370,949	72,682	1,883,717	4,487,696	4,774	3,689	8,463
<b>MA Total:</b>	<b>2,470,044</b>	<b>30</b>	<b>384</b>	<b>6,301,241</b>	<b>10,158,755</b>	<b>3,805,760</b>	<b>7,265,518</b>	<b>27,531,274</b>	<b>6,664</b>	<b>4,482</b>	<b>11,146</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.154	2.882	.
(14) Massachusetts Credibility:	0.820	1.000	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	2.451	3.210	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	6.686	4.737	11.423
(20) Relativity to Underlying Present Rate:	2.572	3.418	.
(21) Credibility to Underlying Relativity:	0.180	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	2.229	2.882	.
(24) Balanced Formula Relativity:	2.265	2.893	2.475

Class(es):		Effective: 7/1/2016							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)
2009	4,450,085	11	167	3,145,183	2,448,615	1,425,715	963,510	7,983,023	1,257	0,537	1,794
2010	4,574,943	9	204	875,834	3,007,500	662,873	1,840,350	6,386,557	0,849	0,547	1,396
2011	4,958,661	9	225	2,156,037	4,296,482	1,154,540	2,390,670	9,997,729	1,301	0,715	2,016
2012	5,215,520	17	204	4,067,413	2,200,868	1,708,667	1,581,612	9,558,561	1,202	0,631	1,833
2013	5,906,009	10	161	1,756,507	1,812,538	1,161,895	1,177,883	5,908,824	0,604	0,396	1,000
<b>MA Total:</b>	<b>25,105,220</b>	<b>56</b>	<b>961</b>	<b>12,000,975</b>	<b>13,766,003</b>	<b>6,113,689</b>	<b>7,954,026</b>	<b>39,834,693</b>	<b>1,026</b>	<b>0,560</b>	<b>1,587</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.332	0.360	.
(14) Massachusetts Credibility:	0.930	1.000	.
(15) Countrywide Pure Premium:	0.739	0.381	1.120
(16) Countrywide Indicated Relativity:	0.238	0.245	.
(17) Countrywide Credibility:	0.040	0.000	.
(18) Countrywide Lost-Time Claims:	3620.0	.	.
(19) Pure Premium Underlying Present Rate:	0.915	0.501	1.415
(20) Relativity to Underlying Present Rate:	0.352	0.361	.
(21) Credibility to Underlying Relativity:	0.030	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.329	0.360	.
(24) Balanced Formula Relativity:	0.334	0.362	0.343

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Construction		
5610 CLEANER - DEBRIS REMOVAL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	279,425	5	48	1,373,167	682,941	437,095	677,080	3,170,283	7,358	3,987	11,346
2010	315,815	5	42	1,047,371	1,133,017	126,794	386,664	2,693,845	6,904	1,626	8,530
2011	304,354	3	29	412,541	1,200,735	42,991	354,607	2,010,874	5,301	1,306	6,607
2012	377,466	2	29	635,622	1,096,151	149,405	511,944	2,393,121	4,588	1,752	6,340
2013	424,120	2	34	520,832	801,049	65,378	419,794	1,807,054	3,117	1,144	4,261
<b>MA Total:</b>	<b>1,701,179</b>	<b>17</b>	<b>182</b>	<b>3,989,533</b>	<b>4,913,893</b>	<b>821,662</b>	<b>2,350,089</b>	<b>12,075,177</b>	<b>5,234</b>	<b>1,864</b>	<b>7,098</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.692	1.199	.
(14) Massachusetts Credibility:	0.560	0.690	.
(15) Countrywide Pure Premium:	3.147	1.660	4.807
(16) Countrywide Indicated Relativity:	1.014	1.067	.
(17) Countrywide Credibility:	0.220	0.160	.
(18) Countrywide Lost-Time Claims:	575.00	.	.
(19) Pure Premium Underlying Present Rate:	3.699	1.487	5.186
(20) Relativity to Underlying Present Rate:	1.423	1.073	.
(21) Credibility to Underlying Relativity:	0.220	0.150	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.484	1.159	.
(24) Balanced Formula Relativity:	1.507	1.163	1.392

Class(es):		Effective: 7/1/2016							Construction		
5645 CARPENTRY-DETACHED ONE OR TWO FAMILY DWELLINGS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	4,095,504	45	716	8,069,662	10,180,750	4,153,090	8,413,393	30,816,895	4,456	3,068	7,525
2010	4,225,910	53	707	5,697,992	10,953,358	3,688,875	6,825,734	27,165,959	3,940	2,488	6,428
2011	4,335,411	41	670	5,785,455	9,994,741	3,435,807	6,319,361	25,535,365	3,640	2,250	5,890
2012	4,577,204	53	653	8,010,645	12,363,196	4,948,233	7,005,863	32,327,937	4,451	2,612	7,063
2013	4,969,080	44	657	7,504,969	15,016,154	4,043,832	9,448,724	36,013,679	4,532	2,715	7,248
<b>MA Total:</b>	<b>22,203,110</b>	<b>236</b>	<b>3,403</b>	<b>35,068,724</b>	<b>58,508,199</b>	<b>20,269,838</b>	<b>38,013,076</b>	<b>151,859,836</b>	<b>4,215</b>	<b>2,625</b>	<b>6,840</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.362	1.688	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	6.083	3.455	9.538
(16) Countrywide Indicated Relativity:	1.961	2.220	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	11215	.	.
(19) Pure Premium Underlying Present Rate:	3.526	2.233	5.759
(20) Relativity to Underlying Present Rate:	1.357	1.611	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.362	1.688	.
(24) Balanced Formula Relativity:	1.384	1.694	1.488

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	12,428	2	0	526,194	0	249,970	0	776,163	42,341	20,114	62,455	
2010	39,431	1	8	374,021	17,670	365,163	20,766	777,621	9,934	9,787	19,721	
2011	32,613	2	5	559,335	236,952	480,234	272,947	1,549,467	24,416	23,094	47,511	
2012	45,950	1	3	633,202	3,772	180,476	25,370	842,820	13,862	4,480	18,342	
2013	35,826	0	6	0	263,531	0	107,249	370,780	7,356	2,994	10,349	
<b>MA Total:</b>	<b>166,247</b>	<b>6</b>	<b>22</b>	<b>2,092,752</b>	<b>521,925</b>	<b>1,275,843</b>	<b>426,332</b>	<b>4,316,851</b>	<b>15,728</b>	<b>10,239</b>	<b>25,966</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.084	6.584	.
(14) Massachusetts Credibility:	0.310	0.530	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	3.142	5.248	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	8.572	7.745	16.317
(20) Relativity to Underlying Present Rate:	3.298	5.588	.
(21) Credibility to Underlying Relativity:	0.690	0.470	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	3.852	6.116	.
(24) Balanced Formula Relativity:	3.913	6.138	4.657

Class(es):		Effective: 7/1/2016							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)	
2009	8,438	0	0	0	0	0	0	0	0.000	0.000	0.000	
2010	6,508	0	4	0	13,915	0	13,597	27,512	2,138	2,089	4,227	
2011	11,802	0	1	0	0	0	2,067	2,067	0.000	0.175	0.175	
2012	7,351	0	1	0	6,115	0	3,743	9,858	0,832	0,509	1,341	
2013	8,197	0	1	0	108,101	0	50,299	158,400	13,188	6,136	19,325	
<b>MA Total:</b>	<b>42,296</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>128,131</b>	<b>0</b>	<b>69,705</b>	<b>197,836</b>	<b>3,029</b>	<b>1,648</b>	<b>4,677</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.979	1.060	.
(14) Massachusetts Credibility:	0.190	0.240	.
(15) Countrywide Pure Premium:	5.530	3.036	8.566
(16) Countrywide Indicated Relativity:	1.782	1.951	.
(17) Countrywide Credibility:	0.270	0.280	.
(18) Countrywide Lost-Time Claims:	43.000	.	.
(19) Pure Premium Underlying Present Rate:	10.259	4.054	14.314
(20) Relativity to Underlying Present Rate:	3.947	2.925	.
(21) Credibility to Underlying Relativity:	0.540	0.480	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	2.799	2.205	.
(24) Balanced Formula Relativity:	2.843	2.213	2.632

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	567	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	1,058	0	2	0	0	0	1,101	1,101	0.000	1.040	1.040
2011	87	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	821	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	248	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>2,781</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,101</b>	<b>1,101</b>	<b>0.000</b>	<b>0.396</b>	<b>0.396</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.255	.
(14) Massachusetts Credibility:	0.050	0.070	.
(15) Countrywide Pure Premium:	14.868	5.876	20.745
(16) Countrywide Indicated Relativity:	4.792	3.776	.
(17) Countrywide Credibility:	0.270	0.290	.
(18) Countrywide Lost-Time Claims:	45.000	.	.
(19) Pure Premium Underlying Present Rate:	4.568	2.690	7.258
(20) Relativity to Underlying Present Rate:	1.758	1.941	.
(21) Credibility to Underlying Relativity:	0.680	0.640	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	2.489	2.355	.
(24) Balanced Formula Relativity:	2.529	2.364	2.473

Class(es):		Effective: 7/1/2016							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)
2009	43,912	0	14	0	25,281	0	59,760	85,041	0.576	1.361	1.937
2010	40,004	0	5	0	275,734	0	98,828	374,562	6.893	2.470	9.363
2011	51,623	0	14	0	815,416	0	151,716	967,133	15.796	2.939	18.735
2012	48,725	1	6	179,150	234,486	50,663	90,154	554,452	8.489	2.890	11.379
2013	70,991	0	5	0	468,076	0	199,189	667,265	6.593	2.806	9.399
<b>MA Total:</b>	<b>255,256</b>	<b>1</b>	<b>44</b>	<b>179,150</b>	<b>1,818,993</b>	<b>50,663</b>	<b>599,648</b>	<b>2,648,453</b>	<b>7.828</b>	<b>2.548</b>	<b>10.376</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.530	1.638	.
(14) Massachusetts Credibility:	0.300	0.380	.
(15) Countrywide Pure Premium:	5.018	2.357	7.376
(16) Countrywide Indicated Relativity:	1.618	1.515	.
(17) Countrywide Credibility:	0.350	0.310	.
(18) Countrywide Lost-Time Claims:	132.00	.	.
(19) Pure Premium Underlying Present Rate:	5.402	2.191	7.593
(20) Relativity to Underlying Present Rate:	2.078	1.580	.
(21) Credibility to Underlying Relativity:	0.350	0.310	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	2.053	1.582	.
(24) Balanced Formula Relativity:	2.085	1.588	1.919

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## Calculation of Class Relativities

Class(es): 6204 DRILLING NOC & DRIVERS		Effective: 7/1/2016							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)
2009	126,883	0	16	0	532,969	0	211,144	744,113	4,200	1,664	5,865
2010	111,134	0	13	0	209,398	0	100,688	310,085	1,884	0,906	2,790
2011	126,955	1	17	5,102	96,501	783	174,417	276,803	0,800	1,380	2,180
2012	123,584	1	8	44,900	286,776	7,266	107,971	446,913	2,684	0,932	3,616
2013	133,097	0	14	0	48,017	0	34,424	82,441	0,361	0,259	0,619
<b>MA Total:</b>	<b>621,653</b>	<b>2</b>	<b>68</b>	<b>50,002</b>	<b>1,173,661</b>	<b>8,049</b>	<b>628,644</b>	<b>1,860,356</b>	<b>1,968</b>	<b>1,024</b>	<b>2,993</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.636	0.659	.
(14) Massachusetts Credibility:	0.410	0.520	.
(15) Countrywide Pure Premium:	5,830	2,660	8,490
(16) Countrywide Indicated Relativity:	1.879	1.709	.
(17) Countrywide Credibility:	0.300	0.240	.
(18) Countrywide Lost-Time Claims:	1174.0	.	.
(19) Pure Premium Underlying Present Rate:	4.681	1.986	6.668
(20) Relativity to Underlying Present Rate:	1.801	1.433	.
(21) Credibility to Underlying Relativity:	0.290	0.240	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.347	1.097	.
(24) Balanced Formula Relativity:	1.368	1.101	1.279

Class(es): 6217 EXCAVATION & DRIVERS		Effective: 7/1/2016							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)
2009	2,377,796	13	248	2,302,667	3,012,130	1,258,022	2,251,009	8,823,828	2,235	1,476	3,711
2010	2,605,101	19	224	3,713,209	2,937,141	1,737,679	1,421,344	9,809,374	2,553	1,213	3,765
2011	2,914,939	20	255	3,764,060	5,594,435	1,669,799	3,407,911	14,436,205	3,211	1,742	4,952
2012	2,975,787	13	206	1,296,099	5,324,664	496,183	2,533,829	9,650,775	2,225	1,018	3,243
2013	3,236,750	15	250	2,847,401	4,226,939	1,292,319	2,799,856	11,166,515	2,186	1,264	3,450
<b>MA Total:</b>	<b>14,110,373</b>	<b>80</b>	<b>1,183</b>	<b>13,923,436</b>	<b>21,095,309</b>	<b>6,454,002</b>	<b>12,413,950</b>	<b>53,886,698</b>	<b>2,482</b>	<b>1,337</b>	<b>3,819</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.802	0.860	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	3.070	1.438	4.508
(16) Countrywide Indicated Relativity:	0.990	0.924	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	6398.0	.	.
(19) Pure Premium Underlying Present Rate:	2.239	1.207	3.446
(20) Relativity to Underlying Present Rate:	0.862	0.871	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.802	0.860	.
(24) Balanced Formula Relativity:	0.815	0.863	0.831

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	285,438	3	32	436,114	177,483	183,964	114,091	911,653	2,150	1,044	3,194
2010	325,433	4	45	514,158	578,090	349,443	302,229	1,743,920	3,356	2,002	5,359
2011	302,861	1	36	452,304	1,080,954	263,230	297,801	2,094,289	5,063	1,852	6,915
2012	327,133	0	25	0	288,671	0	141,380	430,051	0,882	0,432	1,315
2013	346,694	3	30	97,358	354,597	130,374	131,661	713,990	1,304	0,756	2,059
<b>MA Total:</b>	<b>1,587,558</b>	<b>11</b>	<b>168</b>	<b>1,499,935</b>	<b>2,479,795</b>	<b>927,012</b>	<b>987,162</b>	<b>5,893,903</b>	<b>2,507</b>	<b>1,206</b>	<b>3,713</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.810	0.775	.
(14) Massachusetts Credibility:	0.440	0.620	.
(15) Countrywide Pure Premium:	2.548	1.470	4.017
(16) Countrywide Indicated Relativity:	0.821	0.944	.
(17) Countrywide Credibility:	0.280	0.190	.
(18) Countrywide Lost-Time Claims:	600.00	.	.
(19) Pure Premium Underlying Present Rate:	2.239	1.207	3.446
(20) Relativity to Underlying Present Rate:	0.862	0.871	.
(21) Credibility to Underlying Relativity:	0.280	0.190	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.828	0.826	.
(24) Balanced Formula Relativity:	0.841	0.829	0.837

Class(es):		Effective: 7/1/2016							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)
2009	21,672	1	4	272,136	40,240	21,634	36,697	370,707	14,414	2,692	17,105
2010	12,170	0	0	0	0	0	0	0	0,000	0,000	0,000
2011	14,231	0	0	0	0	0	0	0	0,000	0,000	0,000
2012	9,896	0	1	0	0	0	1,328	1,328	0,000	0,134	0,134
2013	11,870	0	1	0	0	0	1,220	1,220	0,000	0,103	0,103
<b>MA Total:</b>	<b>69,839</b>	<b>1</b>	<b>6</b>	<b>272,136</b>	<b>40,240</b>	<b>21,634</b>	<b>39,244</b>	<b>373,255</b>	<b>4,473</b>	<b>0,872</b>	<b>5,345</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.446	0.561	.
(14) Massachusetts Credibility:	0.130	0.160	.
(15) Countrywide Pure Premium:	1.952	0.811	2.764
(16) Countrywide Indicated Relativity:	0.629	0.521	.
(17) Countrywide Credibility:	0.440	0.420	.
(18) Countrywide Lost-Time Claims:	618.00	.	.
(19) Pure Premium Underlying Present Rate:	2.403	0.870	3.272
(20) Relativity to Underlying Present Rate:	0.924	0.627	.
(21) Credibility to Underlying Relativity:	0.430	0.420	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.862	0.572	.
(24) Balanced Formula Relativity:	0.876	0.574	0.775

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	2,882	0	1	0	0	0	3,366	3,366	0.000	1.168	1.168
2013	0	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>2,882</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,366</b>	<b>3,366</b>	<b>0.000</b>	<b>1.168</b>	<b>1.168</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.751	.
(14) Massachusetts Credibility:	0.040	0.040	.
(15) Countrywide Pure Premium:	5.154	1.004	6.158
(16) Countrywide Indicated Relativity:	1.661	0.645	.
(17) Countrywide Credibility:	0.280	0.300	.
(18) Countrywide Lost-Time Claims:	48.000	.	.
(19) Pure Premium Underlying Present Rate:	3.527	0.945	4.472
(20) Relativity to Underlying Present Rate:	1.357	0.682	.
(21) Credibility to Underlying Relativity:	0.680	0.660	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.388	0.674	.
(24) Balanced Formula Relativity:	1.410	0.676	1.165

Class(es):		Effective: 7/1/2016							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)
2009	10,066	0	1	0	0	0	3,344	3,344	0.000	0.332	0.332
2010	26,948	0	1	0	19,416	0	78,538	97,953	0.720	2,914	3,635
2011	42,672	2	6	440,982	995,701	88,299	431,075	1,956,057	33,668	12,171	45,839
2012	22,218	0	2	0	980	0	40,373	41,353	0.044	1,817	1,861
2013	18,716	0	1	0	0	0	425	425	0.000	0.023	0.023
<b>MA Total:</b>	<b>120,621</b>	<b>2</b>	<b>11</b>	<b>440,982</b>	<b>1,016,096</b>	<b>88,299</b>	<b>553,755</b>	<b>2,099,132</b>	<b>12.080</b>	<b>5.323</b>	<b>17.403</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.905	3.423	.
(14) Massachusetts Credibility:	0.210	0.280	.
(15) Countrywide Pure Premium:	2.421	1.444	3.865
(16) Countrywide Indicated Relativity:	0.780	0.928	.
(17) Countrywide Credibility:	0.350	0.360	.
(18) Countrywide Lost-Time Claims:	82.000	.	.
(19) Pure Premium Underlying Present Rate:	4.612	2.220	6.832
(20) Relativity to Underlying Present Rate:	1.774	1.601	.
(21) Credibility to Underlying Relativity:	0.440	0.360	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.874	1.869	.
(24) Balanced Formula Relativity:	1.904	1.876	1.894

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	248,940	8	36	2,221,394	520,694	660,032	454,514	3,856,635	11,015	4,477	15,492
2010	199,675	3	22	470,455	142,597	92,688	73,319	779,059	3,070	0,831	3,902
2011	206,132	1	28	19,289	1,196,565	4,838	368,893	1,589,586	5,898	1,813	7,711
2012	196,673	3	25	805,786	1,393,841	147,894	524,351	2,871,872	11,184	3,418	14,602
2013	229,362	2	24	688,217	765,626	231,079	629,214	2,314,136	6,339	3,751	10,089
<b>MA Total:</b>	<b>1,080,782</b>	<b>17</b>	<b>135</b>	<b>4,205,143</b>	<b>4,019,323</b>	<b>1,136,531</b>	<b>2,050,291</b>	<b>11,411,287</b>	<b>7,610</b>	<b>2,949</b>	<b>10,558</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.460	1.896	.
(14) Massachusetts Credibility:	0.500	0.690	.
(15) Countrywide Pure Premium:	2.984	1.429	4.413
(16) Countrywide Indicated Relativity:	0.962	0.918	.
(17) Countrywide Credibility:	0.250	0.160	.
(18) Countrywide Lost-Time Claims:	1213.0	.	.
(19) Pure Premium Underlying Present Rate:	4.496	2.300	6.796
(20) Relativity to Underlying Present Rate:	1.730	1.659	.
(21) Credibility to Underlying Relativity:	0.250	0.150	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.903	1.704	.
(24) Balanced Formula Relativity:	1.933	1.710	1.859

Class(es):		Effective: 7/1/2016							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)
2009	453,332	1	63	122,288	513,701	28,353	298,132	962,475	1,403	0,720	2,123
2010	473,094	4	55	725,368	536,661	825,088	255,493	2,342,611	2,668	2,284	4,952
2011	517,858	1	56	12,740	894,324	8,636	558,514	1,474,214	1,752	1,095	2,847
2012	566,589	4	32	1,450,345	1,247,234	481,477	1,005,665	4,184,721	4,761	2,625	7,386
2013	637,772	1	29	143,616	359,406	47,535	337,183	887,740	0,789	0,603	1,392
<b>MA Total:</b>	<b>2,648,645</b>	<b>11</b>	<b>235</b>	<b>2,454,358</b>	<b>3,551,326</b>	<b>1,391,089</b>	<b>2,454,987</b>	<b>9,851,760</b>	<b>2,267</b>	<b>1,452</b>	<b>3,720</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.733	0.934	.
(14) Massachusetts Credibility:	0.530	0.780	.
(15) Countrywide Pure Premium:	2.386	1.151	3.537
(16) Countrywide Indicated Relativity:	0.769	0.740	.
(17) Countrywide Credibility:	0.240	0.110	.
(18) Countrywide Lost-Time Claims:	1239.0	.	.
(19) Pure Premium Underlying Present Rate:	2.129	1.313	3.442
(20) Relativity to Underlying Present Rate:	0.819	0.947	.
(21) Credibility to Underlying Relativity:	0.230	0.110	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.761	0.914	.
(24) Balanced Formula Relativity:	0.774	0.917	0.822



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	167,780	3	11	658,272	243,072	380,756	295,336	1,577,436	5,372	4,030	9,402
2010	188,035	1	10	5,478	387,498	7,096	106,168	506,240	2,090	0,602	2,692
2011	199,587	2	8	190,321	28,255	105,511	25,328	349,415	1,095	0,656	1,751
2012	197,610	1	10	184,821	103,320	47,880	100,216	436,237	1,458	0,749	2,208
2013	224,228	1	8	110,458	46,826	87,974	31,229	276,487	0,701	0,532	1,233
<b>MA Total:</b>	<b>977,240</b>	<b>8</b>	<b>47</b>	<b>1,149,349</b>	<b>808,971</b>	<b>629,216</b>	<b>558,278</b>	<b>3,145,815</b>	<b>2,004</b>	<b>1,215</b>	<b>3,219</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.648	0.781	.
(14) Massachusetts Credibility:	0.400	0.590	.
(15) Countrywide Pure Premium:	2.804	1.284	4.088
(16) Countrywide Indicated Relativity:	0.904	0.825	.
(17) Countrywide Credibility:	0.300	0.210	.
(18) Countrywide Lost-Time Claims:	1208.0	.	.
(19) Pure Premium Underlying Present Rate:	2.828	1.772	4.600
(20) Relativity to Underlying Present Rate:	1.088	1.279	.
(21) Credibility to Underlying Relativity:	0.300	0.200	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.857	0.890	.
(24) Balanced Formula Relativity:	0.870	0.893	0.878

Class(es):		Effective: 7/1/2016							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)
2009	238,112	1	52	95,564	249,496	18,926	142,940	506,926	1,449	0,680	2,129
2010	258,202	2	74	177,791	769,226	273,942	583,758	1,804,716	3,668	3,322	6,990
2011	281,649	6	57	679,795	407,129	238,591	326,338	1,651,852	3,859	2,006	5,865
2012	296,894	0	64	0	961,435	0	380,950	1,342,385	3,238	1,283	4,521
2013	319,173	4	35	341,661	318,192	164,964	142,391	967,207	2,067	0,963	3,030
<b>MA Total:</b>	<b>1,394,032</b>	<b>13</b>	<b>282</b>	<b>1,294,811</b>	<b>2,705,477</b>	<b>696,422</b>	<b>1,576,376</b>	<b>6,273,086</b>	<b>2,870</b>	<b>1,630</b>	<b>4,500</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.928	1.048	.
(14) Massachusetts Credibility:	0.480	0.670	.
(15) Countrywide Pure Premium:	3.861	1.875	5.736
(16) Countrywide Indicated Relativity:	1.245	1.205	.
(17) Countrywide Credibility:	0.260	0.170	.
(18) Countrywide Lost-Time Claims:	852.00	.	.
(19) Pure Premium Underlying Present Rate:	3.096	1.707	4.803
(20) Relativity to Underlying Present Rate:	1.191	1.232	.
(21) Credibility to Underlying Relativity:	0.260	0.160	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.079	1.104	.
(24) Balanced Formula Relativity:	1.096	1.108	1.100

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	142,646	1	15	6,084	8,752	343	23,053	38,233	0.104	0.164	0.268	
2010	139,300	0	14	0	155,476	0	58,393	213,869	1.116	0.419	1.535	
2011	149,943	0	14	0	2,785	0	20,169	22,955	0.019	0.135	0.153	
2012	165,688	0	22	0	26,521	0	167,061	193,582	0.160	1.008	1.168	
2013	195,066	0	21	0	71,266	0	81,060	152,326	0.365	0.416	0.781	
<b>MA Total:</b>	<b>792,643</b>	<b>1</b>	<b>86</b>	<b>6,084</b>	<b>264,800</b>	<b>343</b>	<b>349,737</b>	<b>620,965</b>	<b>0.342</b>	<b>0.442</b>	<b>0.783</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.121	0.283	.
(14) Massachusetts Credibility:	0.270	0.370	.
(15) Countrywide Pure Premium:	1.854	1.256	3.110
(16) Countrywide Indicated Relativity:	0.718	0.887	.
(17) Countrywide Credibility:	0.370	0.320	.
(18) Countrywide Lost-Time Claims:	855.00	.	.
(19) Pure Premium Underlying Present Rate:	1.259	0.652	1.911
(20) Relativity to Underlying Present Rate:	0.540	0.470	.
(21) Credibility to Underlying Relativity:	0.360	0.310	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.493	0.534	.
(24) Balanced Formula Relativity:	0.487	0.533	0.503

Class(es):		Effective: 7/1/2016							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)	
2009	418,727	3	64	209,658	109,938	59,815	322,884	702,295	0.763	0.914	1.677	
2010	418,091	2	60	874,863	522,668	233,173	520,159	2,150,864	3.343	1.802	5.144	
2011	415,469	1	57	17,572	227,209	41,653	209,725	496,159	0.589	0.605	1.194	
2012	421,495	1	80	47,409	909,727	19,285	762,523	1,738,945	2.271	1.855	4.126	
2013	443,669	1	72	33,009	2,470,067	84,278	1,163,198	3,750,551	5.642	2.812	8.453	
<b>MA Total:</b>	<b>2,117,451</b>	<b>8</b>	<b>333</b>	<b>1,182,510</b>	<b>4,239,610</b>	<b>438,203</b>	<b>2,978,490</b>	<b>8,838,814</b>	<b>2.561</b>	<b>1.614</b>	<b>4.174</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.907	1.033	.
(14) Massachusetts Credibility:	0.430	0.630	.
(15) Countrywide Pure Premium:	1.897	1.302	3.199
(16) Countrywide Indicated Relativity:	0.735	0.920	.
(17) Countrywide Credibility:	0.290	0.190	.
(18) Countrywide Lost-Time Claims:	605.00	.	.
(19) Pure Premium Underlying Present Rate:	1.568	0.943	2.511
(20) Relativity to Underlying Present Rate:	0.672	0.680	.
(21) Credibility to Underlying Relativity:	0.280	0.180	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.791	0.948	.
(24) Balanced Formula Relativity:	0.782	0.946	0.840

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	2,144,712	40	380	5,422,256	6,757,314	2,615,657	3,000,370	17,795,596	5,679	2,619	8,297
2010	2,279,124	39	417	6,930,505	9,118,097	3,196,141	5,452,534	24,697,278	7,042	3,795	10,836
2011	2,513,000	31	445	4,483,521	8,209,762	1,380,542	3,855,917	17,929,741	5,051	2,084	7,135
2012	2,496,113	43	423	6,354,470	6,412,740	2,844,895	3,441,395	19,053,500	5,115	2,518	7,633
2013	2,837,838	50	492	8,854,080	10,567,910	3,700,110	4,954,711	28,076,811	6,844	3,050	9,894
<b>MA Total:</b>	<b>12,270,788</b>	<b>203</b>	<b>2,157</b>	<b>32,044,831</b>	<b>41,065,823</b>	<b>13,737,345</b>	<b>20,704,927</b>	<b>107,552,926</b>	<b>5,958</b>	<b>2,807</b>	<b>8,765</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.111	1.796	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	4.719	2.057	6.776
(16) Countrywide Indicated Relativity:	1.827	1.454	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	9239.0	.	.
(19) Pure Premium Underlying Present Rate:	4.770	2.447	7.217
(20) Relativity to Underlying Present Rate:	2.045	1.766	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	2.111	1.796	.
(24) Balanced Formula Relativity:	2.085	1.793	1.981

Class(es):		Effective: 7/1/2016							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)
2009	28,855	1	7	159,475	143,414	50,606	66,660	420,155	10,497	4,064	14,561
2010	30,519	0	6	0	11,419	0	18,935	30,354	0,374	0,620	0,995
2011	33,108	1	8	153,486	39,802	64,419	18,391	276,098	5,838	2,501	8,339
2012	38,270	4	6	240,366	108,024	105,809	44,584	498,783	9,104	3,930	13,033
2013	63,371	2	16	399,697	423,351	377,368	162,275	1,362,692	12,988	8,516	21,503
<b>MA Total:</b>	<b>194,123</b>	<b>8</b>	<b>43</b>	<b>953,025</b>	<b>726,010</b>	<b>598,201</b>	<b>310,845</b>	<b>2,588,081</b>	<b>8,649</b>	<b>4,683</b>	<b>13,332</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.064	2.997	.
(14) Massachusetts Credibility:	0.230	0.320	.
(15) Countrywide Pure Premium:	5.394	2.385	7.779
(16) Countrywide Indicated Relativity:	2.089	1.685	.
(17) Countrywide Credibility:	0.390	0.340	.
(18) Countrywide Lost-Time Claims:	401.00	.	.
(19) Pure Premium Underlying Present Rate:	3.621	1.891	5.511
(20) Relativity to Underlying Present Rate:	1.553	1.364	.
(21) Credibility to Underlying Relativity:	0.380	0.340	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	2.109	1.996	.
(24) Balanced Formula Relativity:	2.084	1.992	2.051

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	231.064	8	39	448.832	234.757	139.326	100.700	923.615	2.958	1.039	3.997
2010	332.702	8	87	622.286	1,463.678	273.715	726.803	3,086.483	6.270	3.007	9.277
2011	433.559	14	80	2,306.209	1,700.846	717.417	969.511	5,693.983	9.242	3.891	13.133
2012	403.431	8	69	1,337.695	1,390.060	503.591	707.740	3,939.085	6.761	3.003	9.764
2013	459.078	10	93	657.276	1,320.284	262.133	936.682	3,176.375	4.308	2.611	6.919
<b>MA Total:</b>	<b>1,859.835</b>	<b>48</b>	<b>368</b>	<b>5,372,299</b>	<b>6,109,625</b>	<b>1,896,182</b>	<b>3,441,435</b>	<b>16,819,541</b>	<b>6.174</b>	<b>2.870</b>	<b>9.044</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.187	1.837	.
(14) Massachusetts Credibility:	0.650	0.900	.
(15) Countrywide Pure Premium:	4.962	2.447	7.409
(16) Countrywide Indicated Relativity:	1.922	1.729	.
(17) Countrywide Credibility:	0.180	0.050	.
(18) Countrywide Lost-Time Claims:	3648.0	.	.
(19) Pure Premium Underlying Present Rate:	4.976	2.611	7.587
(20) Relativity to Underlying Present Rate:	2.134	1.884	.
(21) Credibility to Underlying Relativity:	0.170	0.050	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	2.130	1.834	.
(24) Balanced Formula Relativity:	2.104	1.830	2.006

Class(es):		Effective: 7/1/2016							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)
2009	59.725	0	15	0	51.777	0	63.029	114.806	0.867	1.055	1.922
2010	91.601	0	22	0	49.760	0	50.835	100.595	0.543	0.555	1.098
2011	93.329	2	23	332.406	274.995	89.499	184.741	881.642	6.508	2.938	9.447
2012	95.600	0	16	0	152.448	0	167.185	319.634	1.595	1.749	3.343
2013	91.838	0	8	0	360.748	0	261.784	622.532	3.928	2.850	6.779
<b>MA Total:</b>	<b>432.093</b>	<b>2</b>	<b>84</b>	<b>332,406</b>	<b>889,729</b>	<b>89,499</b>	<b>727,576</b>	<b>2,039,210</b>	<b>2.828</b>	<b>1.891</b>	<b>4.719</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.002	1.210	.
(14) Massachusetts Credibility:	0.300	0.420	.
(15) Countrywide Pure Premium:	2.614	1.591	4.205
(16) Countrywide Indicated Relativity:	1.012	1.124	.
(17) Countrywide Credibility:	0.350	0.290	.
(18) Countrywide Lost-Time Claims:	1340.0	.	.
(19) Pure Premium Underlying Present Rate:	3.088	1.684	4.771
(20) Relativity to Underlying Present Rate:	1.324	1.215	.
(21) Credibility to Underlying Relativity:	0.350	0.290	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	1.118	1.187	.
(24) Balanced Formula Relativity:	1.105	1.184	1.133

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	1,266,029	15	521	1,385,228	1,133,267	489,040	1,188,640	4,196,174	1,989	1,325	3,314
2010	1,267,559	18	527	1,244,914	1,768,024	671,191	1,321,594	5,005,723	2,377	1,572	3,949
2011	1,222,697	13	422	939,164	1,260,134	398,591	1,352,738	3,950,626	1,799	1,432	3,231
2012	1,332,415	15	444	892,490	1,338,375	346,024	1,432,344	4,009,233	1,674	1,335	3,009
2013	1,211,942	14	310	1,087,038	1,196,953	441,703	944,455	3,670,150	1,885	1,144	3,028
<b>MA Total:</b>	<b>6,300,641</b>	<b>75</b>	<b>2,224</b>	<b>5,548,834</b>	<b>6,696,753</b>	<b>2,346,548</b>	<b>6,239,771</b>	<b>20,831,906</b>	<b>1,944</b>	<b>1,363</b>	<b>3,306</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.688	0.872	.
(14) Massachusetts Credibility:	0.720	1.000	.
(15) Countrywide Pure Premium:	2.753	1.613	4.366
(16) Countrywide Indicated Relativity:	1.066	1.140	.
(17) Countrywide Credibility:	0.140	0.000	.
(18) Countrywide Lost-Time Claims:	1934.0	.	.
(19) Pure Premium Underlying Present Rate:	1.927	1.355	3.282
(20) Relativity to Underlying Present Rate:	0.826	0.978	.
(21) Credibility to Underlying Relativity:	0.140	0.000	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.761	0.872	.
(24) Balanced Formula Relativity:	0.751	0.870	0.794

Class(es):		Effective: 7/1/2016							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)
2009	3,025,336	34	722	2,728,646	5,503,544	1,093,950	3,491,532	12,817,671	2,721	1,516	4,237
2010	3,242,132	57	787	5,726,792	5,848,560	2,358,171	3,387,340	17,320,862	3,570	1,772	5,342
2011	3,325,598	57	782	5,848,438	6,143,440	3,073,809	3,735,853	18,801,540	3,606	2,048	5,654
2012	3,416,400	56	676	5,426,032	5,115,712	2,976,742	3,229,834	16,748,319	3,086	1,817	4,902
2013	4,075,176	70	785	8,448,199	10,548,302	2,898,231	5,568,407	27,463,138	4,662	2,078	6,739
<b>MA Total:</b>	<b>17,084,642</b>	<b>274</b>	<b>3,752</b>	<b>28,178,107</b>	<b>33,159,557</b>	<b>12,400,902</b>	<b>19,412,965</b>	<b>93,151,531</b>	<b>3,590</b>	<b>1,862</b>	<b>5,452</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.272	1.192	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.939	1.530	4.469
(16) Countrywide Indicated Relativity:	1.138	1.081	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	23816	.	.
(19) Pure Premium Underlying Present Rate:	2.733	1.584	4.317
(20) Relativity to Underlying Present Rate:	1.172	1.143	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	1.272	1.192	.
(24) Balanced Formula Relativity:	1.256	1.189	1.232

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	2,405,026	45	539	2,232,753	2,410,897	1,235,113	1,867,432	7,746,195	1,931	1,290	3,221
2010	2,908,811	58	652	2,940,285	2,868,190	1,463,877	2,908,393	10,180,744	1,997	1,503	3,500
2011	2,908,099	50	623	2,585,018	3,195,628	1,390,638	2,192,834	9,364,118	1,988	1,232	3,220
2012	3,000,351	51	628	2,535,045	3,012,355	1,597,079	2,056,768	9,201,247	1,849	1,218	3,067
2013	3,221,497	54	638	3,629,810	3,367,892	1,842,406	2,650,485	11,490,593	2,172	1,395	3,567
<b>MA Total:</b>	<b>14,443,784</b>	<b>258</b>	<b>3,080</b>	<b>13,922,910</b>	<b>14,854,963</b>	<b>7,529,113</b>	<b>11,675,912</b>	<b>47,982,898</b>	<b>1,992</b>	<b>1,330</b>	<b>3,322</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.706	0.851	.
(14) Massachusetts Credibility:	0.950	1.000	.
(15) Countrywide Pure Premium:	2.150	1.388	3.538
(16) Countrywide Indicated Relativity:	0.833	0.981	.
(17) Countrywide Credibility:	0.030	0.000	.
(18) Countrywide Lost-Time Claims:	6326.0	.	.
(19) Pure Premium Underlying Present Rate:	1.639	1.149	2.788
(20) Relativity to Underlying Present Rate:	0.703	0.829	.
(21) Credibility to Underlying Relativity:	0.020	0.000	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.710	0.851	.
(24) Balanced Formula Relativity:	0.701	0.849	0.754

Class(es):		Effective: 7/1/2016							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)
2009	658,088	7	154	423,353	424,476	155,364	670,918	1,674,111	1,288	1,256	2,544
2010	1,158,227	15	364	1,596,566	2,063,321	430,303	1,804,111	5,894,301	3,160	1,929	5,089
2011	1,271,902	13	356	1,644,289	2,012,224	685,787	1,545,569	5,887,868	2,875	1,754	4,629
2012	1,329,966	14	367	1,284,177	2,246,923	1,098,936	1,619,793	6,249,828	2,655	2,044	4,699
2013	1,234,053	9	295	648,228	3,490,513	565,530	2,948,721	7,652,992	3,354	2,848	6,202
<b>MA Total:</b>	<b>5,652,237</b>	<b>58</b>	<b>1,536</b>	<b>5,596,612</b>	<b>10,237,457</b>	<b>2,935,920</b>	<b>8,589,111</b>	<b>27,359,101</b>	<b>2,801</b>	<b>2,039</b>	<b>4,840</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.992	1.305	.
(14) Massachusetts Credibility:	0.690	1.000	.
(15) Countrywide Pure Premium:	2.218	1.296	3.514
(16) Countrywide Indicated Relativity:	0.859	0.915	.
(17) Countrywide Credibility:	0.160	0.000	.
(18) Countrywide Lost-Time Claims:	15951	.	.
(19) Pure Premium Underlying Present Rate:	1.922	1.519	3.441
(20) Relativity to Underlying Present Rate:	0.824	1.096	.
(21) Credibility to Underlying Relativity:	0.150	0.000	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.946	1.305	.
(24) Balanced Formula Relativity:	0.934	1.302	1.065

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## Calculation of Class Relativities

Class(es): 7405 AIRCRAFT OR HELICOP OP: AIR CARRIER-SCHD/ SUPPL: FLYING CREW									Miscellaneous		
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	251.915	1	17	155.618	42.388	28.564	49.637	276.207	0.786	0.310	1.096
2010	1,339.528	7	105	764.184	1,132.360	611.415	625.793	3,133.752	1.416	0.924	2.339
2011	1,455.711	6	78	543.375	390.242	192.598	464.260	1,590.476	0.641	0.451	1.093
2012	1,538.596	4	76	205.846	632.278	153.786	406.393	1,398.303	0.545	0.364	0.909
2013	1,618.054	4	75	260.671	903.937	120.428	458.431	1,743.468	0.720	0.358	1.078
<b>MA Total:</b>	<b>6,203.804</b>	<b>22</b>	<b>351</b>	<b>1,929.695</b>	<b>3,101.206</b>	<b>1,106.792</b>	<b>2,004.514</b>	<b>8,142.206</b>	<b>0.811</b>	<b>0.502</b>	<b>1.312</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.287	0.321	.
(14) Massachusetts Credibility:	0.520	0.750	.
(15) Countrywide Pure Premium:	0.723	0.351	1.073
(16) Countrywide Indicated Relativity:	0.280	0.248	.
(17) Countrywide Credibility:	0.240	0.130	.
(18) Countrywide Lost-Time Claims:	4563.0	.	.
(19) Pure Premium Underlying Present Rate:	0.837	0.504	1.341
(20) Relativity to Underlying Present Rate:	0.359	0.363	.
(21) Credibility to Underlying Relativity:	0.240	0.120	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.303	0.317	.
(24) Balanced Formula Relativity:	0.299	0.316	0.305

Class(es): 7420 AIRCRAFT OR HELICOP OP: PUBLIC EXHIB STUNT FLYING: FLY CREW									Miscellaneous		
Converted Unlimited Losses											
Amount											
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	2.377	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	5.238	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	3.515	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	3.364	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	5.081	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>19.575</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.000	.
(14) Massachusetts Credibility:	0.100	0.100	.
(15) Countrywide Pure Premium:	9.122	2.212	11.334
(16) Countrywide Indicated Relativity:	3.533	1.563	.
(17) Countrywide Credibility:	0.220	0.230	.
(18) Countrywide Lost-Time Claims:	26.000	.	.
(19) Pure Premium Underlying Present Rate:	4.568	1.081	5.648
(20) Relativity to Underlying Present Rate:	1.959	0.780	.
(21) Credibility to Underlying Relativity:	0.680	0.670	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	2.109	0.882	.
(24) Balanced Formula Relativity:	2.083	0.880	1.655

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	200.736	0	4	0	48.416	0	21.402	69.818	0.241	0.107	0.348	
2010	227.492	0	8	0	386.225	0	128.580	514.806	1.698	0.565	2.263	
2011	233.925	0	7	0	6.172	0	32.845	39.017	0.026	0.140	0.167	
2012	255.660	0	6	0	89.739	0	67.565	157.303	0.351	0.264	0.615	
2013	265.397	0	7	0	824.653	0	245.784	1,070.436	3.107	0.926	4.033	
<b>MA Total:</b>	<b>1,183,209</b>	<b>0</b>	<b>32</b>	<b>0</b>	<b>1,355,205</b>	<b>0</b>	<b>496,176</b>	<b>1,851,380</b>	<b>1.145</b>	<b>0.419</b>	<b>1.565</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.406	0.268	.
(14) Massachusetts Credibility:	0.290	0.340	.
(15) Countrywide Pure Premium:	0.742	0.302	1.044
(16) Countrywide Indicated Relativity:	0.287	0.213	.
(17) Countrywide Credibility:	0.360	0.330	.
(18) Countrywide Lost-Time Claims:	528.00	.	.
(19) Pure Premium Underlying Present Rate:	1.079	0.367	1.446
(20) Relativity to Underlying Present Rate:	0.463	0.265	.
(21) Credibility to Underlying Relativity:	0.350	0.330	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.383	0.249	.
(24) Balanced Formula Relativity:	0.378	0.248	0.332

Class(es):		Effective: 7/1/2016							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)	
2009	63.694	0	2	0	0	0	408	408	0.000	0.006	0.006	
2010	63.585	0	7	0	3.119	0	7.890	11.010	0.049	0.124	0.173	
2011	66.164	0	0	0	0	0	0	0	0.000	0.000	0.000	
2012	65.394	0	5	0	0	0	6.036	6.036	0.000	0.092	0.092	
2013	68.665	0	4	0	1.044	0	5.062	6.106	0.015	0.074	0.089	
<b>MA Total:</b>	<b>327,502</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>4,163</b>	<b>0</b>	<b>19,396</b>	<b>23,560</b>	<b>0.013</b>	<b>0.059</b>	<b>0.072</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.005	0.038	.
(14) Massachusetts Credibility:	0.220	0.240	.
(15) Countrywide Pure Premium:	2.371	0.524	2.895
(16) Countrywide Indicated Relativity:	0.918	0.370	.
(17) Countrywide Credibility:	0.390	0.380	.
(18) Countrywide Lost-Time Claims:	177.00	.	.
(19) Pure Premium Underlying Present Rate:	1.903	0.573	2.476
(20) Relativity to Underlying Present Rate:	0.816	0.414	.
(21) Credibility to Underlying Relativity:	0.390	0.380	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.677	0.307	.
(24) Balanced Formula Relativity:	0.669	0.306	0.540



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	173,356	0	32	0	25,217	0	37,880	63,097	0.145	0.219	0.364
2010	186,728	1	42	173,739	32,514	32,792	73,996	313,041	1.105	0.572	1.676
2011	197,246	1	30	6,066	38,350	5,492	87,446	137,354	0.225	0.471	0.696
2012	108,406	0	10	0	67,514	0	43,966	111,480	0.623	0.406	1.028
2013	129,354	0	13	0	11,827	0	15,399	27,226	0.091	0.119	0.210
<b>MA Total:</b>	<b>795,089</b>	<b>2</b>	<b>127</b>	<b>179,805</b>	<b>175,421</b>	<b>38,284</b>	<b>258,687</b>	<b>652,198</b>	<b>0.447</b>	<b>0.374</b>	<b>0.820</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.158	0.239	.
(14) Massachusetts Credibility:	0.270	0.410	.
(15) Countrywide Pure Premium:	1.473	0.749	2.222
(16) Countrywide Indicated Relativity:	0.571	0.529	.
(17) Countrywide Credibility:	0.370	0.300	.
(18) Countrywide Lost-Time Claims:	578.00	.	.
(19) Pure Premium Underlying Present Rate:	1.263	0.855	2.118
(20) Relativity to Underlying Present Rate:	0.542	0.617	.
(21) Credibility to Underlying Relativity:	0.360	0.290	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.449	0.436	.
(24) Balanced Formula Relativity:	0.443	0.435	0.440

Class(es):		Effective: 7/1/2016							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)
2009	10,729	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	34,838	0	9	0	92,461	0	91,944	184,406	2.654	2.639	5.293
2011	13,382	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	12,749	0	1	0	7,219	0	6,507	13,725	0.566	0.510	1.077
2013	11,216	0	12	0	117,810	0	128,941	246,750	10.504	11.497	22.001
<b>MA Total:</b>	<b>82,914</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>217,490</b>	<b>0</b>	<b>227,391</b>	<b>444,881</b>	<b>2.623</b>	<b>2.743</b>	<b>5.366</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.929	1.755	.
(14) Massachusetts Credibility:	0.090	0.160	.
(15) Countrywide Pure Premium:	0.540	0.372	0.912
(16) Countrywide Indicated Relativity:	0.209	0.263	.
(17) Countrywide Credibility:	0.460	0.420	.
(18) Countrywide Lost-Time Claims:	391.00	.	.
(19) Pure Premium Underlying Present Rate:	0.822	0.802	1.624
(20) Relativity to Underlying Present Rate:	0.353	0.578	.
(21) Credibility to Underlying Relativity:	0.450	0.420	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.338	0.634	.
(24) Balanced Formula Relativity:	0.334	0.633	0.441

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	163,527	0	13	0	35,346	0	32,866	68,212	0.216	0.201	0.417
2010	114,709	2	4	344,330	885,361	220,785	341,079	1,791,556	10.720	4.898	15.618
2011	165,799	1	9	95,552	360,719	70,032	139,981	666,283	2.752	1.267	4.019
2012	263,385	0	9	0	106,060	0	109,530	215,590	0.403	0.416	0.819
2013	185,576	0	20	0	1,337,926	0	305,521	1,643,447	7.210	1.646	8.856
<b>MA Total:</b>	<b>892,996</b>	<b>3</b>	<b>55</b>	<b>439,882</b>	<b>2,725,412</b>	<b>290,817</b>	<b>928,977</b>	<b>4,385,087</b>	<b>3.545</b>	<b>1.366</b>	<b>4.911</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.146	0.878	.
(14) Massachusetts Credibility:	0.380	0.520	.
(15) Countrywide Pure Premium:	3.861	1.662	5.523
(16) Countrywide Indicated Relativity:	1.244	1.068	.
(17) Countrywide Credibility:	0.310	0.240	.
(18) Countrywide Lost-Time Claims:	936.00	.	.
(19) Pure Premium Underlying Present Rate:	2.792	1.387	4.180
(20) Relativity to Underlying Present Rate:	1.074	1.001	.
(21) Credibility to Underlying Relativity:	0.310	0.240	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.154	0.953	.
(24) Balanced Formula Relativity:	1.173	0.957	1.100

Class(es):		Effective: 7/1/2016							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)
2009	673,073	2	33	695,228	53,749	275,862	54,804	1,079,643	1.113	0.491	1.604
2010	814,609	1	36	51,934	250,618	19,908	236,257	558,717	0.371	0.314	0.686
2011	768,031	2	37	360,766	303,533	79,784	204,001	948,084	0.865	0.369	1.234
2012	1,131,255	0	31	0	205,491	0	109,204	314,694	0.182	0.097	0.278
2013	1,018,069	0	20	0	131,344	0	80,055	211,399	0.129	0.079	0.208
<b>MA Total:</b>	<b>4,405,038</b>	<b>5</b>	<b>157</b>	<b>1,107,928</b>	<b>944,735</b>	<b>375,554</b>	<b>684,321</b>	<b>3,112,537</b>	<b>0.466</b>	<b>0.241</b>	<b>0.707</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.165	0.154	.
(14) Massachusetts Credibility:	0.420	0.580	.
(15) Countrywide Pure Premium:	1.056	0.599	1.654
(16) Countrywide Indicated Relativity:	0.409	0.423	.
(17) Countrywide Credibility:	0.290	0.210	.
(18) Countrywide Lost-Time Claims:	1516.0	.	.
(19) Pure Premium Underlying Present Rate:	0.720	0.374	1.093
(20) Relativity to Underlying Present Rate:	0.309	0.270	.
(21) Credibility to Underlying Relativity:	0.290	0.210	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.277	0.235	.
(24) Balanced Formula Relativity:	0.274	0.234	0.260

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## Calculation of Class Relativities

Class(es): 7580 SEWAGE DISPOSAL PLANT OPERATION & DRIVERS									Effective: 7/1/2016			Miscellaneous	
Converted Unlimited Losses													
Amount													
		Claim Count		Indemnity		Medical				MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)		
2009	271,214	2	35	37,206	303,703	11,207	107,284	459,400	1,257	0,437	1,694		
2010	285,403	2	21	162,269	276,995	25,025	409,344	873,632	1,539	1,522	3,061		
2011	395,495	4	35	867,102	251,723	726,857	296,640	2,142,322	2,829	2,588	5,417		
2012	417,711	5	38	422,793	464,118	279,982	204,618	1,371,512	2,123	1,160	3,283		
2013	338,402	1	22	465,602	195,734	87,485	183,787	932,609	1,954	0,802	2,756		
<b>MA Total:</b>	<b>1,708,223</b>	<b>14</b>	<b>151</b>	<b>1,954,971</b>	<b>1,492,273</b>	<b>1,130,555</b>	<b>1,201,674</b>	<b>5,779,474</b>	<b>2,018</b>	<b>1,365</b>	<b>3,383</b>		

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.715	0.874	.
(14) Massachusetts Credibility:	0.360	0.560	.
(15) Countrywide Pure Premium:	1.630	0.969	2.599
(16) Countrywide Indicated Relativity:	0.631	0.684	.
(17) Countrywide Credibility:	0.320	0.220	.
(18) Countrywide Lost-Time Claims:	805.00	.	.
(19) Pure Premium Underlying Present Rate:	1.277	0.889	2.166
(20) Relativity to Underlying Present Rate:	0.548	0.642	.
(21) Credibility to Underlying Relativity:	0.320	0.220	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.635	0.781	.
(24) Balanced Formula Relativity:	0.627	0.779	0.681

Class(es): 7590 GARBAGE WORKS									Effective: 7/1/2016			Miscellaneous	
Converted Unlimited Losses													
Amount													
		Claim Count		Indemnity		Medical				MA Indicated Pure Premiums			
Policy Period	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)		
2009	21,870	0	1	0	3,170	0	6,233	9,404	0,145	0,285	0,430		
2010	14,920	1	3	998	1,131	1,510	3,260	6,899	0,143	0,320	0,462		
2011	22,429	0	1	0	60,508	0	21,717	82,225	2,698	0,968	3,666		
2012	27,563	0	1	0	0	0	2,351	0,000	0,000	0,085	0,085		
2013	23,882	1	6	15,414	46,152	25,596	10,916	98,078	2,578	1,529	4,107		
<b>MA Total:</b>	<b>110,665</b>	<b>2</b>	<b>12</b>	<b>16,412</b>	<b>110,961</b>	<b>27,107</b>	<b>44,478</b>	<b>198,958</b>	<b>1,151</b>	<b>0,647</b>	<b>1,798</b>		

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.408	0.414	.
(14) Massachusetts Credibility:	0.160	0.220	.
(15) Countrywide Pure Premium:	1.583	0.942	2.525
(16) Countrywide Indicated Relativity:	0.613	0.665	.
(17) Countrywide Credibility:	0.420	0.390	.
(18) Countrywide Lost-Time Claims:	451.00	.	.
(19) Pure Premium Underlying Present Rate:	2.516	1.277	3.794
(20) Relativity to Underlying Present Rate:	1.079	0.922	.
(21) Credibility to Underlying Relativity:	0.420	0.390	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.776	0.710	.
(24) Balanced Formula Relativity:	0.766	0.708	0.746

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	1,314,305	17	214	2,092,316	1,318,654	659,434	942,368	5,012,772	2,595	1,219	3,814	
2010	3,079,309	37	423	2,079,576	5,353,772	964,213	3,070,556	11,468,116	2,414	1,310	3,724	
2011	3,654,478	19	337	2,165,532	4,842,123	829,410	2,307,014	10,144,079	1,918	0,858	2,776	
2012	3,409,914	18	255	3,596,894	4,593,469	1,224,356	2,152,555	11,567,274	2,402	0,990	3,392	
2013	3,696,081	33	284	6,443,395	5,154,704	2,024,285	2,169,083	15,791,466	3,138	1,135	4,272	
<b>MA Total:</b>	<b>15,154,086</b>	<b>124</b>	<b>1,513</b>	<b>16,377,713</b>	<b>21,262,721</b>	<b>5,701,698</b>	<b>10,641,576</b>	<b>53,983,708</b>	<b>2,484</b>	<b>1,078</b>	<b>3,562</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.880	0.690	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	2.337	1.218	3.555
(16) Countrywide Indicated Relativity:	0.905	0.861	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	9804.0	.	.
(19) Pure Premium Underlying Present Rate:	2.233	1.088	3.321
(20) Relativity to Underlying Present Rate:	0.957	0.785	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.880	0.690	.
(24) Balanced Formula Relativity:	0.869	0.689	0.805

Class(es):		Effective: 7/1/2016							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)	
2009	135,514	0	25	0	438,440	0	272,608	711,049	3,235	2,012	5,247	
2010	154,363	0	15	0	486,505	0	355,725	842,230	3,152	2,304	5,456	
2011	187,329	0	27	0	78,506	0	90,740	169,246	0,419	0,484	0,903	
2012	255,259	2	38	337,570	229,886	92,470	347,229	1,007,156	2,223	1,723	3,946	
2013	261,577	1	24	106,605	107,067	81,627	107,108	402,406	0,817	0,722	1,538	
<b>MA Total:</b>	<b>994,042</b>	<b>3</b>	<b>129</b>	<b>444,175</b>	<b>1,340,405</b>	<b>174,097</b>	<b>1,173,410</b>	<b>3,132,087</b>	<b>1,795</b>	<b>1,356</b>	<b>3,151</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.580	0.872	.
(14) Massachusetts Credibility:	0.400	0.540	.
(15) Countrywide Pure Premium:	4.097	2.459	6.556
(16) Countrywide Indicated Relativity:	1.321	1.580	.
(17) Countrywide Credibility:	0.220	0.230	.
(18) Countrywide Lost-Time Claims:	27.000	.	.
(19) Pure Premium Underlying Present Rate:	2.792	1.387	4.180
(20) Relativity to Underlying Present Rate:	1.074	1.001	.
(21) Credibility to Underlying Relativity:	0.380	0.230	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.931	1.064	.
(24) Balanced Formula Relativity:	0.946	1.068	0.987

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	3,525,480	6	40	807,134	288,907	364,301	296,782	1,757,124	0.311	0.188	0.498
2010	3,551,975	1	52	48,155	508,054	3,368	218,992	778,570	0.157	0.063	0.219
2011	4,704,321	9	125	2,496,077	1,035,607	502,586	492,205	4,526,475	0.751	0.211	0.962
2012	4,653,889	4	60	737,499	380,016	172,609	259,608	1,549,733	0.240	0.093	0.333
2013	4,440,516	4	52	207,064	432,743	141,377	285,969	1,067,153	0.144	0.096	0.240
<b>MA Total:</b>	<b>20,876,182</b>	<b>24</b>	<b>329</b>	<b>4,295,929</b>	<b>2,645,327</b>	<b>1,184,241</b>	<b>1,553,557</b>	<b>9,679,054</b>	<b>0.332</b>	<b>0.131</b>	<b>0.464</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.959	2.282	.
(14) Massachusetts Credibility:	0.450	0.640	.
(15) Countrywide Pure Premium:	0.151	0.100	0.251
(16) Countrywide Indicated Relativity:	2.211	2.027	.
(17) Countrywide Credibility:	0.280	0.180	.
(18) Countrywide Lost-Time Claims:	1682.0	.	.
(19) Pure Premium Underlying Present Rate:	0.180	0.100	0.281
(20) Relativity to Underlying Present Rate:	2.695	1.973	.
(21) Credibility to Underlying Relativity:	0.270	0.180	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	3.128	2.181	.
(24) Balanced Formula Relativity:	3.118	2.182	2.737

Class(es):		Effective: 7/1/2016							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)
2009	26,038	0	2	0	573	0	4,528	5,101	0.022	0.174	0.196
2010	13,417	1	1	223,586	3,695	88,325	3,141	318,747	16.940	6.817	23.757
2011	12,606	0	2	0	0	0	599	599	0.000	0.048	0.048
2012	15,913	0	1	0	5,051	0	2,401	7,453	0.317	0.151	0.468
2013	17,642	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>85,617</b>	<b>1</b>	<b>6</b>	<b>223,586</b>	<b>9,320</b>	<b>88,325</b>	<b>10,669</b>	<b>331,901</b>	<b>2.720</b>	<b>1.156</b>	<b>3.877</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.964	0.740	.
(14) Massachusetts Credibility:	0.120	0.190	.
(15) Countrywide Pure Premium:	2.695	2.059	4.754
(16) Countrywide Indicated Relativity:	1.044	1.455	.
(17) Countrywide Credibility:	0.440	0.410	.
(18) Countrywide Lost-Time Claims:	2777.0	.	.
(19) Pure Premium Underlying Present Rate:	1.537	1.161	2.698
(20) Relativity to Underlying Present Rate:	0.659	0.838	.
(21) Credibility to Underlying Relativity:	0.440	0.400	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.865	1.072	.
(24) Balanced Formula Relativity:	0.854	1.070	0.931

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	1,534,795	5	94	307,057	1,360,145	341,919	572,368	2,581,489	1,086	0,596	1,682
2010	1,716,883	3	100	263,760	786,857	328,095	421,132	1,799,844	0,612	0,436	1,048
2011	1,870,437	4	136	889,410	716,071	469,984	607,872	2,683,336	0,858	0,576	1,435
2012	1,842,478	7	118	377,383	659,438	130,201	466,127	1,633,149	0,563	0,324	0,886
2013	1,563,020	4	97	214,119	949,175	507,511	516,479	2,187,284	0,744	0,655	1,399
<b>MA Total:</b>	<b>8,527,614</b>	<b>23</b>	<b>545</b>	<b>2,051,728</b>	<b>4,471,686</b>	<b>1,777,710</b>	<b>2,583,979</b>	<b>10,885,102</b>	<b>0,765</b>	<b>0,511</b>	<b>1,276</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.271	0.327	.
(14) Massachusetts Credibility:	0.600	0.870	.
(15) Countrywide Pure Premium:	1.436	0.929	2.365
(16) Countrywide Indicated Relativity:	0.556	0.657	.
(17) Countrywide Credibility:	0.200	0.070	.
(18) Countrywide Lost-Time Claims:	12080	.	.
(19) Pure Premium Underlying Present Rate:	0.871	0.531	1.402
(20) Relativity to Underlying Present Rate:	0.374	0.383	.
(21) Credibility to Underlying Relativity:	0.200	0.060	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.349	0.354	.
(24) Balanced Formula Relativity:	0.344	0.353	0.347

Class(es):		Effective: 7/1/2016							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)
2009	7,184	0	1	0	0	0	1,128	1,128	0,000	0,157	0,157
2010	9,131	0	0	0	0	0	0	0	0,000	0,000	0,000
2011	20,598	0	1	0	1,523	0	3,050	4,573	0,074	0,148	0,222
2012	14,801	0	6	0	271,161	0	88,525	359,685	18,321	5,981	24,302
2013	13,254	0	1	0	9,559	0	5,768	15,327	0,721	0,435	1,156
<b>MA Total:</b>	<b>64,967</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>282,243</b>	<b>0</b>	<b>98,470</b>	<b>380,713</b>	<b>4,344</b>	<b>1,516</b>	<b>5,860</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.404	0.975	.
(14) Massachusetts Credibility:	0.140	0.160	.
(15) Countrywide Pure Premium:	2.412	1.228	3.640
(16) Countrywide Indicated Relativity:	0.778	0.789	.
(17) Countrywide Credibility:	0.430	0.420	.
(18) Countrywide Lost-Time Claims:	286.00	.	.
(19) Pure Premium Underlying Present Rate:	2.834	1.082	3.916
(20) Relativity to Underlying Present Rate:	1.090	0.781	.
(21) Credibility to Underlying Relativity:	0.430	0.420	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4,649
(23) Formula Relativity:	1.000	0.815	.
(24) Balanced Formula Relativity:	1.016	0.818	0.950

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	588,849	3	79	313,583	307,903	420,368	327,469	1,369,324	1,055	1,270	2,325
2010	620,258	1	89	185,534	133,194	15,657	171,763	506,147	0,514	0,302	0,816
2011	619,691	2	64	3,315	415,671	5,945	240,780	665,711	0,676	0,398	1,074
2012	598,781	4	64	640,195	225,083	480,301	299,297	1,644,877	1,445	1,302	2,747
2013	621,378	3	79	117,046	216,253	54,329	386,126	773,754	0,536	0,709	1,245
<b>MA Total:</b>	<b>3,048,955</b>	<b>13</b>	<b>375</b>	<b>1,259,672</b>	<b>1,298,104</b>	<b>976,601</b>	<b>1,425,435</b>	<b>4,959,812</b>	<b>0.839</b>	<b>0.788</b>	<b>1.627</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.882	1.312	.
(14) Massachusetts Credibility:	0.370	0.590	.
(15) Countrywide Pure Premium:	0.986	0.686	1.672
(16) Countrywide Indicated Relativity:	1.028	1.123	.
(17) Countrywide Credibility:	0.320	0.210	.
(18) Countrywide Lost-Time Claims:	1163.0	.	.
(19) Pure Premium Underlying Present Rate:	0.760	0.572	1.332
(20) Relativity to Underlying Present Rate:	0.981	1.062	.
(21) Credibility to Underlying Relativity:	0.310	0.200	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.959	1.223	.
(24) Balanced Formula Relativity:	0.954	1.224	1.058

Class(es):		Effective: 7/1/2016							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)
2009	103,429	0	9	0	17,430	0	87,506	104,936	0,169	0,846	1,015
2010	179,487	1	32	131	933	24,933	23,904	49,901	0,006	0,272	0,278
2011	185,420	0	32	0	92,326	0	76,905	169,231	0,498	0,415	0,913
2012	183,915	1	30	29,158	189,155	1,249	68,981	288,542	1,187	0,382	1,569
2013	81,528	0	5	0	20,713	0	12,922	33,634	0,254	0,158	0,413
<b>MA Total:</b>	<b>733,779</b>	<b>2</b>	<b>108</b>	<b>29,289</b>	<b>320,556</b>	<b>26,182</b>	<b>270,217</b>	<b>646,245</b>	<b>0.477</b>	<b>0.404</b>	<b>0.881</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.501	0.673	.
(14) Massachusetts Credibility:	0.200	0.350	.
(15) Countrywide Pure Premium:	0.850	0.685	1.535
(16) Countrywide Indicated Relativity:	0.887	1.121	.
(17) Countrywide Credibility:	0.400	0.330	.
(18) Countrywide Lost-Time Claims:	1717.0	.	.
(19) Pure Premium Underlying Present Rate:	0.705	0.610	1.315
(20) Relativity to Underlying Present Rate:	0.910	1.133	.
(21) Credibility to Underlying Relativity:	0.400	0.320	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.819	0.968	.
(24) Balanced Formula Relativity:	0.815	0.969	0.874

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	2,153,200	14	273	1,604,221	694,570	1,334,048	785,421	4,418,260	1,068	0,984	2,052
2010	2,210,085	8	272	505,697	1,030,964	178,525	941,986	2,657,171	0,695	0,507	1,202
2011	2,373,143	10	250	709,474	304,141	297,223	421,246	1,732,084	0,427	0,303	0,730
2012	2,482,333	3	315	157,031	774,581	67,327	751,196	1,750,134	0,375	0,330	0,705
2013	2,649,136	8	308	878,034	1,033,101	366,430	1,008,801	3,286,366	0,721	0,519	1,241
<b>MA Total:</b>	<b>11,867,896</b>	<b>43</b>	<b>1,418</b>	<b>3,854,456</b>	<b>3,837,356</b>	<b>2,243,553</b>	<b>3,908,649</b>	<b>13,844,015</b>	<b>0,648</b>	<b>0,518</b>	<b>1,167</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.681	0.864	.
(14) Massachusetts Credibility:	0.610	0.990	.
(15) Countrywide Pure Premium:	1.016	0.660	1.676
(16) Countrywide Indicated Relativity:	1.059	1.080	.
(17) Countrywide Credibility:	0.200	0.010	.
(18) Countrywide Lost-Time Claims:	10434	.	.
(19) Pure Premium Underlying Present Rate:	0.662	0.525	1.186
(20) Relativity to Underlying Present Rate:	0.854	0.974	.
(21) Credibility to Underlying Relativity:	0.190	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.790	0.866	.
(24) Balanced Formula Relativity:	0.786	0.866	0.817

Class(es):		Effective: 7/1/2016							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)
2009	2,955,873	9	235	1,014,862	598,893	527,532	587,571	2,728,858	0,546	0,377	0,923
2010	2,953,942	8	215	459,102	619,665	83,222	414,476	1,576,465	0,365	0,168	0,534
2011	3,261,463	5	257	399,550	976,377	82,273	779,147	2,237,348	0,422	0,264	0,686
2012	3,323,409	6	253	319,687	1,412,617	137,100	949,209	2,818,614	0,521	0,327	0,848
2013	3,525,648	4	241	350,546	722,401	77,456	467,013	1,617,417	0,304	0,154	0,459
<b>MA Total:</b>	<b>16,020,335</b>	<b>32</b>	<b>1,201</b>	<b>2,543,748</b>	<b>4,329,954</b>	<b>907,583</b>	<b>3,197,417</b>	<b>10,978,702</b>	<b>0,429</b>	<b>0,256</b>	<b>0,685</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.451	0.427	.
(14) Massachusetts Credibility:	0.530	0.810	.
(15) Countrywide Pure Premium:	0.518	0.376	0.895
(16) Countrywide Indicated Relativity:	0.540	0.616	.
(17) Countrywide Credibility:	0.240	0.100	.
(18) Countrywide Lost-Time Claims:	8894.0	.	.
(19) Pure Premium Underlying Present Rate:	0.343	0.235	0.577
(20) Relativity to Underlying Present Rate:	0.442	0.436	.
(21) Credibility to Underlying Relativity:	0.230	0.090	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.470	0.447	.
(24) Balanced Formula Relativity:	0.468	0.447	0.460



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## Calculation of Class Relativities

Class(es): 8010 STORE: HARDWARE		Effective: 7/1/2016							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)
2009	1,684,510	4	212	540,061	1,242,967	235,388	782,720	2,801,136	1,058	0,604	1,663
2010	1,744,327	4	208	561,270	291,730	71,706	538,858	1,463,564	0,489	0,350	0,839
2011	2,038,309	7	253	604,096	963,368	231,295	780,818	2,579,577	0,769	0,497	1,266
2012	1,843,955	6	243	242,891	1,559,788	134,484	1,118,742	3,055,904	0,978	0,680	1,657
2013	1,892,115	2	192	231,752	554,819	81,657	591,410	1,459,638	0,416	0,356	0,771
<b>MA Total:</b>	<b>9,203,216</b>	<b>23</b>	<b>1,108</b>	<b>2,180,069</b>	<b>4,612,672</b>	<b>754,530</b>	<b>3,812,548</b>	<b>11,359,819</b>	<b>0,738</b>	<b>0,496</b>	<b>1,234</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.776	0.827	.
(14) Massachusetts Credibility:	0.540	0.860	.
(15) Countrywide Pure Premium:	0.798	0.537	1.335
(16) Countrywide Indicated Relativity:	0.832	0.880	.
(17) Countrywide Credibility:	0.230	0.070	.
(18) Countrywide Lost-Time Claims:	4604.0	.	.
(19) Pure Premium Underlying Present Rate:	0.640	0.482	1.122
(20) Relativity to Underlying Present Rate:	0.826	0.895	.
(21) Credibility to Underlying Relativity:	0.230	0.070	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.800	0.835	.
(24) Balanced Formula Relativity:	0.796	0.836	0.811

Class(es): 8013 STORE: JEWELRY STORES		Effective: 7/1/2016							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)
2009	1,145,806	3	29	180,577	257,388	49,716	146,582	634,264	0,382	0,171	0,554
2010	1,394,444	2	30	131,605	175,879	125,004	119,874	552,361	0,221	0,176	0,396
2011	1,396,823	0	30	0	335,227	0	308,563	643,789	0,240	0,221	0,461
2012	1,393,516	1	27	38,163	61,650	9,823	113,549	223,184	0,072	0,089	0,160
2013	1,395,385	1	22	93,201	226,770	30,686	165,843	516,500	0,229	0,141	0,370
<b>MA Total:</b>	<b>6,725,975</b>	<b>7</b>	<b>138</b>	<b>443,546</b>	<b>1,056,913</b>	<b>215,228</b>	<b>854,411</b>	<b>2,570,098</b>	<b>0,223</b>	<b>0,159</b>	<b>0,382</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.235	0.265	.
(14) Massachusetts Credibility:	0.290	0.480	.
(15) Countrywide Pure Premium:	0.201	0.121	0.322
(16) Countrywide Indicated Relativity:	0.209	0.198	.
(17) Countrywide Credibility:	0.360	0.260	.
(18) Countrywide Lost-Time Claims:	741.00	.	.
(19) Pure Premium Underlying Present Rate:	0.183	0.152	0.335
(20) Relativity to Underlying Present Rate:	0.236	0.283	.
(21) Credibility to Underlying Relativity:	0.350	0.260	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.226	0.252	.
(24) Balanced Formula Relativity:	0.225	0.252	0.235

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## Calculation of Class Relativities

Class(es): 8017 STORE: RETAIL NOC		Effective: 7/1/2016							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)
2009	12,841,910	49	1,440	4,246,356	3,989,558	2,112,817	3,449,568	13,798,300	0.641	0.433	1.074
2010	13,032,726	45	1,332	2,873,876	4,313,362	1,256,692	3,919,515	12,363,444	0.551	0.397	0.949
2011	13,193,274	28	1,316	2,563,774	5,880,865	1,725,574	3,403,982	13,574,195	0.640	0.389	1.029
2012	13,119,060	34	1,221	1,462,321	5,244,341	1,253,157	3,883,179	11,842,998	0.511	0.392	0.903
2013	12,462,234	30	1,091	2,172,261	3,326,199	860,013	3,382,787	9,741,260	0.441	0.340	0.782
<b>MA Total:</b>	<b>64,649,203</b>	<b>186</b>	<b>6,400</b>	<b>13,318,588</b>	<b>22,754,324</b>	<b>7,208,253</b>	<b>18,039,031</b>	<b>61,320,196</b>	<b>0.558</b>	<b>0.391</b>	<b>0.949</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.587	0.651	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.621	0.459	1.080
(16) Countrywide Indicated Relativity:	0.647	0.752	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	36816	.	.
(19) Pure Premium Underlying Present Rate:	0.474	0.375	0.848
(20) Relativity to Underlying Present Rate:	0.611	0.695	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.587	0.651	.
(24) Balanced Formula Relativity:	0.583	0.651	0.610

Class(es): 8018 STORE: WHOLESALE NOC		Effective: 7/1/2016							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)
2009	2,512,913	20	589	1,716,745	2,379,491	560,795	1,802,804	6,459,835	1.630	0.941	2.571
2010	2,839,461	24	636	2,263,327	2,526,919	833,692	1,853,464	7,477,402	1.687	0.946	2.633
2011	3,053,750	23	666	2,099,912	3,073,731	715,810	2,020,938	7,910,391	1.694	0.896	2.590
2012	3,112,455	16	572	1,836,346	3,352,662	465,170	2,329,044	7,983,222	1.667	0.898	2.565
2013	3,448,090	23	714	2,881,549	4,230,627	931,572	2,732,398	10,776,146	2.063	1.063	3.125
<b>MA Total:</b>	<b>14,966,670</b>	<b>106</b>	<b>3,177</b>	<b>10,797,879</b>	<b>15,563,430</b>	<b>3,507,040</b>	<b>10,738,648</b>	<b>40,606,997</b>	<b>1.761</b>	<b>0.952</b>	<b>2.713</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.852	1.586	.
(14) Massachusetts Credibility:	0.880	1.000	.
(15) Countrywide Pure Premium:	1.324	0.775	2.099
(16) Countrywide Indicated Relativity:	1.380	1.269	.
(17) Countrywide Credibility:	0.060	0.000	.
(18) Countrywide Lost-Time Claims:	19578	.	.
(19) Pure Premium Underlying Present Rate:	1.327	0.875	2.202
(20) Relativity to Underlying Present Rate:	1.712	1.625	.
(21) Credibility to Underlying Relativity:	0.060	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.815	1.586	.
(24) Balanced Formula Relativity:	1.805	1.587	1.721

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Goods and Services			
8021 STORE: MEAT, FISH OR POULTRY DEALER- WHOLESAL												
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)	
2009	625.932	1	109	419.908	306.773	133.441	343.700	1,203.823	1.161	0.762	1.923	
2010	686.285	10	101	752.252	379.835	594.083	296.396	2,022.566	1.650	1.298	2.947	
2011	706.228	4	129	133.337	1,870.816	32.922	770.491	2,807.565	2.838	1.138	3.975	
2012	740.086	3	107	611.738	654.078	457.823	380.753	2,104.393	1.710	1.133	2.843	
2013	820.969	6	85	554.777	808.430	243.237	430.380	2,036.825	1.660	0.821	2.481	
<b>MA Total:</b>	<b>3,579.498</b>	<b>24</b>	<b>531</b>	<b>2,472.012</b>	<b>4,019.932</b>	<b>1,461.507</b>	<b>2,221.720</b>	<b>10,175.172</b>	<b>1.814</b>	<b>1.029</b>	<b>2.843</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.907	1.714	.
(14) Massachusetts Credibility:	0.490	0.740	.
(15) Countrywide Pure Premium:	1.310	0.968	2.279
(16) Countrywide Indicated Relativity:	1.366	1.586	.
(17) Countrywide Credibility:	0.260	0.130	.
(18) Countrywide Lost-Time Claims:	2878.0	.	.
(19) Pure Premium Underlying Present Rate:	1.294	0.834	2.127
(20) Relativity to Underlying Present Rate:	1.670	1.548	.
(21) Credibility to Underlying Relativity:	0.250	0.130	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.707	1.676	.
(24) Balanced Formula Relativity:	1.698	1.677	1.690

Class(es):		Effective: 7/1/2016							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)	
2009	222.228	1	54	276.987	175.319	57.989	142.294	652.589	2.035	0.901	2.937	
2010	229.097	1	36	299	247.608	10.359	99.244	357.510	1.082	0.478	1.561	
2011	224.708	0	37	0	496.677	0	78.780	575.458	2.210	0.351	2.561	
2012	215.394	0	26	0	3.915	0	32.715	36.629	0.018	0.152	0.170	
2013	197.900	2	20	147.553	78.839	72.025	70.877	369.294	1.144	0.722	1.866	
<b>MA Total:</b>	<b>1,089.327</b>	<b>4</b>	<b>173</b>	<b>424.839</b>	<b>1,002.357</b>	<b>140.373</b>	<b>423.911</b>	<b>1,991.480</b>	<b>1.310</b>	<b>0.518</b>	<b>1.828</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.377	0.863	.
(14) Massachusetts Credibility:	0.290	0.430	.
(15) Countrywide Pure Premium:	0.970	0.724	1.694
(16) Countrywide Indicated Relativity:	1.011	1.186	.
(17) Countrywide Credibility:	0.360	0.290	.
(18) Countrywide Lost-Time Claims:	516.00	.	.
(19) Pure Premium Underlying Present Rate:	1.166	0.695	1.861
(20) Relativity to Underlying Present Rate:	1.505	1.290	.
(21) Credibility to Underlying Relativity:	0.350	0.280	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.290	1.076	.
(24) Balanced Formula Relativity:	1.283	1.077	1.203

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	351,723	2	74	112,843	151,764	26,963	248,166	539,737	0.752	0.782	1.535
2010	343,324	1	53	167,072	114,831	7,466	94,667	384,036	0.821	0.297	1.119
2011	285,894	0	44	0	167,028	0	73,379	240,407	0.584	0.257	0.841
2012	280,649	0	41	0	505,821	0	154,663	660,485	1.802	0.551	2.353
2013	298,949	0	31	0	15,886	0	33,500	49,386	0.053	0.112	0.165
<b>MA Total:</b>	<b>1,560,539</b>	<b>3</b>	<b>243</b>	<b>279,915</b>	<b>955,331</b>	<b>34,429</b>	<b>604,376</b>	<b>1,874,051</b>	<b>0.792</b>	<b>0.409</b>	<b>1.201</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.832	0.682	.
(14) Massachusetts Credibility:	0.280	0.420	.
(15) Countrywide Pure Premium:	0.965	0.633	1.598
(16) Countrywide Indicated Relativity:	1.006	1.036	.
(17) Countrywide Credibility:	0.360	0.290	.
(18) Countrywide Lost-Time Claims:	1144.0	.	.
(19) Pure Premium Underlying Present Rate:	0.693	0.459	1.152
(20) Relativity to Underlying Present Rate:	0.894	0.852	.
(21) Credibility to Underlying Relativity:	0.360	0.290	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.917	0.834	.
(24) Balanced Formula Relativity:	0.912	0.835	0.882

Class(es):		Effective: 7/1/2016							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)
2009	708,035	3	118	115,919	348,518	34,383	303,863	802,684	0.656	0.478	1.134
2010	763,513	5	154	317,073	967,192	118,399	604,215	2,006,878	1.682	0.946	2.628
2011	809,521	3	123	281,428	430,639	535,711	409,339	1,657,117	0.880	1.167	2.047
2012	608,159	1	65	38,229	394,114	2,460	429,628	864,431	0.711	0.710	1.421
2013	622,060	3	53	383,368	192,871	127,384	180,232	883,855	0.926	0.495	1.421
<b>MA Total:</b>	<b>3,511,288</b>	<b>15</b>	<b>513</b>	<b>1,136,016</b>	<b>2,333,334</b>	<b>818,337</b>	<b>1,927,277</b>	<b>6,214,964</b>	<b>0.988</b>	<b>0.782</b>	<b>1.770</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.039	1.303	.
(14) Massachusetts Credibility:	0.410	0.650	.
(15) Countrywide Pure Premium:	0.903	0.635	1.538
(16) Countrywide Indicated Relativity:	0.941	1.040	.
(17) Countrywide Credibility:	0.300	0.180	.
(18) Countrywide Lost-Time Claims:	19158	.	.
(19) Pure Premium Underlying Present Rate:	0.845	0.617	1.463
(20) Relativity to Underlying Present Rate:	1.091	1.146	.
(21) Credibility to Underlying Relativity:	0.290	0.170	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.025	1.229	.
(24) Balanced Formula Relativity:	1.019	1.230	1.101

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	147,410	1	22	59,097	51,651	112,826	38,802	262,377	0.751	1.029	1.780
2010	548,603	9	103	785,820	744,248	449,658	402,171	2,381,897	2.789	1.553	4.342
2011	515,388	7	79	313,403	1,151,466	95,345	460,272	2,020,486	2.842	1.078	3.920
2012	498,154	4	76	492,713	708,158	264,884	248,220	1,713,975	2.411	1.030	3.441
2013	617,816	1	75	27,267	672,075	18,145	355,976	1,073,463	1.132	0.606	1.738
<b>MA Total:</b>	<b>2,327,371</b>	<b>22</b>	<b>355</b>	<b>1,678,300</b>	<b>3,327,599</b>	<b>940,858</b>	<b>1,505,441</b>	<b>7,452,198</b>	<b>2.151</b>	<b>1.051</b>	<b>3.202</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.261	1.751	.
(14) Massachusetts Credibility:	0.470	0.690	.
(15) Countrywide Pure Premium:	1.056	0.474	1.531
(16) Countrywide Indicated Relativity:	1.102	0.776	.
(17) Countrywide Credibility:	0.270	0.160	.
(18) Countrywide Lost-Time Claims:	155.00	.	.
(19) Pure Premium Underlying Present Rate:	1.766	1.071	2.837
(20) Relativity to Underlying Present Rate:	2.279	1.988	.
(21) Credibility to Underlying Relativity:	0.260	0.150	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.953	1.630	.
(24) Balanced Formula Relativity:	1.942	1.632	1.822

Class(es):		Effective: 7/1/2016							Goods and Services		
8039 STORE: DEPARTMENT - RETAIL											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	609,914	2	75	85,596	23,472	50,296	105,197	264,561	0.179	0.255	0.434
2010	382,858	2	66	16,768	18,813	8,188	63,091	106,861	0.093	0.186	0.279
2011	675,213	4	104	333,324	62,212	147,249	151,450	694,234	0.586	0.442	1.028
2012	656,737	4	71	53,090	380,115	58,046	323,031	814,282	0.660	0.580	1.240
2013	617,209	4	98	139,072	179,084	186,331	216,554	721,041	0.515	0.653	1.168
<b>MA Total:</b>	<b>2,941,931</b>	<b>16</b>	<b>414</b>	<b>627,850</b>	<b>663,696</b>	<b>450,109</b>	<b>859,323</b>	<b>2,600,979</b>	<b>0.439</b>	<b>0.445</b>	<b>0.884</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.462	0.741	.
(14) Massachusetts Credibility:	0.310	0.500	.
(15) Countrywide Pure Premium:	0.700	0.536	1.235
(16) Countrywide Indicated Relativity:	0.730	0.877	.
(17) Countrywide Credibility:	0.350	0.250	.
(18) Countrywide Lost-Time Claims:	4251.0	.	.
(19) Pure Premium Underlying Present Rate:	0.496	0.391	0.887
(20) Relativity to Underlying Present Rate:	0.640	0.726	.
(21) Credibility to Underlying Relativity:	0.340	0.250	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.616	0.772	.
(24) Balanced Formula Relativity:	0.613	0.772	0.674

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Goods and Services		
8044 STORE: FURNITURE & DRIVERS											
		Converted Unlimited Losses									
		Amount									
		Claim Count		Indemnity		Medical		MA Indicated Pure Premiums			
Policy Period (1)	Exposure (2)	Likely (3)	Not-Likely (4)	Likely (5)	Not-Likely (6)	Likely (7)	Not-Likely (8)	Total (9)	Indemnity (10)	Medical (11)	Total (12)
2009	665,614	13	141	1,055,693	694,953	1,715,692	781,580	4,247,917	2,630	3,752	6,382
2010	818,031	13	124	1,547,356	548,669	576,342	806,664	3,479,030	2,562	1,691	4,253
2011	680,548	9	105	722,951	1,012,347	305,851	606,824	2,647,973	2,550	1,341	3,891
2012	652,877	1	92	81,058	531,789	28,371	463,556	1,104,775	0,939	0,753	1,692
2013	702,662	9	82	529,176	744,973	161,869	372,298	1,808,316	1,813	0,760	2,574
<b>MA Total:</b>	<b>3,519,732</b>	<b>45</b>	<b>544</b>	<b>3,936,233</b>	<b>3,532,730</b>	<b>2,788,125</b>	<b>3,030,922</b>	<b>13,288,010</b>	<b>2,122</b>	<b>1,653</b>	<b>3,775</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.231	2.754	.
(14) Massachusetts Credibility:	0.520	0.920	.
(15) Countrywide Pure Premium:	1.464	0.853	2.317
(16) Countrywide Indicated Relativity:	1.526	1.397	.
(17) Countrywide Credibility:	0.240	0.040	.
(18) Countrywide Lost-Time Claims:	6688.0	.	.
(19) Pure Premium Underlying Present Rate:	1.515	1.489	3.004
(20) Relativity to Underlying Present Rate:	1.955	2.765	.
(21) Credibility to Underlying Relativity:	0.240	0.040	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.995	2.700	.
(24) Balanced Formula Relativity:	1.985	2.702	2.262

Class(es):		Effective: 7/1/2016							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)
2009	377,314	3	47	393,489	298,106	229,117	368,444	1,289,156	1,833	1,584	3,417
2010	711,260	6	121	196,318	204,954	233,454	299,537	934,263	0,564	0,749	1,314
2011	622,139	5	79	384,195	283,036	139,487	266,232	1,072,951	1,072	0,652	1,725
2012	453,261	2	64	96,691	154,473	79,677	160,291	491,131	0,554	0,529	1,084
2013	474,998	3	38	354,886	52,751	69,137	80,439	557,213	0,858	0,315	1,173
<b>MA Total:</b>	<b>2,638,972</b>	<b>19</b>	<b>349</b>	<b>1,425,578</b>	<b>993,320</b>	<b>750,872</b>	<b>1,174,944</b>	<b>4,344,714</b>	<b>0,917</b>	<b>0,730</b>	<b>1,646</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.964	1.216	.
(14) Massachusetts Credibility:	0.390	0.650	.
(15) Countrywide Pure Premium:	1.054	0.728	1.782
(16) Countrywide Indicated Relativity:	1.099	1.193	.
(17) Countrywide Credibility:	0.310	0.180	.
(18) Countrywide Lost-Time Claims:	5207.0	.	.
(19) Pure Premium Underlying Present Rate:	0.981	0.811	1.793
(20) Relativity to Underlying Present Rate:	1.266	1.507	.
(21) Credibility to Underlying Relativity:	0.300	0.170	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.096	1.261	.
(24) Balanced Formula Relativity:	1.090	1.262	1.157

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	261.432	3	30	532.083	190.570	40.905	178.077	941.635	2.764	0.838	3.602
2010	283.003	2	31	109.343	365.831	24.416	213.671	713.261	1.679	0.841	2.520
2011	309.175	2	36	133.411	121.870	27.202	154.518	437.000	0.826	0.588	1.413
2012	344.071	4	37	248.369	176.573	40.398	79.478	544.817	1.235	0.348	1.583
2013	296.253	2	35	395.004	427.190	84.422	211.266	1,117.881	2.775	0.998	3.773
<b>MA Total:</b>	<b>1,493,934</b>	<b>13</b>	<b>169</b>	<b>1,418,210</b>	<b>1,282,032</b>	<b>217,343</b>	<b>837,010</b>	<b>3,754,595</b>	<b>1.807</b>	<b>0.706</b>	<b>2.513</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.900	1.176	.
(14) Massachusetts Credibility:	0.350	0.510	.
(15) Countrywide Pure Premium:	1.368	0.955	2.323
(16) Countrywide Indicated Relativity:	1.427	1.564	.
(17) Countrywide Credibility:	0.300	0.250	.
(18) Countrywide Lost-Time Claims:	56.000	.	.
(19) Pure Premium Underlying Present Rate:	1.287	0.804	2.091
(20) Relativity to Underlying Present Rate:	1.661	1.492	.
(21) Credibility to Underlying Relativity:	0.350	0.240	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.675	1.349	.
(24) Balanced Formula Relativity:	1.666	1.350	1.543

Class(es):		Effective: 7/1/2016							Goods and Services		
8050 STORE: FIVE & TEN CENT 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)
2009	7.312	0	1	0	0	0	797	797	0.000	0.109	0.109
2010	10.396	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	9.843	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	8.596	0	1	0	0	0	642	642	0.000	0.075	0.075
2013	7.043	0	1	0	0	0	305	305	0.000	0.043	0.043
<b>MA Total:</b>	<b>43.191</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,744</b>	<b>1,744</b>	<b>0.000</b>	<b>0.040</b>	<b>0.040</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.067	.
(14) Massachusetts Credibility:	0.060	0.100	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.866	0.938	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.676	0.509	1.185
(20) Relativity to Underlying Present Rate:	0.872	0.945	.
(21) Credibility to Underlying Relativity:	0.940	0.900	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.820	0.857	.
(24) Balanced Formula Relativity:	0.816	0.858	0.832

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	235,049	2	60	149,250	308,506	52,818	275,905	786,479	1,947	1,399	3,346	
2010	255,184	2	57	94,822	116,134	148,669	197,739	557,364	0,827	1,357	2,184	
2011	292,669	0	57	0	393,857	0	291,262	685,120	1,346	0,995	2,341	
2012	279,434	3	44	255,007	299,936	86,140	278,210	919,293	1,986	1,304	3,290	
2013	312,721	1	48	9,171	83,925	393	115,839	209,328	0,298	0,372	0,669	
<b>MA Total:</b>	<b>1,375,058</b>	<b>8</b>	<b>266</b>	<b>508,250</b>	<b>1,202,357</b>	<b>288,020</b>	<b>1,158,955</b>	<b>3,157,583</b>	<b>1,244</b>	<b>1,052</b>	<b>2,296</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.308	1.753	.
(14) Massachusetts Credibility:	0.310	0.520	.
(15) Countrywide Pure Premium:	1.044	0.817	1.861
(16) Countrywide Indicated Relativity:	1.089	1.338	.
(17) Countrywide Credibility:	0.350	0.240	.
(18) Countrywide Lost-Time Claims:	5341.0	.	.
(19) Pure Premium Underlying Present Rate:	1.049	0.904	1.953
(20) Relativity to Underlying Present Rate:	1.354	1.678	.
(21) Credibility to Underlying Relativity:	0.340	0.240	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.247	1.635	.
(24) Balanced Formula Relativity:	1.240	1.636	1.394

Class(es):		Effective: 7/1/2016							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)	
2009	8,441	0	0	0	0	0	0	0	0,000	0,000	0,000	
2010	1,985	0	0	0	0	0	0	0	0,000	0,000	0,000	
2011	2,381	0	1	0	46,878	0	13,678	60,557	19,690	5,745	25,436	
2012	602	0	0	0	0	0	0	0	0,000	0,000	0,000	
2013	0	0	0	0	0	0	0	0	0,000	0,000	0,000	
<b>MA Total:</b>	<b>13,410</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>46,878</b>	<b>0</b>	<b>13,678</b>	<b>60,557</b>	<b>3,496</b>	<b>1,020</b>	<b>4,516</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.675	1.699	.
(14) Massachusetts Credibility:	0.050	0.080	.
(15) Countrywide Pure Premium:	0.567	0.401	0.968
(16) Countrywide Indicated Relativity:	0.591	0.657	.
(17) Countrywide Credibility:	0.210	0.220	.
(18) Countrywide Lost-Time Claims:	22,000	.	.
(19) Pure Premium Underlying Present Rate:	1.370	0.877	2.247
(20) Relativity to Underlying Present Rate:	1.768	1.628	.
(21) Credibility to Underlying Relativity:	0.740	0.700	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.616	1.420	.
(24) Balanced Formula Relativity:	1.608	1.421	1.536



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	7.805	0	1	0	4.726	0	8.913	13.639	0.606	1.142	1.747	
2010	2.782	0	0	0	0	0	0	0	0.000	0.000	0.000	
2011	7.906	2	1	131.007	31.371	69.359	1.080	232.816	20.538	8.909	29.448	
2012	10.055	0	1	0	130.156	0	77.399	207.556	12.945	7.698	20.643	
2013	9.887	2	1	222.374	222.485	62.596	46.373	553.828	44.995	11.022	56.017	
<b>MA Total:</b>	<b>38.434</b>	<b>4</b>	<b>4</b>	<b>353.381</b>	<b>388.738</b>	<b>131.955</b>	<b>133.765</b>	<b>1,007.839</b>	<b>19.309</b>	<b>6.914</b>	<b>26.222</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	20.298	11.516	.
(14) Massachusetts Credibility:	0.100	0.140	.
(15) Countrywide Pure Premium:	1.744	0.588	2.331
(16) Countrywide Indicated Relativity:	1.818	0.963	.
(17) Countrywide Credibility:	0.140	0.150	.
(18) Countrywide Lost-Time Claims:	9.000	.	.
(19) Pure Premium Underlying Present Rate:	2.090	1.289	3.380
(20) Relativity to Underlying Present Rate:	2.698	2.393	.
(21) Credibility to Underlying Relativity:	0.760	0.710	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	4.335	3.456	.
(24) Balanced Formula Relativity:	4.312	3.459	3.982

Class(es):		Effective: 7/1/2016							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)	
2009	123.495	2	34	742.658	453.985	322.959	105.962	1,625.564	9.690	3.473	13.163	
2010	128.382	1	22	132.408	181.365	129.863	119.024	562.660	2.444	1.939	4.383	
2011	137.989	3	21	223.537	21.291	170.015	61.523	476.367	1.774	1.678	3.452	
2012	144.396	1	32	231.574	446.546	90.199	358.926	1,127.246	4.696	3.110	7.807	
2013	147.652	1	38	295	446.982	1.261	244.987	693.524	3.029	1.668	4.697	
<b>MA Total:</b>	<b>681.914</b>	<b>8</b>	<b>147</b>	<b>1,330.472</b>	<b>1,550.169</b>	<b>714.297</b>	<b>890.423</b>	<b>4,485.361</b>	<b>4.224</b>	<b>2.353</b>	<b>6.578</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.441	3.920	.
(14) Massachusetts Credibility:	0.350	0.580	.
(15) Countrywide Pure Premium:	2.341	1.363	3.704
(16) Countrywide Indicated Relativity:	2.441	2.232	.
(17) Countrywide Credibility:	0.330	0.210	.
(18) Countrywide Lost-Time Claims:	2238.0	.	.
(19) Pure Premium Underlying Present Rate:	2.854	2.412	5.266
(20) Relativity to Underlying Present Rate:	3.684	4.478	.
(21) Credibility to Underlying Relativity:	0.320	0.210	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	3.539	3.683	.
(24) Balanced Formula Relativity:	3.520	3.685	3.584

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	524,255	3	73	88,486	504,929	48,802	359,540	1,001,757	1.132	0.779	1.911
2010	557,513	2	88	43,022	543,509	122,821	588,991	1,298,343	1.052	1.277	2.329
2011	559,680	1	86	147,305	147,011	50,079	221,517	565,912	0.526	0.485	1.011
2012	586,430	5	71	1,645,762	277,287	579,100	193,173	2,695,321	3.279	1.317	4.596
2013	577,908	1	56	82,051	179,203	31,021	303,960	596,236	0.452	0.580	1.032
<b>MA Total:</b>	<b>2,805,785</b>	<b>12</b>	<b>374</b>	<b>2,006,626</b>	<b>1,651,939</b>	<b>831,822</b>	<b>1,667,180</b>	<b>6,157,568</b>	<b>1.304</b>	<b>0.891</b>	<b>2.195</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.371	1.484	.
(14) Massachusetts Credibility:	0.450	0.690	.
(15) Countrywide Pure Premium:	1.485	0.828	2.313
(16) Countrywide Indicated Relativity:	1.549	1.356	.
(17) Countrywide Credibility:	0.280	0.160	.
(18) Countrywide Lost-Time Claims:	5551.0	.	.
(19) Pure Premium Underlying Present Rate:	1.287	0.909	2.196
(20) Relativity to Underlying Present Rate:	1.661	1.688	.
(21) Credibility to Underlying Relativity:	0.270	0.150	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.499	1.494	.
(24) Balanced Formula Relativity:	1.491	1.495	1.493

Class(es):		Effective: 7/1/2016							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)
2009	423,611	3	81	591,442	205,726	217,159	187,120	1,201,447	1.882	0.954	2.836
2010	599,345	2	84	39,244	602,915	22,177	557,731	1,222,067	1.071	0.968	2.039
2011	682,974	7	85	829,956	233,273	152,508	300,984	1,516,722	1.557	0.664	2.221
2012	698,486	2	87	195,802	714,000	99,368	566,605	1,575,774	1.303	0.953	2.256
2013	748,438	7	86	1,844,932	372,638	498,833	272,420	2,988,823	2.963	1.030	3.993
<b>MA Total:</b>	<b>3,152,855</b>	<b>21</b>	<b>423</b>	<b>3,501,376</b>	<b>2,128,552</b>	<b>990,045</b>	<b>1,884,860</b>	<b>8,504,833</b>	<b>1.786</b>	<b>0.912</b>	<b>2.698</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.877	1.519	.
(14) Massachusetts Credibility:	0.440	0.710	.
(15) Countrywide Pure Premium:	1.097	0.613	1.710
(16) Countrywide Indicated Relativity:	1.143	1.004	.
(17) Countrywide Credibility:	0.280	0.150	.
(18) Countrywide Lost-Time Claims:	1073.0	.	.
(19) Pure Premium Underlying Present Rate:	1.118	0.875	1.993
(20) Relativity to Underlying Present Rate:	1.443	1.624	.
(21) Credibility to Underlying Relativity:	0.280	0.140	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.550	1.456	.
(24) Balanced Formula Relativity:	1.542	1.458	1.509

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	36,619	0	16	0	20,619	0	60,010	80,629	0.563	1.639	2.202
2010	37,272	1	9	450,709	16,239	286,155	18,793	771,896	12.528	8.182	20.710
2011	38,315	1	7	59,278	62,225	55,418	21,008	197,929	3.171	1.995	5.166
2012	39,450	1	8	47,815	131,818	7,473	67,595	254,701	4.553	1.903	6.456
2013	39,043	1	12	19,282	113,398	5,591	119,971	258,242	3.398	3.216	6.614
<b>MA Total:</b>	<b>190,698</b>	<b>4</b>	<b>52</b>	<b>577,084</b>	<b>344,299</b>	<b>354,637</b>	<b>287,377</b>	<b>1,563,397</b>	<b>4.832</b>	<b>3.367</b>	<b>8.198</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.079	5.608	.
(14) Massachusetts Credibility:	0.200	0.310	.
(15) Countrywide Pure Premium:	3.111	1.577	4.687
(16) Countrywide Indicated Relativity:	3.244	2.582	.
(17) Countrywide Credibility:	0.400	0.350	.
(18) Countrywide Lost-Time Claims:	371.00	.	.
(19) Pure Premium Underlying Present Rate:	2.408	1.850	4.258
(20) Relativity to Underlying Present Rate:	3.107	3.435	.
(21) Credibility to Underlying Relativity:	0.400	0.340	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	3.556	3.810	.
(24) Balanced Formula Relativity:	3.537	3.813	3.644

Class(es):		Effective: 7/1/2016							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)
2009	21,658	0	6	0	5,757	0	28,532	34,289	0.266	1.317	1.583
2010	30,188	0	3	0	40,732	0	34,669	75,401	1.349	1.148	2.498
2011	15,434	0	1	0	3,310	0	7,981	11,291	0.214	0.517	0.732
2012	19,705	0	2	0	2,296	0	5,048	7,344	0.117	0.256	0.373
2013	21,928	0	4	0	624	0	30,727	31,352	0.028	1.401	1.430
<b>MA Total:</b>	<b>108,914</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>52,720</b>	<b>0</b>	<b>106,958</b>	<b>159,678</b>	<b>0.484</b>	<b>0.982</b>	<b>1.466</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.509	1.636	.
(14) Massachusetts Credibility:	0.160	0.210	.
(15) Countrywide Pure Premium:	1.593	1.177	2.770
(16) Countrywide Indicated Relativity:	1.661	1.928	.
(17) Countrywide Credibility:	0.420	0.400	.
(18) Countrywide Lost-Time Claims:	172.00	.	.
(19) Pure Premium Underlying Present Rate:	2.540	1.170	3.710
(20) Relativity to Underlying Present Rate:	3.279	2.172	.
(21) Credibility to Underlying Relativity:	0.420	0.390	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.156	1.962	.
(24) Balanced Formula Relativity:	2.145	1.963	2.074

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	47,243	1	12	117,448	4,520	38,143	48,604	208,715	2,582	1,836	4,418	
2010	64,265	1	14	235,315	4,937	108,751	17,334	366,338	3,738	1,962	5,700	
2011	55,991	0	10	0	35,059	0	16,489	51,548	0,626	0,294	0,921	
2012	55,113	0	9	0	30,991	0	81,148	112,139	0,562	1,472	2,035	
2013	60,322	2	9	480,582	110,436	468,467	21,261	1,080,746	9,798	8,119	17,916	
<b>MA Total:</b>	<b>282,934</b>	<b>4</b>	<b>54</b>	<b>833,345</b>	<b>185,943</b>	<b>615,362</b>	<b>184,837</b>	<b>1,819,486</b>	<b>3,603</b>	<b>2,828</b>	<b>6,431</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.787	4.711	.
(14) Massachusetts Credibility:	0.190	0.280	.
(15) Countrywide Pure Premium:	1.944	1.090	3.034
(16) Countrywide Indicated Relativity:	2.027	1.786	.
(17) Countrywide Credibility:	0.410	0.360	.
(18) Countrywide Lost-Time Claims:	1600.0	.	.
(19) Pure Premium Underlying Present Rate:	1.534	0.912	2.446
(20) Relativity to Underlying Present Rate:	1.980	1.692	.
(21) Credibility to Underlying Relativity:	0.400	0.360	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.343	2.571	.
(24) Balanced Formula Relativity:	2.330	2.573	2.424

Class(es):		Effective: 7/1/2016							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)	
2009	801,635	2	93	192,335	2,152,628	568,696	1,529,515	4,443,174	2,925	2,617	5,543	
2010	854,440	1	69	384,820	960,710	112,710	1,031,717	2,489,957	1,575	1,339	2,914	
2011	923,759	4	66	1,061,512	940,936	269,849	800,927	3,073,224	2,168	1,159	3,327	
2012	937,620	5	66	1,148,396	2,629,583	389,077	1,137,755	5,304,811	4,029	1,628	5,658	
2013	980,195	2	85	146,312	3,138,934	63,971	1,795,550	5,144,767	3,352	1,897	5,249	
<b>MA Total:</b>	<b>4,497,650</b>	<b>14</b>	<b>379</b>	<b>2,933,375</b>	<b>9,822,792</b>	<b>1,404,303</b>	<b>6,295,463</b>	<b>20,455,933</b>	<b>2,836</b>	<b>1,712</b>	<b>4,548</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.917	1.101	.
(14) Massachusetts Credibility:	0.640	0.950	.
(15) Countrywide Pure Premium:	2.499	1.196	3.695
(16) Countrywide Indicated Relativity:	0.806	0.769	.
(17) Countrywide Credibility:	0.180	0.030	.
(18) Countrywide Lost-Time Claims:	3017.0	.	.
(19) Pure Premium Underlying Present Rate:	1.995	1.242	3.236
(20) Relativity to Underlying Present Rate:	0.767	0.896	.
(21) Credibility to Underlying Relativity:	0.180	0.020	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.870	1.087	.
(24) Balanced Formula Relativity:	0.884	1.091	0.953

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	847,275	7	156	1,406,948	2,012,633	473,310	1,169,158	5,062,049	4,036	1,939	5,975
2010	861,166	9	171	1,017,890	1,206,864	317,449	892,444	3,434,647	2,583	1,405	3,988
2011	975,038	10	210	2,192,502	997,330	946,419	862,383	4,998,634	3,271	1,855	5,127
2012	1,019,840	14	202	1,430,941	2,760,753	1,180,463	1,603,393	6,975,550	4,110	2,730	6,840
2013	1,185,618	14	254	3,316,152	3,232,291	1,993,940	1,899,623	10,442,006	5,523	3,284	8,807
<b>MA Total:</b>	<b>4,888,937</b>	<b>54</b>	<b>993</b>	<b>9,364,433</b>	<b>10,209,870</b>	<b>4,911,582</b>	<b>6,427,002</b>	<b>30,912,886</b>	<b>4,004</b>	<b>2,319</b>	<b>6,323</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.209	3.863	.
(14) Massachusetts Credibility:	0.690	1.000	.
(15) Countrywide Pure Premium:	2.354	1.351	3.705
(16) Countrywide Indicated Relativity:	2.455	2.212	.
(17) Countrywide Credibility:	0.160	0.000	.
(18) Countrywide Lost-Time Claims:	8526.0	.	.
(19) Pure Premium Underlying Present Rate:	2.192	1.408	3.600
(20) Relativity to Underlying Present Rate:	2.829	2.614	.
(21) Credibility to Underlying Relativity:	0.150	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	3.721	3.863	.
(24) Balanced Formula Relativity:	3.701	3.866	3.765

Class(es):		Effective: 7/1/2016							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)
2009	159,014	0	42	0	558,129	0	172,194	730,322	3,510	1,083	4,593
2010	182,560	2	39	697,626	89,365	303,826	149,160	1,239,976	4,311	2,481	6,792
2011	292,407	1	44	462,039	475,335	187,814	304,991	1,430,179	3,206	1,685	4,891
2012	269,762	1	41	349,138	1,326,076	92,042	1,003,779	2,771,035	6,210	4,062	10,272
2013	274,334	1	37	1,175	583,012	27,327	606,790	1,218,304	2,129	2,311	4,441
<b>MA Total:</b>	<b>1,178,077</b>	<b>5</b>	<b>203</b>	<b>1,509,978</b>	<b>3,031,916</b>	<b>611,009</b>	<b>2,236,913</b>	<b>7,389,816</b>	<b>3,855</b>	<b>2,417</b>	<b>6,273</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.053	4.027	.
(14) Massachusetts Credibility:	0.410	0.630	.
(15) Countrywide Pure Premium:	2.708	1.620	4.328
(16) Countrywide Indicated Relativity:	2.824	2.653	.
(17) Countrywide Credibility:	0.300	0.190	.
(18) Countrywide Lost-Time Claims:	2272.0	.	.
(19) Pure Premium Underlying Present Rate:	2.534	1.687	4.221
(20) Relativity to Underlying Present Rate:	3.271	3.132	.
(21) Credibility to Underlying Relativity:	0.290	0.180	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	3.457	3.605	.
(24) Balanced Formula Relativity:	3.439	3.607	3.504

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	130.986	1	48	45.510	498.985	32.367	304.433	881.295	4.157	2.571	6.728	
2010	123.067	1	35	96.123	169.620	21.574	157.037	444.355	2.159	1.451	3.611	
2011	138.881	2	35	305.655	381.558	30.659	326.836	1,044.708	4.948	2.574	7.522	
2012	131.973	0	25	0	323.410	0	159.777	483.187	2.451	1.211	3.661	
2013	133.917	0	21	0	29.772	0	33.980	63.751	0.222	0.254	0.476	
<b>MA Total:</b>	<b>658.824</b>	<b>4</b>	<b>164</b>	<b>447.288</b>	<b>1,403.345</b>	<b>84.600</b>	<b>982.063</b>	<b>2,917.296</b>	<b>2.809</b>	<b>1.619</b>	<b>4.428</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.953	2.697	.
(14) Massachusetts Credibility:	0.290	0.440	.
(15) Countrywide Pure Premium:	2.055	1.337	3.392
(16) Countrywide Indicated Relativity:	2.142	2.190	.
(17) Countrywide Credibility:	0.360	0.280	.
(18) Countrywide Lost-Time Claims:	548.00	.	.
(19) Pure Premium Underlying Present Rate:	1.897	1.279	3.175
(20) Relativity to Underlying Present Rate:	2.448	2.374	.
(21) Credibility to Underlying Relativity:	0.350	0.280	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.484	2.464	.
(24) Balanced Formula Relativity:	2.471	2.466	2.469

Class(es):		Effective: 7/1/2016							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)	
2009	66.697	0	16	0	39.482	0	40.426	79.908	0.592	0.606	1.198	
2010	71.395	1	9	213.472	13.513	42.443	39.045	308.472	3.179	1.141	4.321	
2011	81.547	1	11	11.121	36.871	7.235	148.088	203.315	0.589	1.905	2.493	
2012	81.201	0	10	0	46.260	0	42.021	88.281	0.570	0.517	1.087	
2013	85.748	0	19	0	30.840	0	67.765	98.605	0.360	0.790	1.150	
<b>MA Total:</b>	<b>386.588</b>	<b>2</b>	<b>65</b>	<b>224.594</b>	<b>166.965</b>	<b>49.678</b>	<b>337.346</b>	<b>778.582</b>	<b>1.013</b>	<b>1.001</b>	<b>2.014</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.065	1.668	.
(14) Massachusetts Credibility:	0.280	0.420	.
(15) Countrywide Pure Premium:	1.943	2.224	4.167
(16) Countrywide Indicated Relativity:	2.026	3.642	.
(17) Countrywide Credibility:	0.360	0.290	.
(18) Countrywide Lost-Time Claims:	177.00	.	.
(19) Pure Premium Underlying Present Rate:	2.867	1.877	4.744
(20) Relativity to Underlying Present Rate:	3.701	3.484	.
(21) Credibility to Underlying Relativity:	0.360	0.290	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.360	2.767	.
(24) Balanced Formula Relativity:	2.347	2.769	2.510

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	205,594	7	81	395,326	703,589	142,018	326,991	1,567,924	5,345	2,281	7,626
2010	223,357	3	57	509,306	827,997	88,208	298,655	1,724,166	5,987	1,732	7,719
2011	273,864	5	60	508,053	171,157	130,966	286,201	1,096,377	2,480	1,523	4,003
2012	314,371	3	67	43,642	654,492	27,146	325,046	1,050,326	2,221	1,120	3,341
2013	285,204	2	51	49,359	992,143	22,818	836,820	1,901,140	3,652	3,014	6,666
<b>MA Total:</b>	<b>1,302,390</b>	<b>20</b>	<b>316</b>	<b>1,505,687</b>	<b>3,349,378</b>	<b>411,156</b>	<b>2,073,714</b>	<b>7,339,934</b>	<b>3,728</b>	<b>1,908</b>	<b>5,636</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.919	3.178	.
(14) Massachusetts Credibility:	0.440	0.630	.
(15) Countrywide Pure Premium:	2.619	1.616	4.236
(16) Countrywide Indicated Relativity:	2.731	2.647	.
(17) Countrywide Credibility:	0.280	0.190	.
(18) Countrywide Lost-Time Claims:	1212.0	.	.
(19) Pure Premium Underlying Present Rate:	2.707	1.538	4.245
(20) Relativity to Underlying Present Rate:	3.493	2.855	.
(21) Credibility to Underlying Relativity:	0.280	0.180	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	3.467	3.019	.
(24) Balanced Formula Relativity:	3.449	3.021	3.283

Class(es):		Effective: 7/1/2016							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)
2009	150,847	5	25	569,819	153,450	283,849	400,718	1,407,836	4,795	4,538	9,333
2010	146,515	3	21	325,937	36,646	125,811	160,429	648,823	2,475	1,954	4,428
2011	159,264	0	31	0	328,796	0	211,645	540,441	2,064	1,329	3,393
2012	165,442	3	23	604,761	25,635	290,514	82,104	1,003,014	3,810	2,252	6,063
2013	166,040	1	20	51,873	98,475	27,448	211,951	389,747	0,905	1,442	2,347
<b>MA Total:</b>	<b>788,108</b>	<b>12</b>	<b>120</b>	<b>1,552,390</b>	<b>643,002</b>	<b>727,622</b>	<b>1,066,846</b>	<b>3,989,860</b>	<b>2,786</b>	<b>2,277</b>	<b>5,063</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.928	3.793	.
(14) Massachusetts Credibility:	0.320	0.560	.
(15) Countrywide Pure Premium:	2.839	2.122	4.960
(16) Countrywide Indicated Relativity:	2.960	3.474	.
(17) Countrywide Credibility:	0.340	0.220	.
(18) Countrywide Lost-Time Claims:	1014.0	.	.
(19) Pure Premium Underlying Present Rate:	2.061	1.912	3.973
(20) Relativity to Underlying Present Rate:	2.659	3.550	.
(21) Credibility to Underlying Relativity:	0.340	0.220	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.848	3.669	.
(24) Balanced Formula Relativity:	2.833	3.672	3.157

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## Calculation of Class Relativities

Class(es): 8291 STORAGE WAREHOUSE-COLD		Effective: 7/1/2016							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)
2009	163,597	3	50	149,776	64,208	66,375	104,550	384,908	1,308	1,045	2,353
2010	141,710	1	44	47,129	365,181	9,383	212,306	633,998	2,910	1,564	4,474
2011	135,063	2	31	129,864	589,264	47,584	285,923	1,052,634	5,324	2,469	7,794
2012	119,643	0	20	0	41,090	0	36,642	77,731	0,343	0,306	0,650
2013	120,828	0	33	0	273,742	0	212,195	485,937	2,266	1,756	4,022
<b>MA Total:</b>	<b>680,841</b>	<b>6</b>	<b>178</b>	<b>326,768</b>	<b>1,333,485</b>	<b>123,341</b>	<b>851,615</b>	<b>2,635,209</b>	<b>2,439</b>	<b>1,432</b>	<b>3,871</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.563	2.385	.
(14) Massachusetts Credibility:	0.300	0.460	.
(15) Countrywide Pure Premium:	2.064	1.191	3.255
(16) Countrywide Indicated Relativity:	2.152	1.950	.
(17) Countrywide Credibility:	0.350	0.270	.
(18) Countrywide Lost-Time Claims:	1012.0	.	.
(19) Pure Premium Underlying Present Rate:	1.988	1.371	3.359
(20) Relativity to Underlying Present Rate:	2.565	2.545	.
(21) Credibility to Underlying Relativity:	0.350	0.270	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.420	2.311	.
(24) Balanced Formula Relativity:	2.407	2.313	2.371

Class(es): 8292 STORAGE WAREHOUSE NOC		Effective: 7/1/2016							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)
2009	366,051	1	70	78	618,764	8,740	227,890	855,472	1,691	0,646	2,337
2010	496,665	1	71	92,058	104,483	12,578	182,701	391,820	0,396	0,393	0,789
2011	518,867	1	104	387,492	220,450	36,964	311,384	956,291	1,172	0,671	1,843
2012	551,973	3	98	297,014	556,148	73,885	386,203	1,313,250	1,546	0,834	2,379
2013	600,774	8	115	729,415	530,500	243,473	396,200	1,899,588	2,097	1,065	3,162
<b>MA Total:</b>	<b>2,534,330</b>	<b>14</b>	<b>458</b>	<b>1,506,058</b>	<b>2,030,345</b>	<b>375,640</b>	<b>1,504,378</b>	<b>5,416,421</b>	<b>1,395</b>	<b>0,742</b>	<b>2,137</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.467	1.236	.
(14) Massachusetts Credibility:	0.440	0.660	.
(15) Countrywide Pure Premium:	1.694	0.977	2.671
(16) Countrywide Indicated Relativity:	1.766	1.601	.
(17) Countrywide Credibility:	0.280	0.170	.
(18) Countrywide Lost-Time Claims:	5964.0	.	.
(19) Pure Premium Underlying Present Rate:	1.373	0.888	2.261
(20) Relativity to Underlying Present Rate:	1.772	1.649	.
(21) Credibility to Underlying Relativity:	0.280	0.170	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.636	1.368	.
(24) Balanced Formula Relativity:	1.628	1.369	1.527



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	344,916	15	109	1,627,285	1,273,898	722,084	834,772	4,458,039	8,411	4,514	12,925
2010	375,607	5	101	490,044	1,625,423	939,132	908,950	3,963,549	5,632	4,920	10,552
2011	394,336	9	112	1,116,815	679,756	269,166	751,677	2,817,414	4,556	2,589	7,145
2012	447,664	8	97	802,041	760,568	821,742	473,418	2,857,769	3,491	2,893	6,384
2013	507,595	3	100	633,012	1,480,191	282,482	875,394	3,271,079	4,163	2,281	6,444
<b>MA Total:</b>	<b>2,070,117</b>	<b>40</b>	<b>519</b>	<b>4,669,198</b>	<b>5,819,835</b>	<b>3,034,606</b>	<b>3,844,211</b>	<b>17,367,850</b>	<b>5,067</b>	<b>3,323</b>	<b>8,390</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.326	5.535	.
(14) Massachusetts Credibility:	0.640	1.000	.
(15) Countrywide Pure Premium:	4.853	2.443	7.296
(16) Countrywide Indicated Relativity:	5.060	4.000	.
(17) Countrywide Credibility:	0.180	0.000	.
(18) Countrywide Lost-Time Claims:	4168.0	.	.
(19) Pure Premium Underlying Present Rate:	4.343	3.350	7.693
(20) Relativity to Underlying Present Rate:	5.606	6.219	.
(21) Credibility to Underlying Relativity:	0.180	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	5.329	5.535	.
(24) Balanced Formula Relativity:	5.300	5.539	5.393

Class(es):		Effective: 7/1/2016							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)
2009	1,615,768	15	263	2,538,506	2,904,689	1,324,444	1,759,576	8,527,215	3,369	1,909	5,277
2010	1,595,316	20	286	3,621,163	3,290,457	1,176,851	2,202,277	10,290,746	4,332	2,118	6,451
2011	1,541,332	13	283	1,441,765	3,064,745	478,611	2,013,218	6,998,340	2,924	1,617	4,540
2012	1,556,325	16	233	2,422,109	1,753,815	1,576,085	1,622,037	7,374,046	2,683	2,055	4,738
2013	1,576,917	15	261	1,715,040	2,319,373	868,519	1,759,298	6,662,230	2,558	1,666	4,225
<b>MA Total:</b>	<b>7,885,658</b>	<b>79</b>	<b>1,326</b>	<b>11,738,583</b>	<b>13,333,078</b>	<b>5,424,510</b>	<b>9,356,406</b>	<b>39,852,578</b>	<b>3,179</b>	<b>1,874</b>	<b>5,054</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.342	3.122	.
(14) Massachusetts Credibility:	0.920	1.000	.
(15) Countrywide Pure Premium:	3.181	1.424	4.605
(16) Countrywide Indicated Relativity:	3.317	2.332	.
(17) Countrywide Credibility:	0.040	0.000	.
(18) Countrywide Lost-Time Claims:	3724.0	.	.
(19) Pure Premium Underlying Present Rate:	2.834	1.597	4.432
(20) Relativity to Underlying Present Rate:	3.658	2.966	.
(21) Credibility to Underlying Relativity:	0.040	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	3.354	3.122	.
(24) Balanced Formula Relativity:	3.336	3.125	3.254

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	7,345,174	45	1,144	4,089,098	8,864,828	1,640,940	5,669,735	20,264,601	1,764	0.995	2,759
2010	7,449,414	49	1,116	6,167,533	9,331,517	2,693,838	6,566,365	24,759,252	2,081	1.243	3,324
2011	7,521,975	39	1,016	3,144,469	7,796,340	2,248,953	5,520,788	18,710,550	1,455	1.033	2,487
2012	7,720,143	37	1,063	4,507,785	6,226,543	2,202,923	4,998,234	17,935,486	1,390	0.933	2,323
2013	7,894,866	38	1,059	4,249,782	10,387,645	1,761,164	5,675,785	22,074,376	1,854	0.942	2,796
<b>MA Total:</b>	<b>37,931,571</b>	<b>208</b>	<b>5,398</b>	<b>22,158,667</b>	<b>42,606,872</b>	<b>10,547,818</b>	<b>28,430,907</b>	<b>103,744,264</b>	<b>1,707</b>	<b>1.028</b>	<b>2,735</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.795	1.712	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.460	0.820	2.280
(16) Countrywide Indicated Relativity:	1.522	1.343	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	26476	.	.
(19) Pure Premium Underlying Present Rate:	1.342	0.878	2.219
(20) Relativity to Underlying Present Rate:	1.732	1.629	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.795	1.712	.
(24) Balanced Formula Relativity:	1.785	1.713	1.757

Class(es):		Effective: 7/1/2016							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)
2009	191,038	1	14	39,817	112,524	33,871	31,700	217,912	0.797	0.343	1,141
2010	188,907	2	12	206,867	21,013	94,072	63,905	385,857	1,206	0.836	2,043
2011	199,767	1	8	123,684	147,799	256,809	81,787	610,080	1,359	1.695	3,054
2012	201,975	1	14	69,053	63,791	18,741	130,524	282,109	0,658	0,739	1,397
2013	173,663	0	8	0	213,624	0	188,683	402,308	1,230	1,086	2,317
<b>MA Total:</b>	<b>955,350</b>	<b>5</b>	<b>56</b>	<b>439,421</b>	<b>558,752</b>	<b>403,493</b>	<b>496,600</b>	<b>1,898,266</b>	<b>1,045</b>	<b>0,942</b>	<b>1,987</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.098	1.569	.
(14) Massachusetts Credibility:	0.240	0.410	.
(15) Countrywide Pure Premium:	0.882	0.564	1.445
(16) Countrywide Indicated Relativity:	0.919	0.923	.
(17) Countrywide Credibility:	0.380	0.300	.
(18) Countrywide Lost-Time Claims:	522.00	.	.
(19) Pure Premium Underlying Present Rate:	0.769	0.709	1.477
(20) Relativity to Underlying Present Rate:	0.992	1.316	.
(21) Credibility to Underlying Relativity:	0.380	0.290	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.990	1.302	.
(24) Balanced Formula Relativity:	0.985	1.303	1.108

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	306,592	2	42	532,811	276,468	189,845	190,028	1,189,152	2,640	1,239	3,879
2010	427,004	3	70	14,882	401,799	6,309	229,396	652,387	0,976	0,552	1,528
2011	427,907	3	66	283,092	195,063	229,118	224,192	931,465	1,117	1,059	2,177
2012	435,207	5	81	378,929	835,519	133,804	442,099	1,790,351	2,791	1,323	4,114
2013	413,497	0	76	0	276,873	0	233,249	510,121	0,670	0,564	1,234
<b>MA Total:</b>	<b>2,010,206</b>	<b>13</b>	<b>335</b>	<b>1,209,715</b>	<b>1,985,722</b>	<b>559,076</b>	<b>1,318,963</b>	<b>5,073,476</b>	<b>1,590</b>	<b>0,934</b>	<b>2,524</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.671	1.556	.
(14) Massachusetts Credibility:	0.400	0.570	.
(15) Countrywide Pure Premium:	1.203	0.685	1.888
(16) Countrywide Indicated Relativity:	1.255	1.121	.
(17) Countrywide Credibility:	0.300	0.220	.
(18) Countrywide Lost-Time Claims:	1161.0	.	.
(19) Pure Premium Underlying Present Rate:	1.376	0.784	2.160
(20) Relativity to Underlying Present Rate:	1.776	1.455	.
(21) Credibility to Underlying Relativity:	0.300	0.210	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.578	1.439	.
(24) Balanced Formula Relativity:	1.569	1.440	1.519

Class(es):		Effective: 7/1/2016							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)
2009	511,913	2	78	416,534	296,151	304,392	205,773	1,222,851	1,392	0,997	2,389
2010	624,438	8	76	213,637	173,441	154,902	137,670	679,651	0,620	0,469	1,088
2011	518,028	4	53	405,040	136,570	82,184	80,745	704,539	1,046	0,315	1,360
2012	516,285	3	42	144,855	87,394	71,171	74,683	378,103	0,450	0,283	0,732
2013	509,926	3	44	90,785	34,020	32,942	51,369	209,116	0,245	0,165	0,410
<b>MA Total:</b>	<b>2,680,591</b>	<b>20</b>	<b>293</b>	<b>1,270,851</b>	<b>727,576</b>	<b>645,591</b>	<b>550,241</b>	<b>3,194,258</b>	<b>0,746</b>	<b>0,446</b>	<b>1,192</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.784	0.743	.
(14) Massachusetts Credibility:	0.340	0.540	.
(15) Countrywide Pure Premium:	1.036	0.692	1.728
(16) Countrywide Indicated Relativity:	1.081	1.133	.
(17) Countrywide Credibility:	0.330	0.230	.
(18) Countrywide Lost-Time Claims:	1312.0	.	.
(19) Pure Premium Underlying Present Rate:	0.694	0.504	1.198
(20) Relativity to Underlying Present Rate:	0.895	0.936	.
(21) Credibility to Underlying Relativity:	0.330	0.230	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.918	0.877	.
(24) Balanced Formula Relativity:	0.914	0.878	0.900

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## Calculation of Class Relativities

Class(es): 8393 AUTOMOBILE BODY REPAIR		Effective: 7/1/2016							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)
2009	1,670,700	12	200	1,850,171	1,618,116	907,012	742,393	5,117,692	2,076	0,987	3,063
2010	1,749,314	8	197	1,173,851	799,864	398,548	853,373	3,225,636	1,128	0,716	1,844
2011	2,018,078	7	191	646,457	1,433,421	278,251	754,170	3,112,299	1,031	0,512	1,542
2012	1,996,860	6	195	1,052,950	1,318,171	198,534	1,064,926	3,634,581	1,187	0,633	1,820
2013	2,044,454	9	153	1,177,945	2,000,804	465,857	769,018	4,413,624	1,555	0,604	2,159
<b>MA Total:</b>	<b>9,479,406</b>	<b>42</b>	<b>936</b>	<b>5,901,374</b>	<b>7,170,376</b>	<b>2,248,203</b>	<b>4,183,880</b>	<b>19,503,833</b>	<b>1,379</b>	<b>0,679</b>	<b>2,057</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.450	1.130	.
(14) Massachusetts Credibility:	0.630	0.900	.
(15) Countrywide Pure Premium:	1.111	0.495	1.606
(16) Countrywide Indicated Relativity:	1.159	0.810	.
(17) Countrywide Credibility:	0.190	0.050	.
(18) Countrywide Lost-Time Claims:	2771.0	.	.
(19) Pure Premium Underlying Present Rate:	0.921	0.519	1.440
(20) Relativity to Underlying Present Rate:	1.188	0.963	.
(21) Credibility to Underlying Relativity:	0.180	0.050	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.347	1.106	.
(24) Balanced Formula Relativity:	1.340	1.107	1.250

Class(es): 8601 ARCHITECT OR ENGINEER-CONSULTING		Effective: 7/1/2016							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)
2009	9,303,462	0	184	0	687,777	0	1,780,264	2,468,041	0.074	0.191	0.265
2010	11,200,321	6	195	773,296	1,102,821	132,793	742,019	2,750,930	0.168	0.078	0.246
2011	12,664,594	5	196	783,781	764,817	328,549	687,470	2,564,618	0.122	0.080	0.203
2012	13,049,671	7	160	653,412	909,514	389,989	823,643	2,776,559	0.120	0.093	0.213
2013	13,448,982	1	148	109,406	834,558	30,752	748,152	1,722,867	0.070	0.058	0.128
<b>MA Total:</b>	<b>59,667,029</b>	<b>19</b>	<b>883</b>	<b>2,319,895</b>	<b>4,299,487</b>	<b>882,083</b>	<b>4,781,549</b>	<b>12,283,015</b>	<b>0.111</b>	<b>0.095</b>	<b>0.206</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.321	1.652	.
(14) Massachusetts Credibility:	0.600	0.900	.
(15) Countrywide Pure Premium:	0.146	0.089	0.235
(16) Countrywide Indicated Relativity:	2.147	1.797	.
(17) Countrywide Credibility:	0.200	0.050	.
(18) Countrywide Lost-Time Claims:	2700.0	.	.
(19) Pure Premium Underlying Present Rate:	0.125	0.082	0.207
(20) Relativity to Underlying Present Rate:	1.871	1.613	.
(21) Credibility to Underlying Relativity:	0.200	0.050	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	1.596	1.657	.
(24) Balanced Formula Relativity:	1.591	1.658	1.618

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	7,005	0	1	0	676,999	0	231,969	908,968	96,644	33,114	129,76
2010	7,275	0	0	0	0	0	0	0	0,000	0,000	0,000
2011	7,206	0	0	0	0	0	0	0	0,000	0,000	0,000
2012	6,724	0	0	0	0	0	0	0	0,000	0,000	0,000
2013	8,440	0	0	0	0	0	0	0	0,000	0,000	0,000
<b>MA Total:</b>	<b>36,651</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>676,999</b>	<b>0</b>	<b>231,969</b>	<b>908,968</b>	<b>18,472</b>	<b>6,329</b>	<b>24,801</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	19.418	10.543	.
(14) Massachusetts Credibility:	0.090	0.130	.
(15) Countrywide Pure Premium:	1.677	0.785	2.462
(16) Countrywide Indicated Relativity:	1.749	1.285	.
(17) Countrywide Credibility:	0.240	0.250	.
(18) Countrywide Lost-Time Claims:	31.000	.	.
(19) Pure Premium Underlying Present Rate:	1.595	1.115	2.711
(20) Relativity to Underlying Present Rate:	2.059	2.070	.
(21) Credibility to Underlying Relativity:	0.670	0.620	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	3.547	2.975	.
(24) Balanced Formula Relativity:	3.528	2.978	3.315

Class(es):		Effective: 7/1/2016							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)
2009	1,379,548	2	39	57,844	75,219	65,462	130,638	329,162	0,096	0,142	0,239
2010	1,433,843	4	48	87,359	328,906	29,344	413,182	858,791	0,290	0,309	0,599
2011	1,513,452	3	60	20,393	468,406	23,614	292,133	804,546	0,323	0,209	0,532
2012	1,571,659	6	43	826,445	638,313	274,112	218,329	1,957,199	0,932	0,313	1,245
2013	1,709,054	7	58	166,388	126,046	170,096	240,794	703,324	0,171	0,240	0,412
<b>MA Total:</b>	<b>7,607,557</b>	<b>22</b>	<b>248</b>	<b>1,158,429</b>	<b>1,636,889</b>	<b>562,628</b>	<b>1,295,076</b>	<b>4,653,022</b>	<b>0,367</b>	<b>0,244</b>	<b>0,612</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.386	0.407	.
(14) Massachusetts Credibility:	0.420	0.610	.
(15) Countrywide Pure Premium:	0.761	0.388	1.149
(16) Countrywide Indicated Relativity:	0.794	0.635	.
(17) Countrywide Credibility:	0.290	0.200	.
(18) Countrywide Lost-Time Claims:	1011.0	.	.
(19) Pure Premium Underlying Present Rate:	0.414	0.245	0.659
(20) Relativity to Underlying Present Rate:	0.534	0.455	.
(21) Credibility to Underlying Relativity:	0.290	0.190	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.547	0.462	.
(24) Balanced Formula Relativity:	0.544	0.462	0.512

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	220,261	0	3	0	22,576	0	10,528	33,104	0.102	0.048	0.150
2010	241,311	0	2	0	0	0	767	767	0.000	0.003	0.003
2011	273,309	1	2	138,183	19,792	612,602	2,095	772,672	0.578	2.249	2.827
2012	288,802	0	3	0	251,578	0	51,567	303,146	0.871	0.179	1.050
2013	275,574	2	1	30,002	0	35,866	39	65,907	0.109	0.130	0.239
<b>MA Total:</b>	<b>1,299,258</b>	<b>3</b>	<b>11</b>	<b>168,185</b>	<b>293,946</b>	<b>648,468</b>	<b>64,997</b>	<b>1,175,595</b>	<b>0.356</b>	<b>0.549</b>	<b>0.905</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.235	9.555	.
(14) Massachusetts Credibility:	0.120	0.280	.
(15) Countrywide Pure Premium:	0.132	0.066	0.197
(16) Countrywide Indicated Relativity:	1.933	1.333	.
(17) Countrywide Credibility:	0.340	0.360	.
(18) Countrywide Lost-Time Claims:	77.000	.	.
(19) Pure Premium Underlying Present Rate:	0.108	0.198	0.306
(20) Relativity to Underlying Present Rate:	1.610	3.899	.
(21) Credibility to Underlying Relativity:	0.540	0.360	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	2.035	4.559	.
(24) Balanced Formula Relativity:	2.028	4.562	3.057

Class(es):		Effective: 7/1/2016							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)
2009	73,824,928	30	488	2,236,518	4,267,737	957,925	3,406,970	10,869,149	0.088	0.059	0.147
2010	80,720,805	33	589	3,232,908	3,257,981	1,268,359	3,438,119	11,197,367	0.080	0.058	0.139
2011	86,361,430	31	492	4,676,760	2,869,512	1,841,559	2,954,234	12,342,065	0.087	0.056	0.143
2012	89,690,431	28	532	2,469,605	2,756,997	1,284,885	2,775,434	9,286,921	0.058	0.045	0.104
2013	96,666,461	33	491	5,181,723	3,632,179	2,625,755	3,318,669	14,758,326	0.091	0.061	0.153
<b>MA Total:</b>	<b>427,264,055</b>	<b>155</b>	<b>2,592</b>	<b>17,797,513</b>	<b>16,784,406</b>	<b>7,978,483</b>	<b>15,893,427</b>	<b>58,453,828</b>	<b>0.081</b>	<b>0.056</b>	<b>0.137</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.964	0.972	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.106	0.069	0.175
(16) Countrywide Indicated Relativity:	1.555	1.401	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	15197	.	.
(19) Pure Premium Underlying Present Rate:	0.073	0.052	0.125
(20) Relativity to Underlying Present Rate:	1.096	1.024	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	0.964	0.972	.
(24) Balanced Formula Relativity:	0.960	0.973	0.965

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)	
2009	119,586	3	35	369,112	420,246	223,951	348,028	1,361,337	6,601	4,783	11,384	
2010	108,460	1	34	1,174	72,146	66	41,460	114,847	0,676	0,383	1,059	
2011	153,402	3	37	127,831	386,441	111,390	256,527	882,189	3,352	2,398	5,751	
2012	130,178	1	36	69,030	773,822	16,353	348,944	1,208,149	6,475	2,806	9,281	
2013	123,885	3	33	1,179,730	189,967	752,919	173,212	2,295,828	11,056	7,476	18,532	
<b>MA Total:</b>	<b>635,512</b>	<b>11</b>	<b>175</b>	<b>1,746,878</b>	<b>1,842,621</b>	<b>1,104,680</b>	<b>1,168,171</b>	<b>5,862,350</b>	<b>5,648</b>	<b>3,576</b>	<b>9,225</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.938	5.957	.
(14) Massachusetts Credibility:	0.280	0.440	.
(15) Countrywide Pure Premium:	2.120	1.693	3.812
(16) Countrywide Indicated Relativity:	2.210	2.772	.
(17) Countrywide Credibility:	0.360	0.280	.
(18) Countrywide Lost-Time Claims:	375.00	.	.
(19) Pure Premium Underlying Present Rate:	1.831	1.280	3.111
(20) Relativity to Underlying Present Rate:	2.363	2.377	.
(21) Credibility to Underlying Relativity:	0.360	0.280	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	3.309	4.063	.
(24) Balanced Formula Relativity:	3.291	4.066	3.591

Class(es):		Effective: 7/1/2016							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)	
2009	25,058	0	0	0	0	0	0	0	0.000	0.000	0.000	
2010	57,096	0	2	0	5,558	0	660	6,218	0,097	0,012	0,109	
2011	73,931	0	3	0	0	0	2,587	2,587	0,000	0,035	0,035	
2012	103,461	0	3	0	309	0	1,118	1,427	0,003	0,011	0,014	
2013	137,333	1	1	285,368	1,991	27,227	597	315,182	2,092	0,203	2,295	
<b>MA Total:</b>	<b>396,878</b>	<b>1</b>	<b>9</b>	<b>285,368</b>	<b>7,858</b>	<b>27,227</b>	<b>4,963</b>	<b>325,415</b>	<b>0,739</b>	<b>0,081</b>	<b>0,820</b>	

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.777	0.135	.
(14) Massachusetts Credibility:	0.130	0.210	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.536	0.596	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	0.418	0.323	0.741
(20) Relativity to Underlying Present Rate:	0.540	0.600	.
(21) Credibility to Underlying Relativity:	0.870	0.790	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.570	0.503	.
(24) Balanced Formula Relativity:	0.567	0.503	0.542

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## Calculation of Class Relativities

Class(es): 8748 AUTOMOBILE SALESPERSONS		Effective: 7/1/2016							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)
2009	2,289,314	2	76	85,792	174,683	53,045	166,329	479,849	0.114	0.096	0.210
2010	2,473,798	6	94	523,966	1,113,978	207,235	708,871	2,554,051	0.662	0.370	1.032
2011	2,538,678	3	101	441,320	604,909	137,320	419,095	1,602,644	0.412	0.219	0.631
2012	2,598,735	4	85	617,294	357,847	393,770	310,102	1,679,013	0.375	0.271	0.646
2013	2,762,292	6	93	942,984	136,847	263,768	260,673	1,604,271	0.391	0.190	0.581
<b>MA Total:</b>	<b>12,662,816</b>	<b>21</b>	<b>449</b>	<b>2,611,355</b>	<b>2,388,265</b>	<b>1,055,138</b>	<b>1,865,070</b>	<b>7,919,828</b>	<b>0.395</b>	<b>0.231</b>	<b>0.625</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.701	4.013	.
(14) Massachusetts Credibility:	0.430	0.670	.
(15) Countrywide Pure Premium:	0.198	0.136	0.334
(16) Countrywide Indicated Relativity:	2.903	2.770	.
(17) Countrywide Credibility:	0.290	0.170	.
(18) Countrywide Lost-Time Claims:	1604.0	.	.
(19) Pure Premium Underlying Present Rate:	0.263	0.188	0.451
(20) Relativity to Underlying Present Rate:	3.934	3.689	.
(21) Credibility to Underlying Relativity:	0.280	0.160	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	3.965	3.750	.
(24) Balanced Formula Relativity:	3.951	3.752	3.870

Class(es): 8800 MAILING OR ADDRESSING CO & CLERICAL		Effective: 7/1/2016							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)
2009	524,749	0	20	0	221,440	0	141,193	362,633	0.422	0.269	0.691
2010	504,123	2	22	193,229	29,791	193,582	54,042	470,644	0.442	0.491	0.934
2011	425,567	3	19	280,829	200,066	23,135	88,243	592,274	1.130	0.262	1.392
2012	412,929	2	21	178,631	56,071	63,943	72,209	370,854	0.568	0.330	0.898
2013	412,556	2	13	310,992	64,893	83,742	68,172	527,800	0.911	0.368	1.279
<b>MA Total:</b>	<b>2,279,924</b>	<b>9</b>	<b>95</b>	<b>963,682</b>	<b>572,262</b>	<b>364,402</b>	<b>423,860</b>	<b>2,324,205</b>	<b>0.674</b>	<b>0.346</b>	<b>1.019</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	8.021	6.016	.
(14) Massachusetts Credibility:	0.290	0.480	.
(15) Countrywide Pure Premium:	0.509	0.377	0.886
(16) Countrywide Indicated Relativity:	7.467	7.656	.
(17) Countrywide Credibility:	0.360	0.260	.
(18) Countrywide Lost-Time Claims:	807.00	.	.
(19) Pure Premium Underlying Present Rate:	0.546	0.441	0.987
(20) Relativity to Underlying Present Rate:	8.160	8.673	.
(21) Credibility to Underlying Relativity:	0.350	0.260	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	7.870	7.133	.
(24) Balanced Formula Relativity:	7.843	7.137	7.557



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	21,910,541	1	52	14,589	32,449	40,847	138,558	226,443	0.002	0.008	0.010
2010	27,405,360	1	45	8,868	136,575	31,227	258,338	435,009	0.005	0.011	0.016
2011	29,095,311	2	50	15,846	65,609	35,764	328,595	445,815	0.003	0.013	0.015
2012	31,689,653	5	63	445,246	83,045	330,302	220,588	1,079,181	0.017	0.017	0.034
2013	29,162,815	3	46	195,734	144,449	110,572	179,198	629,953	0.012	0.010	0.022
<b>MA Total:</b>	<b>139,263,680</b>	<b>12</b>	<b>256</b>	<b>680,284</b>	<b>462,127</b>	<b>548,712</b>	<b>1,125,278</b>	<b>2,816,401</b>	<b>0.008</b>	<b>0.012</b>	<b>0.020</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.098	0.209	.
(14) Massachusetts Credibility:	0.370	0.580	.
(15) Countrywide Pure Premium:	0.023	0.017	0.040
(16) Countrywide Indicated Relativity:	0.343	0.341	.
(17) Countrywide Credibility:	0.320	0.210	.
(18) Countrywide Lost-Time Claims:	827.00	.	.
(19) Pure Premium Underlying Present Rate:	0.016	0.012	0.028
(20) Relativity to Underlying Present Rate:	0.245	0.227	.
(21) Credibility to Underlying Relativity:	0.310	0.210	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	0.222	0.240	.
(24) Balanced Formula Relativity:	0.221	0.241	0.229

Class(es):		Effective: 7/1/2016							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)
2009	362,747,904	72	1,796	4,318,357	5,675,268	2,813,373	6,332,182	19,139,180	0.028	0.025	0.053
2010	402,280,266	84	1,941	7,782,178	8,322,665	2,969,600	7,664,066	26,738,509	0.040	0.026	0.066
2011	433,693,152	88	1,717	6,832,817	6,749,126	3,160,080	6,982,072	23,724,095	0.031	0.023	0.055
2012	441,061,294	84	1,752	8,902,953	9,285,365	3,492,641	8,098,502	29,779,461	0.041	0.026	0.068
2013	461,228,290	65	1,781	7,192,986	9,875,761	3,747,113	9,149,761	29,965,621	0.037	0.028	0.065
<b>MA Total:</b>	<b>2,101,010,905</b>	<b>393</b>	<b>8,987</b>	<b>35,029,292</b>	<b>39,908,185</b>	<b>16,182,806</b>	<b>38,226,582</b>	<b>129,346,866</b>	<b>0.036</b>	<b>0.026</b>	<b>0.062</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.425	0.451	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.047	0.035	0.082
(16) Countrywide Indicated Relativity:	0.684	0.710	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	45778	.	.
(19) Pure Premium Underlying Present Rate:	0.028	0.024	0.052
(20) Relativity to Underlying Present Rate:	0.418	0.466	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	0.425	0.451	.
(24) Balanced Formula Relativity:	0.423	0.451	0.434

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	22,991,147	6	82	528,646	700,128	135,063	588,316	1,952,154	0.053	0.031	0.085
2010	23,377,280	7	93	527,191	497,105	428,608	424,440	1,877,345	0.044	0.036	0.080
2011	23,158,152	0	83	0	559,604	0	271,084	830,689	0.024	0.012	0.036
2012	24,999,908	4	69	33,532	665,980	34,929	686,042	1,420,483	0.028	0.029	0.057
2013	24,846,780	1	73	128,450	1,162,442	89,666	614,620	1,995,177	0.052	0.028	0.080
<b>MA Total:</b>	<b>119,373,266</b>	<b>18</b>	<b>400</b>	<b>1,217,820</b>	<b>3,585,260</b>	<b>688,266</b>	<b>2,584,502</b>	<b>8,075,848</b>	<b>0.040</b>	<b>0.027</b>	<b>0.068</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.479	0.477	.
(14) Massachusetts Credibility:	0.510	0.740	.
(15) Countrywide Pure Premium:	0.046	0.034	0.079
(16) Countrywide Indicated Relativity:	0.669	0.684	.
(17) Countrywide Credibility:	0.250	0.130	.
(18) Countrywide Lost-Time Claims:	1959.0	.	.
(19) Pure Premium Underlying Present Rate:	0.042	0.026	0.068
(20) Relativity to Underlying Present Rate:	0.635	0.502	.
(21) Credibility to Underlying Relativity:	0.240	0.130	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	0.564	0.507	.
(24) Balanced Formula Relativity:	0.562	0.507	0.540

Class(es):		Effective: 7/1/2016							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)
2009	8,814,298	47	2,225	3,847,932	6,569,197	1,333,900	4,320,432	16,071,461	1.182	0.641	1.823
2010	9,584,712	48	2,271	4,309,791	7,439,902	1,451,624	4,830,512	18,031,830	1.226	0.655	1.881
2011	10,254,345	51	2,265	4,703,963	9,763,791	1,329,721	6,105,811	21,903,287	1.411	0.725	2.136
2012	9,492,031	46	1,921	3,075,392	7,193,453	1,391,653	4,530,955	16,191,454	1.082	0.624	1.706
2013	9,892,951	45	1,798	3,666,109	6,644,805	1,410,078	4,445,585	16,166,577	1.042	0.592	1.634
<b>MA Total:</b>	<b>48,038,337</b>	<b>237</b>	<b>10,480</b>	<b>19,603,188</b>	<b>37,611,148</b>	<b>6,916,977</b>	<b>24,233,296</b>	<b>88,364,608</b>	<b>1.191</b>	<b>0.648</b>	<b>1.839</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.252	1.080	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.135	0.708	1.844
(16) Countrywide Indicated Relativity:	1.184	1.160	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	23411	.	.
(19) Pure Premium Underlying Present Rate:	0.980	0.590	1.570
(20) Relativity to Underlying Present Rate:	1.265	1.096	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.252	1.080	.
(24) Balanced Formula Relativity:	1.245	1.081	1.182

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							Goods and Services		
8831 PET GROOMING & 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)
2009	2,375,825	5	518	147,490	564,896	81,546	765,075	1,559,007	0.300	0.356	0.656
2010	2,514,995	5	615	275,074	414,835	119,027	1,090,675	1,899,611	0.274	0.481	0.755
2011	2,456,372	3	553	326,453	214,423	305,776	798,149	1,644,801	0.220	0.449	0.670
2012	2,573,336	5	513	426,103	370,200	397,037	766,849	1,960,189	0.309	0.452	0.762
2013	2,744,497	6	612	407,591	1,190,962	147,933	1,248,866	2,995,352	0.582	0.509	1.091
<b>MA Total:</b>	<b>12,665,026</b>	<b>24</b>	<b>2,811</b>	<b>1,582,711</b>	<b>2,755,316</b>	<b>1,051,319</b>	<b>4,669,613</b>	<b>10,058,960</b>	<b>0.343</b>	<b>0.452</b>	<b>0.794</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.360	0.752	.
(14) Massachusetts Credibility:	0.490	0.970	.
(15) Countrywide Pure Premium:	0.508	0.489	0.997
(16) Countrywide Indicated Relativity:	0.530	0.801	.
(17) Countrywide Credibility:	0.260	0.020	.
(18) Countrywide Lost-Time Claims:	4055.0	.	.
(19) Pure Premium Underlying Present Rate:	0.355	0.473	0.828
(20) Relativity to Underlying Present Rate:	0.458	0.878	.
(21) Credibility to Underlying Relativity:	0.250	0.010	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.429	0.755	.
(24) Balanced Formula Relativity:	0.426	0.755	0.554

Class(es):		Effective: 7/1/2016							Office and Clerical		
8832 PHYSICIAN & 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)
2009	46,494,780	32	1,170	3,289,788	4,293,128	781,275	2,655,601	11,019,792	0.163	0.074	0.237
2010	47,620,258	30	1,159	3,148,249	4,228,255	1,530,358	3,112,614	12,019,476	0.155	0.097	0.252
2011	49,044,725	41	1,135	4,947,573	5,329,554	2,408,502	3,562,045	16,247,673	0.210	0.122	0.331
2012	49,467,282	34	1,284	4,183,420	5,481,698	1,460,257	3,740,992	14,866,368	0.195	0.105	0.301
2013	53,532,893	42	1,311	4,678,875	4,028,873	1,796,905	3,485,852	13,990,505	0.163	0.099	0.261
<b>MA Total:</b>	<b>246,159,939</b>	<b>179</b>	<b>6,059</b>	<b>20,247,905</b>	<b>23,361,508</b>	<b>7,977,297</b>	<b>16,557,104</b>	<b>68,143,814</b>	<b>0.177</b>	<b>0.100</b>	<b>0.277</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.109	1.734	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.112	0.075	0.187
(16) Countrywide Indicated Relativity:	1.648	1.512	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	13573	.	.
(19) Pure Premium Underlying Present Rate:	0.120	0.074	0.194
(20) Relativity to Underlying Present Rate:	1.798	1.447	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	2.109	1.734	.
(24) Balanced Formula Relativity:	2.102	1.735	1.953

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## Calculation of Class Relativities

Class(es): 8833 HOSPITAL: PROFESSIONAL EMPLOYEES		Effective: 7/1/2016							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)
2009	6,629,755	19	776	2,831,186	2,232,155	998,079	1,971,153	8,032,572	0.764	0.448	1.212
2010	7,441,766	20	917	2,156,601	2,384,829	851,038	1,675,394	7,067,862	0.610	0.339	0.950
2011	7,861,032	27	851	1,642,671	2,798,542	769,453	2,460,357	7,671,024	0.565	0.411	0.976
2012	7,939,565	16	925	1,773,836	3,541,466	454,711	2,695,963	8,465,976	0.669	0.397	1.066
2013	7,835,265	22	780	1,992,407	5,879,151	704,883	2,647,701	11,224,141	1.005	0.428	1.433
<b>MA Total:</b>	<b>37,707,383</b>	<b>104</b>	<b>4,249</b>	<b>10,396,701</b>	<b>16,836,144</b>	<b>3,778,165</b>	<b>11,450,568</b>	<b>42,461,576</b>	<b>0.722</b>	<b>0.404</b>	<b>1.126</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	8.599	7.027	.
(14) Massachusetts Credibility:	0.890	1.000	.
(15) Countrywide Pure Premium:	0.340	0.230	0.570
(16) Countrywide Indicated Relativity:	4.991	4.666	.
(17) Countrywide Credibility:	0.060	0.000	.
(18) Countrywide Lost-Time Claims:	18707	.	.
(19) Pure Premium Underlying Present Rate:	0.542	0.338	0.880
(20) Relativity to Underlying Present Rate:	8.098	6.647	.
(21) Credibility to Underlying Relativity:	0.050	0.000	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	8.357	7.027	.
(24) Balanced Formula Relativity:	8.329	7.032	7.802

Class(es): 8835 NURSING-HOME HEALTH, PUBLIC & TRAVELING-ALL EMPLOYEES		Effective: 7/1/2016							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)
2009	4,890,831	31	775	1,464,925	2,651,448	723,305	1,616,734	6,456,412	0.842	0.478	1.320
2010	5,351,925	44	697	2,932,002	2,511,331	1,329,814	1,799,791	8,572,939	1.017	0.585	1.602
2011	5,908,500	36	697	3,872,876	2,993,182	1,778,135	2,190,247	10,834,440	1.162	0.672	1.834
2012	6,705,204	44	772	3,656,989	4,361,612	1,015,539	2,402,038	11,436,178	1.196	0.510	1.706
2013	7,471,845	61	828	6,111,887	6,010,997	2,503,083	2,843,496	17,469,464	1.622	0.716	2.338
<b>MA Total:</b>	<b>30,328,306</b>	<b>216</b>	<b>3,769</b>	<b>18,038,680</b>	<b>18,528,570</b>	<b>7,349,876</b>	<b>10,852,306</b>	<b>54,769,433</b>	<b>1.206</b>	<b>0.600</b>	<b>1.806</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.267	1.000	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.175	0.637	1.811
(16) Countrywide Indicated Relativity:	1.225	1.042	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	16190	.	.
(19) Pure Premium Underlying Present Rate:	0.945	0.538	1.484
(20) Relativity to Underlying Present Rate:	1.220	0.999	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.267	1.000	.
(24) Balanced Formula Relativity:	1.261	1.000	1.160

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	33,117,439	73	3,614	5,857,850	7,992,349	2,312,416	8,341,233	24,503,848	0.418	0.322	0.740
2010	34,860,570	120	3,868	6,557,115	9,439,075	3,307,292	8,962,536	28,266,018	0.459	0.352	0.811
2011	35,539,461	88	3,433	6,024,645	8,685,751	2,827,537	8,549,931	26,087,864	0.414	0.320	0.734
2012	35,476,025	75	3,079	4,050,747	9,657,805	2,212,911	7,989,919	23,911,382	0.386	0.288	0.674
2013	36,971,082	78	3,135	4,846,427	9,134,580	2,042,593	7,892,211	23,915,809	0.378	0.269	0.647
MA Total:	175,964,578	434	17,129	27,336,782	44,909,560	12,702,749	41,735,829	126,684,920	0.411	0.309	0.720

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	4.888	5.383	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.099	0.094	0.193
(16) Countrywide Indicated Relativity:	1.457	1.911	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	16563	.	.
(19) Pure Premium Underlying Present Rate:	0.333	0.287	0.620
(20) Relativity to Underlying Present Rate:	4.981	5.637	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	4.888	5.383	.
(24) Balanced Formula Relativity:	4.872	5.386	5.081

Class(es):		Effective: 7/1/2016							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)
2009	4,295,004	21	445	3,095,901	3,878,563	1,741,605	2,287,110	11,003,179	1.624	0.938	2.562
2010	4,904,706	40	662	3,500,697	3,190,009	1,562,574	2,036,489	10,289,769	1.364	0.734	2.098
2011	5,148,824	53	534	5,932,879	5,691,116	2,003,767	3,605,904	17,233,666	2.258	1.090	3.347
2012	5,194,137	37	521	3,323,249	4,444,236	1,268,404	3,623,620	12,659,510	1.495	0.942	2.437
2013	5,564,774	27	465	3,163,140	5,704,426	1,167,046	3,105,820	13,140,432	1.594	0.768	2.361
MA Total:	25,107,445	178	2,627	19,015,867	22,908,350	7,743,397	14,658,944	64,326,557	1.670	0.892	2.562

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.755	1.486	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.471	0.926	2.397
(16) Countrywide Indicated Relativity:	1.534	1.516	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	17528	.	.
(19) Pure Premium Underlying Present Rate:	1.207	0.743	1.950
(20) Relativity to Underlying Present Rate:	1.558	1.380	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.755	1.486	.
(24) Balanced Formula Relativity:	1.746	1.487	1.646

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	5,038,625	39	810	5,528,950	5,017,687	1,745,504	3,169,142	15,461,281	2,093	0,975	3,069
2010	5,162,878	35	832	4,277,963	4,685,259	1,431,249	2,952,859	13,347,330	1,736	0,849	2,585
2011	5,290,656	29	823	3,746,259	6,227,234	1,542,170	3,567,292	15,082,955	1,885	0,966	2,851
2012	5,350,735	37	837	4,489,200	5,247,575	1,487,284	3,809,106	15,033,165	1,820	0,990	2,810
2013	5,570,194	24	781	2,685,900	7,190,758	943,605	4,815,930	15,636,192	1,773	1,034	2,807
<b>MA Total:</b>	<b>26,413,089</b>	<b>164</b>	<b>4,083</b>	<b>20,728,271</b>	<b>28,368,512</b>	<b>7,149,811</b>	<b>18,314,329</b>	<b>74,560,924</b>	<b>1,859</b>	<b>0,964</b>	<b>2,823</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.954	1.606	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	1.654	0.947	2.601
(16) Countrywide Indicated Relativity:	1.725	1.551	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	14375	.	.
(19) Pure Premium Underlying Present Rate:	1.484	0.900	2.384
(20) Relativity to Underlying Present Rate:	1.916	1.670	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.954	1.606	.
(24) Balanced Formula Relativity:	1.944	1.607	1.813

Class(es):		Effective: 7/1/2016							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)
2009	470,345	1	96	289,908	376,195	255,189	255,678	1,176,970	1,416	1,086	2,502
2010	480,960	0	96	0	75,850	0	250,615	326,465	0,158	0,521	0,679
2011	539,494	3	103	156,633	651,423	613,436	400,728	1,822,220	1,498	1,880	3,378
2012	558,122	0	98	0	209,861	0	408,011	617,872	0,376	0,731	1,107
2013	595,955	5	102	265,468	226,339	568,823	211,406	1,272,037	0,825	1,309	2,134
<b>MA Total:</b>	<b>2,644,875</b>	<b>9</b>	<b>495</b>	<b>712,009</b>	<b>1,539,668</b>	<b>1,437,448</b>	<b>1,526,439</b>	<b>5,215,564</b>	<b>0,851</b>	<b>1,121</b>	<b>1,972</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.895	1.867	.
(14) Massachusetts Credibility:	0.360	0.650	.
(15) Countrywide Pure Premium:	1.028	0.848	1.876
(16) Countrywide Indicated Relativity:	1.072	1.388	.
(17) Countrywide Credibility:	0.320	0.180	.
(18) Countrywide Lost-Time Claims:	2047.0	.	.
(19) Pure Premium Underlying Present Rate:	0.780	0.826	1.607
(20) Relativity to Underlying Present Rate:	1.007	1.534	.
(21) Credibility to Underlying Relativity:	0.320	0.170	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.988	1.724	.
(24) Balanced Formula Relativity:	0.982	1.725	1.270

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	12,921	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	18,182	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	18,613	0	0	0	0	0	0	0	0.000	0.000	0.000
2012	25,615	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	37,338	1	0	730,866	0	87,954	0	818,819	19,574	2,356	21,930
<b>MA Total:</b>	<b>112,668</b>	<b>1</b>	<b>0</b>	<b>730,866</b>	<b>0</b>	<b>87,954</b>	<b>0</b>	<b>818,819</b>	<b>6,487</b>	<b>0,781</b>	<b>7,268</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.298	0.500	.
(14) Massachusetts Credibility:	0.110	0.130	.
(15) Countrywide Pure Premium:	0.768	0.767	1.535
(16) Countrywide Indicated Relativity:	0.297	0.542	.
(17) Countrywide Credibility:	0.230	0.250	.
(18) Countrywide Lost-Time Claims:	30.000	.	.
(19) Pure Premium Underlying Present Rate:	0.949	0.351	1.300
(20) Relativity to Underlying Present Rate:	0.407	0.253	.
(21) Credibility to Underlying Relativity:	0.660	0.620	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.590	0.357	.
(24) Balanced Formula Relativity:	0.583	0.357	0.502

Class(es):		Effective: 7/1/2016							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)
2009	552,009	6	90	1,032,857	944,566	472,182	438,567	2,888,172	3,582	1,650	5,232
2010	96,753	0	15	0	0	0	12,544	12,544	0,000	0,130	0,130
2011	212,743	2	40	481,364	369,820	244,049	151,408	1,246,641	4,001	1,859	5,860
2012	206,506	1	39	54,443	144,807	103,295	115,740	418,284	0,965	1,061	2,026
2013	213,437	1	41	513	325,182	23,623	144,767	494,085	1,526	0,789	2,315
<b>MA Total:</b>	<b>1,281,448</b>	<b>10</b>	<b>225</b>	<b>1,569,177</b>	<b>1,784,374</b>	<b>843,149</b>	<b>863,026</b>	<b>5,059,726</b>	<b>2,617</b>	<b>1,331</b>	<b>3,948</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.751	2.218	.
(14) Massachusetts Credibility:	0.370	0.500	.
(15) Countrywide Pure Premium:	1.112	0.642	1.755
(16) Countrywide Indicated Relativity:	1.160	1.052	.
(17) Countrywide Credibility:	0.320	0.250	.
(18) Countrywide Lost-Time Claims:	811.00	.	.
(19) Pure Premium Underlying Present Rate:	1.812	0.883	2.695
(20) Relativity to Underlying Present Rate:	2.339	1.639	.
(21) Credibility to Underlying Relativity:	0.310	0.250	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.114	1.782	.
(24) Balanced Formula Relativity:	2.103	1.783	1.979

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	608.165	4	264	184.749	882.108	77.951	325.676	1.470.484	1.754	0.664	2.418
2010	669.225	5	238	359.430	649.157	184.047	409.711	1.602.345	1.507	0.887	2.394
2011	737.191	4	233	233.039	763.254	317.464	576.092	1.889.849	1.351	1.212	2.564
2012	652.922	8	185	574.600	1.059.576	243.517	580.026	2.457.718	2.503	1.261	3.764
2013	620.889	6	190	247.232	1.109.898	197.307	605.100	2.159.536	2.186	1.292	3.478
<b>MA Total:</b>	<b>3.288.391</b>	<b>27</b>	<b>1.110</b>	<b>1,599.050</b>	<b>4,463.992</b>	<b>1,020.285</b>	<b>2,496.605</b>	<b>9,579.932</b>	<b>1.844</b>	<b>1.069</b>	<b>2.913</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.938	1.781	.
(14) Massachusetts Credibility:	0.460	0.680	.
(15) Countrywide Pure Premium:	1.573	1.077	2.650
(16) Countrywide Indicated Relativity:	1.640	1.763	.
(17) Countrywide Credibility:	0.270	0.160	.
(18) Countrywide Lost-Time Claims:	6855.0	.	.
(19) Pure Premium Underlying Present Rate:	1.217	0.756	1.972
(20) Relativity to Underlying Present Rate:	1.571	1.403	.
(21) Credibility to Underlying Relativity:	0.270	0.160	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.759	1.718	.
(24) Balanced Formula Relativity:	1.749	1.719	1.738

Class(es):		Effective: 7/1/2016							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)
2009	4.468.866	27	749	1.670.690	2.635.361	671.304	1.965.985	6.943.340	0.964	0.590	1.554
2010	5.749.609	38	854	2.264.954	3.589.854	1.297.822	2.399.352	9.551.981	1.018	0.643	1.661
2011	6.369.585	30	856	2.860.392	3.205.255	1.233.262	2.589.111	9.888.019	0.952	0.600	1.552
2012	6.242.325	22	828	1.634.474	5.135.095	853.495	3.136.765	10.759.828	1.084	0.639	1.724
2013	6.181.163	30	685	1.979.489	3.770.006	1.288.239	2.347.950	9.385.684	0.930	0.588	1.518
<b>MA Total:</b>	<b>29.011.549</b>	<b>147</b>	<b>3.972</b>	<b>10,409.999</b>	<b>18,335.570</b>	<b>5,344.121</b>	<b>12,439.163</b>	<b>46,528.853</b>	<b>0.991</b>	<b>0.613</b>	<b>1.604</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.042	1.021	.
(14) Massachusetts Credibility:	0.880	1.000	.
(15) Countrywide Pure Premium:	1.052	0.732	1.785
(16) Countrywide Indicated Relativity:	1.097	1.199	.
(17) Countrywide Credibility:	0.060	0.000	.
(18) Countrywide Lost-Time Claims:	19323	.	.
(19) Pure Premium Underlying Present Rate:	0.690	0.504	1.193
(20) Relativity to Underlying Present Rate:	0.890	0.935	.
(21) Credibility to Underlying Relativity:	0.060	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.036	1.021	.
(24) Balanced Formula Relativity:	1.030	1.022	1.027



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	1,813,750	3	343	99,508	666,742	65,313	677,115	1,508,678	0.422	0.409	0.832
2010	2,062,162	7	387	692,875	1,412,776	265,462	856,367	3,227,479	1.021	0.544	1.565
2011	2,463,837	8	427	464,417	939,471	230,141	892,028	2,526,057	0.570	0.455	1.025
2012	2,415,769	9	449	689,829	2,329,320	195,320	1,268,176	4,482,645	1.250	0.606	1.856
2013	2,294,521	7	416	816,210	1,065,529	305,866	1,036,383	3,223,989	0.820	0.585	1.405
<b>MA Total:</b>	<b>11,050,039</b>	<b>34</b>	<b>2,022</b>	<b>2,762,839</b>	<b>6,413,838</b>	<b>1,062,102</b>	<b>4,730,069</b>	<b>14,968,848</b>	<b>0.830</b>	<b>0.524</b>	<b>1.355</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.873	0.873	.
(14) Massachusetts Credibility:	0.600	0.950	.
(15) Countrywide Pure Premium:	0.709	0.486	1.195
(16) Countrywide Indicated Relativity:	0.740	0.795	.
(17) Countrywide Credibility:	0.200	0.030	.
(18) Countrywide Lost-Time Claims:	4797.0	.	.
(19) Pure Premium Underlying Present Rate:	0.690	0.504	1.193
(20) Relativity to Underlying Present Rate:	0.890	0.935	.
(21) Credibility to Underlying Relativity:	0.200	0.020	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.850	0.872	.
(24) Balanced Formula Relativity:	0.845	0.873	0.856

Class(es):		Effective: 7/1/2016							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)
2009	2,730,228	5	317	385,767	462,574	124,343	922,520	1,895,204	0.311	0.383	0.694
2010	2,797,517	2	302	38,068	573,299	36,401	782,770	1,430,539	0.219	0.293	0.511
2011	2,799,388	4	329	272,953	1,122,794	154,930	905,401	2,456,078	0.499	0.379	0.877
2012	2,918,163	1	324	253,525	609,002	167,282	726,057	1,755,866	0.296	0.306	0.602
2013	2,997,216	4	325	374,884	1,463,534	140,317	1,384,600	3,363,335	0.613	0.509	1.122
<b>MA Total:</b>	<b>14,242,511</b>	<b>16</b>	<b>1,597</b>	<b>1,325,197</b>	<b>4,231,203</b>	<b>623,274</b>	<b>4,721,349</b>	<b>10,901,022</b>	<b>0.390</b>	<b>0.375</b>	<b>0.765</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.410	0.625	.
(14) Massachusetts Credibility:	0.540	0.910	.
(15) Countrywide Pure Premium:	0.661	0.479	1.140
(16) Countrywide Indicated Relativity:	0.689	0.785	.
(17) Countrywide Credibility:	0.230	0.050	.
(18) Countrywide Lost-Time Claims:	5101.0	.	.
(19) Pure Premium Underlying Present Rate:	0.401	0.359	0.760
(20) Relativity to Underlying Present Rate:	0.518	0.666	.
(21) Credibility to Underlying Relativity:	0.230	0.040	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.499	0.635	.
(24) Balanced Formula Relativity:	0.496	0.635	0.550

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	660,236	1	32	40,242	17,318	21,998	40,246	119,804	0.087	0.094	0.181
2010	678,106	1	45	33	348,185	7,595	352,149	707,962	0.514	0.531	1.044
2011	711,020	2	46	91,002	200,135	18,137	176,902	486,176	0.409	0.274	0.684
2012	727,289	4	40	174,183	34,800	121,625	107,946	438,553	0.287	0.316	0.603
2013	744,752	1	41	2,401	225,278	1,392	240,928	469,998	0.306	0.325	0.631
<b>MA Total:</b>	<b>3,521,403</b>	<b>9</b>	<b>204</b>	<b>307,860</b>	<b>825,715</b>	<b>170,747</b>	<b>918,171</b>	<b>2,222,493</b>	<b>0.322</b>	<b>0.309</b>	<b>0.631</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.338	0.515	.
(14) Massachusetts Credibility:	0.310	0.500	.
(15) Countrywide Pure Premium:	0.618	0.407	1.024
(16) Countrywide Indicated Relativity:	0.644	0.666	.
(17) Countrywide Credibility:	0.350	0.250	.
(18) Countrywide Lost-Time Claims:	755.00	.	.
(19) Pure Premium Underlying Present Rate:	0.414	0.316	0.729
(20) Relativity to Underlying Present Rate:	0.534	0.586	.
(21) Credibility to Underlying Relativity:	0.340	0.250	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.512	0.571	.
(24) Balanced Formula Relativity:	0.509	0.571	0.533

Class(es):		Effective: 7/1/2016							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)
2009	4,216,639	10	340	641,587	1,622,413	191,576	1,438,145	3,893,720	0.537	0.386	0.923
2010	4,430,057	9	322	1,012,161	710,694	760,500	917,501	3,400,856	0.389	0.379	0.768
2011	4,606,477	11	305	1,105,105	509,418	459,400	876,639	2,950,561	0.350	0.290	0.641
2012	4,812,971	7	283	389,292	1,557,107	152,697	1,026,471	3,125,567	0.404	0.245	0.649
2013	5,109,085	4	323	191,725	1,364,100	329,588	1,266,944	3,152,357	0.305	0.312	0.617
<b>MA Total:</b>	<b>23,175,229</b>	<b>41</b>	<b>1,573</b>	<b>3,339,869</b>	<b>5,763,731</b>	<b>1,893,761</b>	<b>5,525,699</b>	<b>16,523,061</b>	<b>0.393</b>	<b>0.320</b>	<b>0.713</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.413	0.533	.
(14) Massachusetts Credibility:	0.560	0.980	.
(15) Countrywide Pure Premium:	0.404	0.335	0.739
(16) Countrywide Indicated Relativity:	0.421	0.548	.
(17) Countrywide Credibility:	0.220	0.010	.
(18) Countrywide Lost-Time Claims:	3159.0	.	.
(19) Pure Premium Underlying Present Rate:	0.281	0.260	0.540
(20) Relativity to Underlying Present Rate:	0.362	0.482	.
(21) Credibility to Underlying Relativity:	0.220	0.010	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.404	0.533	.
(24) Balanced Formula Relativity:	0.401	0.533	0.452

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## Calculation of Class Relativities

Class(es): 9079 RESTAURANT NOC		Effective: 7/1/2016							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)
2009	17,648,474	57	2,718	3,755,116	6,188,400	1,740,704	5,956,245	17,640,466	0.563	0.436	1.000
2010	20,821,858	57	3,061	4,773,780	6,602,828	1,972,191	5,964,203	19,313,002	0.546	0.381	0.928
2011	22,103,153	60	3,267	3,814,136	8,768,804	2,541,919	8,335,687	23,460,546	0.569	0.492	1.061
2012	23,147,469	71	3,170	4,064,866	7,785,187	2,059,000	7,541,297	21,450,351	0.512	0.415	0.927
2013	25,554,487	67	3,263	3,940,481	9,564,907	2,072,817	8,535,067	24,113,272	0.528	0.415	0.944
<b>MA Total:</b>	<b>109,275,441</b>	<b>312</b>	<b>15,479</b>	<b>20,348,379</b>	<b>38,910,127</b>	<b>10,386,632</b>	<b>36,332,500</b>	<b>105,977,638</b>	<b>0.542</b>	<b>0.428</b>	<b>0.970</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.570	0.712	.
(14) Massachusetts Credibility:	1.000	1.000	.
(15) Countrywide Pure Premium:	0.563	0.478	1.041
(16) Countrywide Indicated Relativity:	0.587	0.783	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	2844.0	.	.
(19) Pure Premium Underlying Present Rate:	0.473	0.400	0.873
(20) Relativity to Underlying Present Rate:	0.610	0.742	.
(21) Credibility to Underlying Relativity:	0.000	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.570	0.712	.
(24) Balanced Formula Relativity:	0.567	0.713	0.623

Class(es): 9089 BILLIARD HALL		Effective: 7/1/2016							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)
2009	7,416	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	7,043	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	4,637	0	1	0	0	0	612	612	0.000	0.132	0.132
2012	4,286	0	1	0	0	0	629	629	0.000	0.147	0.147
2013	5,382	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>28,764</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,242</b>	<b>1,242</b>	<b>0.000</b>	<b>0.043</b>	<b>0.043</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.000	0.072	.
(14) Massachusetts Credibility:	0.050	0.080	.
(15) Countrywide Pure Premium:	0.279	0.438	0.717
(16) Countrywide Indicated Relativity:	0.291	0.717	.
(17) Countrywide Credibility:	0.180	0.190	.
(18) Countrywide Lost-Time Claims:	15.000	.	.
(19) Pure Premium Underlying Present Rate:	0.520	0.400	0.920
(20) Relativity to Underlying Present Rate:	0.671	0.743	.
(21) Credibility to Underlying Relativity:	0.770	0.730	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.569	0.684	.
(24) Balanced Formula Relativity:	0.566	0.685	0.612

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## Calculation of Class Relativities

Class(es): 9093 BOWLING LANE		Effective: 7/1/2016							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)
2009	114,470	0	10	0	4,862	0	26,996	31,858	0.042	0.236	0.278
2010	133,296	0	10	0	121,048	0	22,415	143,463	0.908	0.168	1.076
2011	154,199	1	22	2,756	84,242	8,371	265,476	360,845	0.564	1.776	2.340
2012	154,528	0	19	0	13,202	0	32,270	45,473	0.085	0.209	0.294
2013	173,484	1	20	39,774	30,260	35,796	25,707	131,537	0.404	0.355	0.758
<b>MA Total:</b>	<b>729,976</b>	<b>2</b>	<b>81</b>	<b>42,530</b>	<b>253,615</b>	<b>44,167</b>	<b>372,863</b>	<b>713,175</b>	<b>0.406</b>	<b>0.571</b>	<b>0.977</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.426	0.952	.
(14) Massachusetts Credibility:	0.170	0.310	.
(15) Countrywide Pure Premium:	0.622	0.558	1.181
(16) Countrywide Indicated Relativity:	0.649	0.915	.
(17) Countrywide Credibility:	0.420	0.350	.
(18) Countrywide Lost-Time Claims:	431.00	.	.
(19) Pure Premium Underlying Present Rate:	0.417	0.469	0.886
(20) Relativity to Underlying Present Rate:	0.538	0.871	.
(21) Credibility to Underlying Relativity:	0.410	0.340	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.566	0.911	.
(24) Balanced Formula Relativity:	0.563	0.912	0.698

Class(es): 9101 COLLEGE: ALL OTHER EMPLOYEES		Effective: 7/1/2016							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)
2009	1,448,373	15	574	916,171	953,769	460,613	1,157,743	3,488,296	1.291	1.117	2.408
2010	1,540,431	12	411	702,899	752,647	227,849	982,940	2,666,335	0.945	0.786	1.731
2011	1,476,172	15	565	993,352	1,358,250	558,070	1,332,752	4,242,425	1.593	1.281	2.874
2012	1,422,310	15	584	1,118,110	1,340,435	582,424	1,626,849	4,667,818	1.729	1.553	3.282
2013	1,490,861	10	503	564,353	1,416,687	296,520	1,016,491	3,294,052	1.329	0.881	2.209
<b>MA Total:</b>	<b>7,378,147</b>	<b>67</b>	<b>2,637</b>	<b>4,294,885</b>	<b>5,821,789</b>	<b>2,125,476</b>	<b>6,116,775</b>	<b>18,358,926</b>	<b>1.371</b>	<b>1.117</b>	<b>2.488</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.441	1.861	.
(14) Massachusetts Credibility:	0.690	1.000	.
(15) Countrywide Pure Premium:	1.568	1.123	2.691
(16) Countrywide Indicated Relativity:	1.635	1.839	.
(17) Countrywide Credibility:	0.160	0.000	.
(18) Countrywide Lost-Time Claims:	14652	.	.
(19) Pure Premium Underlying Present Rate:	1.441	1.086	2.527
(20) Relativity to Underlying Present Rate:	1.860	2.016	.
(21) Credibility to Underlying Relativity:	0.150	0.000	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.535	1.861	.
(24) Balanced Formula Relativity:	1.527	1.862	1.657

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	206.734	0	34	0	396.891	0	166.364	563.255	1.920	0.805	2.725
2010	224.518	0	24	0	23.158	0	67.316	90.474	0.103	0.300	0.403
2011	172.769	0	23	0	229.557	0	243.529	473.086	1.329	1.410	2.738
2012	188.062	0	24	0	37.798	0	50.404	88.201	0.201	0.268	0.469
2013	190.603	0	31	0	345.578	0	227.850	573.429	1.813	1.195	3.008
<b>MA Total:</b>	<b>982.686</b>	<b>0</b>	<b>136</b>	<b>0</b>	<b>1,032.981</b>	<b>0</b>	<b>755.464</b>	<b>1,788.445</b>	<b>1.051</b>	<b>0.769</b>	<b>1.820</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.372	0.492	.
(14) Massachusetts Credibility:	0.280	0.450	.
(15) Countrywide Pure Premium:	1.547	1.144	2.692
(16) Countrywide Indicated Relativity:	0.599	0.809	.
(17) Countrywide Credibility:	0.360	0.280	.
(18) Countrywide Lost-Time Claims:	6952.0	.	.
(19) Pure Premium Underlying Present Rate:	1.180	0.873	2.053
(20) Relativity to Underlying Present Rate:	0.506	0.630	.
(21) Credibility to Underlying Relativity:	0.360	0.270	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.502	0.618	.
(24) Balanced Formula Relativity:	0.496	0.617	0.539

Class(es):		Effective: 7/1/2016							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)
2009	624.879	1	67	191.969	664.990	63.233	497.475	1,417.667	1.371	0.897	2.269
2010	662.274	3	92	888.765	313.624	118.801	207.689	1,528.879	1.816	0.493	2.309
2011	661.207	1	100	145.969	1,264.799	420.204	737.300	2,568.272	2.134	1.751	3.884
2012	621.645	2	83	286.543	473.936	56.625	347.514	1,164.618	1.223	0.650	1.873
2013	682.379	0	90	0	224.673	0	415.054	639.728	0.329	0.608	0.937
<b>MA Total:</b>	<b>3,252.384</b>	<b>7</b>	<b>432</b>	<b>1,513.246</b>	<b>2,942.023</b>	<b>658.863</b>	<b>2,205.032</b>	<b>7,319.165</b>	<b>1.370</b>	<b>0.881</b>	<b>2.250</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.485	0.564	.
(14) Massachusetts Credibility:	0.370	0.580	.
(15) Countrywide Pure Premium:	0.843	0.616	1.459
(16) Countrywide Indicated Relativity:	0.326	0.435	.
(17) Countrywide Credibility:	0.320	0.210	.
(18) Countrywide Lost-Time Claims:	1344.0	.	.
(19) Pure Premium Underlying Present Rate:	0.717	0.497	1.213
(20) Relativity to Underlying Present Rate:	0.307	0.358	.
(21) Credibility to Underlying Relativity:	0.310	0.210	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.379	0.493	.
(24) Balanced Formula Relativity:	0.375	0.492	0.417

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	447,841	0	70	0	98,772	0	191,558	290,330	0.221	0.428	0.648
2010	487,696	0	61	0	91,229	0	115,765	206,994	0.187	0.237	0.424
2011	496,728	0	102	0	599,582	0	371,660	971,242	1.207	0.748	1.955
2012	300,754	0	77	0	209,105	0	321,778	530,883	0.695	1.070	1.765
2013	332,223	1	76	15,095	252,685	23,765	321,069	612,614	0.806	1.038	1.844
<b>MA Total:</b>	<b>2,065,242</b>	<b>1</b>	<b>386</b>	<b>15,095</b>	<b>1,251,373</b>	<b>23,765</b>	<b>1,321,830</b>	<b>2,612,064</b>	<b>0.613</b>	<b>0.652</b>	<b>1.265</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	7.301	11.337	.
(14) Massachusetts Credibility:	0.280	0.460	.
(15) Countrywide Pure Premium:	0.697	0.557	1.255
(16) Countrywide Indicated Relativity:	10.232	11.311	.
(17) Countrywide Credibility:	0.360	0.270	.
(18) Countrywide Lost-Time Claims:	779.00	.	.
(19) Pure Premium Underlying Present Rate:	0.537	0.449	0.986
(20) Relativity to Underlying Present Rate:	8.035	8.820	.
(21) Credibility to Underlying Relativity:	0.360	0.270	.
(22) Industry Group Converted Pure Premium:	0.084	0.057	0.141
(23) Formula Relativity:	8.620	10.651	.
(24) Balanced Formula Relativity:	8.591	10.657	9.430

Class(es):		Effective: 7/1/2016							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)
2009	8,115	1	11	49,504	246,571	5,636	17,812	319,522	36.483	2.889	39.372
2010	16,012	2	32	102,857	216,061	5,626	173,704	498,248	19.918	11.200	31.118
2011	12,877	1	30	69,812	83,535	103,187	208,973	465,507	11.909	24.242	36.152
2012	16,194	0	34	0	155,091	0	145,287	300,378	9.577	8.972	18.549
2013	17,397	0	47	0	271,022	0	339,846	610,868	15.579	19.535	35.114
<b>MA Total:</b>	<b>70,594</b>	<b>4</b>	<b>154</b>	<b>222,173</b>	<b>972,280</b>	<b>114,449</b>	<b>885,622</b>	<b>2,194,523</b>	<b>16.920</b>	<b>14.166</b>	<b>31.086</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	5.994	9.066	.
(14) Massachusetts Credibility:	0.140	0.320	.
(15) Countrywide Pure Premium:	1.582	2.528	4.110
(16) Countrywide Indicated Relativity:	0.613	1.786	.
(17) Countrywide Credibility:	0.430	0.340	.
(18) Countrywide Lost-Time Claims:	528.00	.	.
(19) Pure Premium Underlying Present Rate:	2.615	5.101	7.716
(20) Relativity to Underlying Present Rate:	1.121	3.680	.
(21) Credibility to Underlying Relativity:	0.430	0.340	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	1.585	4.760	.
(24) Balanced Formula Relativity:	1.565	4.750	2.700

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	37,523	3	53	59,535	249,222	2,049	103,106	413,912	8,228	2,802	11,031
2010	30,982	5	19	449,367	467,890	30,794	80,325	1,028,376	29,607	3,587	33,193
2011	28,259	0	50	0	749,859	0	300,632	1,050,491	26,535	10,638	37,173
2012	28,133	4	59	1,314,514	620,413	190,841	249,708	2,375,476	68,779	15,660	84,439
2013	29,955	2	100	212,241	62,953	272,266	649,397	1,196,856	9,187	30,768	39,955
<b>MA Total:</b>	<b>154,852</b>	<b>14</b>	<b>281</b>	<b>2,035,657</b>	<b>2,150,337</b>	<b>495,950</b>	<b>1,383,168</b>	<b>6,065,112</b>	<b>27,032</b>	<b>12,135</b>	<b>39,167</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	9.576	7.766	.
(14) Massachusetts Credibility:	0.340	0.470	.
(15) Countrywide Pure Premium:	5.429	3.359	8.787
(16) Countrywide Indicated Relativity:	2.103	2.373	.
(17) Countrywide Credibility:	0.330	0.270	.
(18) Countrywide Lost-Time Claims:	1108.0	.	.
(19) Pure Premium Underlying Present Rate:	11.562	6.190	17.752
(20) Relativity to Underlying Present Rate:	4.958	4.466	.
(21) Credibility to Underlying Relativity:	0.330	0.260	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	5.586	5.452	.
(24) Balanced Formula Relativity:	5.518	5.440	5.490

Class(es):		Effective: 7/1/2016							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)
2009	129,290	0	37	0	87,160	0	121,043	208,203	0.674	0.936	1.610
2010	146,701	0	39	0	8,277	0	95,911	104,188	0.056	0.654	0.710
2011	143,095	0	30	0	37,297	0	170,043	207,340	0.261	1.188	1.449
2012	156,423	0	42	0	402,353	0	378,990	781,343	2.572	2.423	4.995
2013	185,482	0	41	0	143,902	0	291,326	435,229	0.776	1.571	2.346
<b>MA Total:</b>	<b>760,992</b>	<b>0</b>	<b>189</b>	<b>0</b>	<b>678,989</b>	<b>0</b>	<b>1,057,313</b>	<b>1,736,302</b>	<b>0.892</b>	<b>1.389</b>	<b>2.282</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.316	0.889	.
(14) Massachusetts Credibility:	0.280	0.510	.
(15) Countrywide Pure Premium:	2.358	2.539	4.897
(16) Countrywide Indicated Relativity:	0.913	1.794	.
(17) Countrywide Credibility:	0.360	0.250	.
(18) Countrywide Lost-Time Claims:	2038.0	.	.
(19) Pure Premium Underlying Present Rate:	1.546	1.526	3.072
(20) Relativity to Underlying Present Rate:	0.663	1.101	.
(21) Credibility to Underlying Relativity:	0.360	0.240	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.656	1.166	.
(24) Balanced Formula Relativity:	0.648	1.164	0.832

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	136.834	3	37	60.736	53.806	188.564	344.536	647.641	0.837	3.896	4.733
2010	207.168	1	61	417	244.019	119	226.079	470.634	1.180	1.092	2.272
2011	206.857	2	52	16.030	378.979	19.449	100.285	514.743	1.910	0.579	2.488
2012	190.867	5	63	312.115	188.367	162.375	176.202	839.057	2.622	1.774	4.396
2013	247.268	3	83	281.564	587.024	92.452	302.000	1,263.039	3.513	1.595	5.108
<b>MA Total:</b>	<b>988.994</b>	<b>14</b>	<b>296</b>	<b>670.861</b>	<b>1,452.194</b>	<b>462.958</b>	<b>1,149.102</b>	<b>3,735.116</b>	<b>2.147</b>	<b>1.630</b>	<b>3.777</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.760	1.043	.
(14) Massachusetts Credibility:	0.280	0.600	.
(15) Countrywide Pure Premium:	1.015	0.850	1.866
(16) Countrywide Indicated Relativity:	0.393	0.601	.
(17) Countrywide Credibility:	0.360	0.200	.
(18) Countrywide Lost-Time Claims:	407.00	.	.
(19) Pure Premium Underlying Present Rate:	1.152	1.812	2.963
(20) Relativity to Underlying Present Rate:	0.494	1.307	.
(21) Credibility to Underlying Relativity:	0.360	0.200	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	0.532	1.008	.
(24) Balanced Formula Relativity:	0.526	1.005	0.697

Class(es):		Effective: 7/1/2016							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)
2009	194.428	2	29	171.758	65.474	75.318	91.165	403.714	1.220	0.856	2.076
2010	191.884	0	34	0	43.660	0	66.771	110.431	0.228	0.348	0.576
2011	186.692	1	31	5.970	14.987	2.229	71.498	94.684	0.112	0.395	0.507
2012	191.140	1	32	125.765	223.864	51.493	170.549	571.672	1.829	1.162	2.991
2013	197.407	0	31	0	150.490	0	167.046	317.536	0.762	0.846	1.609
<b>MA Total:</b>	<b>961.551</b>	<b>4</b>	<b>157</b>	<b>303.493</b>	<b>498.475</b>	<b>129.040</b>	<b>567.029</b>	<b>1,498.036</b>	<b>0.834</b>	<b>0.724</b>	<b>1.558</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.877	1.206	.
(14) Massachusetts Credibility:	0.310	0.460	.
(15) Countrywide Pure Premium:	2.508	1.605	4.112
(16) Countrywide Indicated Relativity:	2.615	2.628	.
(17) Countrywide Credibility:	0.350	0.270	.
(18) Countrywide Lost-Time Claims:	689.00	.	.
(19) Pure Premium Underlying Present Rate:	1.550	0.939	2.489
(20) Relativity to Underlying Present Rate:	2.000	1.743	.
(21) Credibility to Underlying Relativity:	0.340	0.270	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.867	1.735	.
(24) Balanced Formula Relativity:	1.857	1.736	1.810



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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	588,440	8	80	1,769,023	822,499	546,453	1,006,374	4,144,349	4,404	2,639	7,043
2010	703,087	2	74	162,789	1,637,728	25,228	797,921	2,623,666	2,561	1,171	3,732
2011	595,947	5	80	522,112	1,075,203	243,156	516,243	2,356,714	2,680	1,274	3,955
2012	654,717	7	80	572,050	1,033,056	205,044	592,401	2,402,552	2,452	1,218	3,670
2013	756,290	4	65	292,173	764,758	253,585	467,416	1,777,934	1,398	0,953	2,351
<b>MA Total:</b>	<b>3,298,480</b>	<b>26</b>	<b>379</b>	<b>3,318,148</b>	<b>5,333,245</b>	<b>1,273,466</b>	<b>3,380,356</b>	<b>13,305,215</b>	<b>2,623</b>	<b>1,411</b>	<b>4,034</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.929	0.903	.
(14) Massachusetts Credibility:	0.620	0.870	.
(15) Countrywide Pure Premium:	3.167	1.774	4.941
(16) Countrywide Indicated Relativity:	1.227	1.254	.
(17) Countrywide Credibility:	0.190	0.070	.
(18) Countrywide Lost-Time Claims:	2134.0	.	.
(19) Pure Premium Underlying Present Rate:	2.450	1.362	3.813
(20) Relativity to Underlying Present Rate:	1.051	0.983	.
(21) Credibility to Underlying Relativity:	0.190	0.060	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	1.009	0.932	.
(24) Balanced Formula Relativity:	0.996	0.930	0.973

Class(es):		Effective: 7/1/2016							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)
2009	886,749	10	248	915,102	3,616,577	398,978	1,824,112	6,754,769	5,110	2,507	7,617
2010	996,202	15	273	2,307,706	3,427,179	715,367	1,902,131	8,352,384	5,757	2,627	8,384
2011	1,042,246	14	272	1,645,888	3,812,540	478,664	2,177,619	8,114,712	5,237	2,549	7,786
2012	970,964	17	210	4,799,075	2,065,588	1,800,210	1,442,218	10,107,092	7,070	3,339	10,409
2013	1,056,446	16	270	2,615,273	4,535,021	1,048,889	2,412,866	10,612,048	6,768	3,277	10,045
<b>MA Total:</b>	<b>4,952,607</b>	<b>72</b>	<b>1,273</b>	<b>12,283,044</b>	<b>17,456,906</b>	<b>4,442,108</b>	<b>9,758,946</b>	<b>43,941,004</b>	<b>6,005</b>	<b>2,867</b>	<b>8,872</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.127	1.835	.
(14) Massachusetts Credibility:	0.920	1.000	.
(15) Countrywide Pure Premium:	4.191	2.334	6.526
(16) Countrywide Indicated Relativity:	1.623	1.649	.
(17) Countrywide Credibility:	0.040	0.000	.
(18) Countrywide Lost-Time Claims:	7167.0	.	.
(19) Pure Premium Underlying Present Rate:	4.504	2.590	7.094
(20) Relativity to Underlying Present Rate:	1.931	1.869	.
(21) Credibility to Underlying Relativity:	0.040	0.000	.
(22) Industry Group Converted Pure Premium:	2.823	1.563	4.385
(23) Formula Relativity:	2.099	1.835	.
(24) Balanced Formula Relativity:	2.074	1.831	1.987

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	123,587	4	43	668,475	237,051	435,112	129,925	1,470,564	7,327	4,572	11,899
2010	137,457	0	0	0	0	0	0	0	0,000	0,000	0,000
2011	66,924	0	25	0	25,634	0	45,680	71,315	0,383	0,683	1,066
2012	50,758	0	26	0	9,023	0	30,450	39,472	0,178	0,600	0,778
2013	52,205	1	9	71,883	5,220	114,813	4,258	196,175	1,477	2,281	3,758
<b>MA Total:</b>	<b>430,931</b>	<b>5</b>	<b>103</b>	<b>740,358</b>	<b>276,929</b>	<b>549,925</b>	<b>210,313</b>	<b>1,777,526</b>	<b>2,361</b>	<b>1,764</b>	<b>4,125</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.482	2.939	.
(14) Massachusetts Credibility:	0.180	0.340	.
(15) Countrywide Pure Premium:	0.989	0.596	1.585
(16) Countrywide Indicated Relativity:	1.032	0.976	.
(17) Countrywide Credibility:	0.410	0.330	.
(18) Countrywide Lost-Time Claims:	1020.0	.	.
(19) Pure Premium Underlying Present Rate:	0.921	0.990	1.910
(20) Relativity to Underlying Present Rate:	1.188	1.838	.
(21) Credibility to Underlying Relativity:	0.410	0.330	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	1.357	1.928	.
(24) Balanced Formula Relativity:	1.350	1.929	1.574

Class(es):		Effective: 7/1/2016							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)
2009	273,041	0	32	0	5,474	0	31,303	36,777	0,020	0,115	0,135
2010	299,492	0	32	0	86,993	0	240,011	327,004	0,290	0,801	1,092
2011	298,839	3	44	436,543	130,385	240,062	125,736	932,727	1,897	1,224	3,121
2012	301,368	2	29	136,151	149,483	39,307	82,133	407,074	0,948	0,403	1,351
2013	303,823	1	25	124,339	324,899	39,979	218,061	707,278	1,479	0,849	2,328
<b>MA Total:</b>	<b>1,476,562</b>	<b>6</b>	<b>162</b>	<b>697,033</b>	<b>697,234</b>	<b>319,348</b>	<b>697,244</b>	<b>2,410,859</b>	<b>0,944</b>	<b>0,688</b>	<b>1,633</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.874	1.070	.
(14) Massachusetts Credibility:	0.310	0.550	.
(15) Countrywide Pure Premium:	1.391	0.884	2.275
(16) Countrywide Indicated Relativity:	1.420	1.558	.
(17) Countrywide Credibility:	0.350	0.230	.
(18) Countrywide Lost-Time Claims:	995.00	.	.
(19) Pure Premium Underlying Present Rate:	1.017	0.952	1.969
(20) Relativity to Underlying Present Rate:	1.146	1.586	.
(21) Credibility to Underlying Relativity:	0.340	0.220	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.158	1.296	.
(24) Balanced Formula Relativity:	1.142	1.287	1.196

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	706,040	3	93	265,782	1,074,222	195,538	740,750	2,276,292	1,898	1,326	3,224
2010	716,880	5	110	221,888	694,655	133,660	490,402	1,540,606	1,279	0,871	2,149
2011	780,309	13	145	1,989,655	386,298	823,524	520,042	3,719,519	3,045	1,722	4,767
2012	776,971	5	114	1,144,322	767,165	665,713	594,620	3,171,820	2,460	1,622	4,082
2013	871,242	8	107	1,317,808	957,090	409,518	587,881	3,272,297	2,611	1,145	3,756
<b>MA Total:</b>	<b>3,851,442</b>	<b>34</b>	<b>569</b>	<b>4,939,454</b>	<b>3,879,430</b>	<b>2,227,953</b>	<b>2,933,696</b>	<b>13,980,533</b>	<b>2,290</b>	<b>1,340</b>	<b>3,630</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	2.407	2.232	.
(14) Massachusetts Credibility:	0.520	0.810	.
(15) Countrywide Pure Premium:	2.084	1.111	3.195
(16) Countrywide Indicated Relativity:	2.173	1.820	.
(17) Countrywide Credibility:	0.240	0.100	.
(18) Countrywide Lost-Time Claims:	1886.0	.	.
(19) Pure Premium Underlying Present Rate:	1.364	0.986	2.350
(20) Relativity to Underlying Present Rate:	1.760	1.831	.
(21) Credibility to Underlying Relativity:	0.240	0.090	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	2.196	2.155	.
(24) Balanced Formula Relativity:	2.184	2.157	2.173

Class(es):		Effective: 7/1/2016							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)
2009	192,689	1	26	34,842	249,437	17,340	183,118	484,738	1,475	1,040	2,516
2010	202,716	0	32	0	367,520	0	178,067	545,587	1,813	0,878	2,691
2011	236,535	0	16	0	24,430	0	74,929	99,359	0,103	0,317	0,420
2012	181,798	1	14	14,743	56,794	23,323	262,474	357,334	0,393	1,572	1,966
2013	210,179	1	13	573,837	76,699	127,227	46,822	824,586	3,095	0,828	3,923
<b>MA Total:</b>	<b>1,023,917</b>	<b>3</b>	<b>101</b>	<b>623,423</b>	<b>774,880</b>	<b>167,890</b>	<b>745,410</b>	<b>2,311,603</b>	<b>1,366</b>	<b>0,892</b>	<b>2,258</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.264	1.386	.
(14) Massachusetts Credibility:	0.320	0.420	.
(15) Countrywide Pure Premium:	2.435	1.221	3.657
(16) Countrywide Indicated Relativity:	2.486	2.153	.
(17) Countrywide Credibility:	0.340	0.290	.
(18) Countrywide Lost-Time Claims:	440.00	.	.
(19) Pure Premium Underlying Present Rate:	1.549	0.733	2.282
(20) Relativity to Underlying Present Rate:	1.745	1.222	.
(21) Credibility to Underlying Relativity:	0.340	0.290	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	1.843	1.561	.
(24) Balanced Formula Relativity:	1.818	1.550	1.718

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## Calculation of Class Relativities

Class(es): 9522 UPHOLSTERING		Effective: 7/1/2016							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)
2009	111,785	0	7	0	67,936	0	32,336	100,273	0.608	0.289	0.897
2010	137,699	1	34	1,587	48,341	2,833	51,970	104,731	0.363	0.398	0.761
2011	140,205	0	10	0	39,595	0	33,737	73,332	0.282	0.241	0.523
2012	149,857	0	11	0	287,464	0	105,707	393,171	1.918	0.705	2.624
2013	139,673	0	13	0	95,636	0	52,426	148,061	0.685	0.375	1.060
<b>MA Total:</b>	<b>679,219</b>	<b>1</b>	<b>75</b>	<b>1,587</b>	<b>538,972</b>	<b>2,833</b>	<b>276,176</b>	<b>819,567</b>	<b>0.796</b>	<b>0.411</b>	<b>1.207</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.737	0.638	.
(14) Massachusetts Credibility:	0.210	0.300	.
(15) Countrywide Pure Premium:	1.074	0.621	1.695
(16) Countrywide Indicated Relativity:	1.097	1.095	.
(17) Countrywide Credibility:	0.400	0.350	.
(18) Countrywide Lost-Time Claims:	1411.0	.	.
(19) Pure Premium Underlying Present Rate:	0.851	0.476	1.327
(20) Relativity to Underlying Present Rate:	0.959	0.792	.
(21) Credibility to Underlying Relativity:	0.390	0.350	.
(22) Industry Group Converted Pure Premium:	1.080	0.644	1.724
(23) Formula Relativity:	0.967	0.852	.
(24) Balanced Formula Relativity:	0.954	0.846	0.914

Class(es): 9533 SCAFFOLDING: SCAFFOLD INST, RPR OR REMOVAL- BUILT UP FROM GROUN		Effective: 7/1/2016							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)
2009	48,116	2	10	64,348	298,047	15,162	106,265	483,822	7,532	2,524	10,055
2010	25,698	0	5	0	213,063	0	93,241	306,304	8,291	3,628	11,919
2011	82,588	1	13	1,380	873,452	1,067	412,230	1,288,129	10,593	5,004	15,597
2012	59,998	0	6	0	588,480	0	253,222	841,702	9,808	4,221	14,029
2013	63,543	1	6	275,635	376,905	550,760	79,684	1,282,983	10,269	9,921	20,191
<b>MA Total:</b>	<b>279,943</b>	<b>4</b>	<b>40</b>	<b>341,363</b>	<b>2,349,947</b>	<b>566,989</b>	<b>944,642</b>	<b>4,202,940</b>	<b>9,614</b>	<b>5,400</b>	<b>15,014</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	3.108	3.473	.
(14) Massachusetts Credibility:	0.370	0.430	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	2.939	1.826	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	8.019	2.694	10.713
(20) Relativity to Underlying Present Rate:	3.085	1.944	.
(21) Credibility to Underlying Relativity:	0.630	0.570	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	3.094	2.601	.
(24) Balanced Formula Relativity:	3.143	2.610	2.965

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	186,595	0	16	0	171,785	0	298,512	470,297	0.921	1,600	2,520
2010	209,656	2	14	962,593	854,934	505,691	223,031	2,546,248	8,669	3,476	12,145
2011	215,120	2	11	645,772	257,431	163,646	207,507	1,274,357	4,199	1,725	5,924
2012	237,878	1	15	542,157	1,198,564	217,868	401,300	2,359,890	7,318	2,603	9,921
2013	268,741	1	14	503,386	133,822	663,114	469,921	1,770,243	2,371	4,216	6,587
<b>MA Total:</b>	<b>1,117,989</b>	<b>6</b>	<b>70</b>	<b>2,653,908</b>	<b>2,616,536</b>	<b>1,550,319</b>	<b>1,600,271</b>	<b>8,421,035</b>	<b>4,714</b>	<b>2,818</b>	<b>7,532</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.524	1.812	.
(14) Massachusetts Credibility:	0.460	0.620	.
(15) Countrywide Pure Premium:	2.860	1.298	4.158
(16) Countrywide Indicated Relativity:	0.922	0.834	.
(17) Countrywide Credibility:	0.270	0.190	.
(18) Countrywide Lost-Time Claims:	422.00	.	.
(19) Pure Premium Underlying Present Rate:	3.533	1.730	5.263
(20) Relativity to Underlying Present Rate:	1.359	1.248	.
(21) Credibility to Underlying Relativity:	0.270	0.190	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.317	1.519	.
(24) Balanced Formula Relativity:	1.338	1.525	1.400

Class(es):		Effective: 7/1/2016							Construction		
9545 BILL POSTING & 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)
2009	0	0	0	0	0	0	0	0	0.000	0.000	0.000
2010	796	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	2,021	0	3	0	6,119	0	10,361	16,480	3.028	5,127	8,155
2012	1,712	0	0	0	0	0	0	0	0.000	0.000	0.000
2013	1,243	0	0	0	0	0	0	0	0.000	0.000	0.000
<b>MA Total:</b>	<b>5,772</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>6,119</b>	<b>0</b>	<b>10,361</b>	<b>16,480</b>	<b>1.060</b>	<b>1,795</b>	<b>2,855</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.343	1.154	.
(14) Massachusetts Credibility:	0.050	0.060	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.757	0.711	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.065	1.049	3.115
(20) Relativity to Underlying Present Rate:	0.795	0.757	.
(21) Credibility to Underlying Relativity:	0.950	0.940	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.772	0.781	.
(24) Balanced Formula Relativity:	0.784	0.784	0.784

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	14,260	0	1	0	0	0	267	267	0.000	0.019	0.019
2010	21,199	0	0	0	0	0	0	0	0.000	0.000	0.000
2011	26,286	1	4	248,197	340	30,408	7,358	286,304	9,455	1,437	10,892
2012	28,834	2	5	304,845	23,877	40,745	22,713	392,180	11,400	2,201	13,601
2013	29,325	0	8	0	22,816	0	7,403	30,219	0,778	0,252	1,030
<b>MA Total:</b>	<b>119,905</b>	<b>3</b>	<b>18</b>	<b>553,042</b>	<b>47,034</b>	<b>71,153</b>	<b>37,741</b>	<b>708,970</b>	<b>5,005</b>	<b>0,908</b>	<b>5,913</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.618	0.584	.
(14) Massachusetts Credibility:	0.150	0.230	.
(15) Countrywide Pure Premium:	0.000	0.000	0.000
(16) Countrywide Indicated Relativity:	0.749	0.889	.
(17) Countrywide Credibility:	0.000	0.000	.
(18) Countrywide Lost-Time Claims:	0.000	.	.
(19) Pure Premium Underlying Present Rate:	2.043	1.312	3.355
(20) Relativity to Underlying Present Rate:	0.786	0.947	.
(21) Credibility to Underlying Relativity:	0.850	0.770	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	0.911	0.863	.
(24) Balanced Formula Relativity:	0.925	0.866	0.906

Class(es):		Effective: 7/1/2016							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)
2009	110,918	0	22	0	693,635	0	116,727	810,363	6,254	1,052	7,306
2010	113,025	3	21	279,053	92,908	77,452	156,577	605,990	3,291	2,071	5,362
2011	120,889	0	19	0	371,765	0	184,716	556,481	3,075	1,528	4,603
2012	121,174	2	21	101,624	142,630	219,065	135,250	598,570	2,016	2,924	4,940
2013	129,690	0	23	0	191,533	0	132,740	324,274	1,477	1,024	2,500
<b>MA Total:</b>	<b>595,695</b>	<b>5</b>	<b>106</b>	<b>380,677</b>	<b>1,492,472</b>	<b>296,517</b>	<b>726,011</b>	<b>2,895,677</b>	<b>3,144</b>	<b>1,717</b>	<b>4,861</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	1.016	1.104	.
(14) Massachusetts Credibility:	0.390	0.480	.
(15) Countrywide Pure Premium:	4.453	2.372	6.825
(16) Countrywide Indicated Relativity:	1.435	1.524	.
(17) Countrywide Credibility:	0.180	0.190	.
(18) Countrywide Lost-Time Claims:	15.000	.	.
(19) Pure Premium Underlying Present Rate:	4.224	1.744	5.968
(20) Relativity to Underlying Present Rate:	1.625	1.258	.
(21) Credibility to Underlying Relativity:	0.430	0.330	.
(22) Industry Group Converted Pure Premium:	3.094	1.555	4.649
(23) Formula Relativity:	1.354	1.235	.
(24) Balanced Formula Relativity:	1.375	1.239	1.330

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## Calculation of Class Relativities

Class(es):		Effective: 7/1/2016							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)
2009	3,599,982	5	79	365,098	102,342	479,376	132,387	1,079,204	0.130	0.170	0.300
2010	3,729,412	4	78	369,135	334,490	89,183	329,487	1,122,296	0.189	0.112	0.301
2011	3,982,505	4	80	139,554	481,948	46,500	268,341	936,343	0.156	0.079	0.235
2012	4,211,729	1	74	83,892	540,108	49,355	206,480	879,836	0.148	0.061	0.209
2013	4,398,386	3	70	36,937	152,026	54,485	166,914	410,361	0.043	0.050	0.093
<b>MA Total:</b>	<b>19,922,015</b>	<b>17</b>	<b>381</b>	<b>994,616</b>	<b>1,610,915</b>	<b>718,900</b>	<b>1,103,609</b>	<b>4,428,040</b>	<b>0.131</b>	<b>0.091</b>	<b>0.222</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.137	0.152	.
(14) Massachusetts Credibility:	0.470	0.670	.
(15) Countrywide Pure Premium:	0.315	0.186	0.501
(16) Countrywide Indicated Relativity:	0.329	0.305	.
(17) Countrywide Credibility:	0.270	0.170	.
(18) Countrywide Lost-Time Claims:	1991.0	.	.
(19) Pure Premium Underlying Present Rate:	0.205	0.120	0.324
(20) Relativity to Underlying Present Rate:	0.264	0.222	.
(21) Credibility to Underlying Relativity:	0.260	0.160	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.222	0.189	.
(24) Balanced Formula Relativity:	0.221	0.190	0.209

Class(es):		Effective: 7/1/2016							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)
2009	567,515	0	14	0	134,375	0	76,759	211,133	0.237	0.135	0.372
2010	604,410	1	9	17,805	34,355	45,225	25,530	122,915	0.086	0.117	0.203
2011	615,306	2	16	218,770	51,849	117,239	74,616	462,474	0.440	0.312	0.752
2012	602,442	2	9	151,471	24,039	46,568	51,431	273,508	0.291	0.163	0.454
2013	669,063	3	9	105,488	126,159	72,371	199,941	503,958	0.346	0.407	0.753
<b>MA Total:</b>	<b>3,058,736</b>	<b>8</b>	<b>57</b>	<b>493,533</b>	<b>370,776</b>	<b>281,403</b>	<b>428,277</b>	<b>1,573,989</b>	<b>0.283</b>	<b>0.232</b>	<b>0.515</b>

	Pure Premium Relativities		
	Indemnity	Medical	Total
(13) Massachusetts Indicated Relativity:	0.297	0.386	.
(14) Massachusetts Credibility:	0.260	0.410	.
(15) Countrywide Pure Premium:	0.464	0.313	0.777
(16) Countrywide Indicated Relativity:	0.484	0.512	.
(17) Countrywide Credibility:	0.370	0.300	.
(18) Countrywide Lost-Time Claims:	460.00	.	.
(19) Pure Premium Underlying Present Rate:	0.313	0.226	0.539
(20) Relativity to Underlying Present Rate:	0.404	0.420	.
(21) Credibility to Underlying Relativity:	0.370	0.290	.
(22) Industry Group Converted Pure Premium:	0.951	0.600	1.552
(23) Formula Relativity:	0.406	0.434	.
(24) Balanced Formula Relativity:	0.404	0.434	0.415

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Section IX - Classification Pricing  
 Subsection H - Industry Group Rate Change and Rate Level Factors  
 7/1/2016

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	0.987	0.992	1.020	1.004	1.003
(2) Experience and Benefit Level Change - Overall	1.5%	1.5%	1.5%	1.5%	1.5%
(3) Target Rate Change = (1) x [1.000 + (2)] - 1.000	0.1%	0.7%	3.6%	2.0%	1.8%
(4) Benefit Level Change - Overall	1.2%	1.2%	1.2%	1.2%	1.2%
(5) Experience Change - Overall = {(1.000 + (2)) / [1.000 + (4)]} - 1.000	0.3%	0.3%	0.3%	0.3%	0.3%
(6) Experience Change - by Group = {(1) x [1.000 + (5)]} - 1.000	-1.0%	-0.5%	2.3%	0.7%	0.6%
(7) 0.75 Experience Change - by Group = 0.75 x (6)	-0.8%	-0.4%	1.7%	0.6%	0.4%
(8) Maximum Rate Change = (4) + (7) + 15.0%	15.4%	15.8%	17.9%	16.8%	16.6%
(9) Minimum Rate Change = (4) + (7) - 15.0%	-14.6%	-14.2%	-12.1%	-13.2%	-13.4%
(10) Present Average Rate	2.034	5.438	0.162	1.797	5.050
(11) Uncapped Rate Level Factor = [1.000 + (3)] x (6)	2.037	5.475	0.168	1.832	5.139
(12) Capped Rate Level Factor	2.083	5.490	0.178	1.840	5.185

In addition, the WCRIBMA is limiting the increase in average rates for any class to \$15.00 and no average rate shall exceed \$90.00 per \$100.00 of payroll.

**Notes:**

- (1): Exhibit 2.
- (2): Indicated Rate Change, from Section I-A, Exhibit 1.
- (4): Section IV - A, Exhibit 1.
- (10): Rates by class consistent with the 04/01/14 stipulation, weighted by five years of exposure.
- (12): Proposed average uncapped rates are capped by an iterative process using rate levels to determine if the required



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) / 1.176 (9)
Manufacturing	426,109,070	493,821,493	1.159	10,059	12,000	0.916	1.160	0.987
Construction	967,615,751	1,128,647,176	1.166	12,013	12,000	1.000	1.166	0.992
Office & Clerical	394,436,625	473,740,741	1.201	10,935	12,000	0.955	1.200	1.020
Goods & Services	992,654,583	1,172,618,160	1.181	29,056	12,000	1.000	1.181	1.004
Miscellaneous	450,280,924	531,097,206	1.179	9,463	12,000	0.888	1.179	1.003
All	3,231,096,953	3,799,924,776	1.176			1.000	1.176	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  
 7/1/2016

Section IX - I  
 Exhibit 1

## Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (6)	Proposed Average Uncapped Rate (7)
	Indemnity (2)	Medical (4)	Total (5)		
0005	1.429	1.336	1.393	1.832	2.55
0008	1.294	1.512	1.378	1.832	2.53
0016	2.437	2.521	2.469	1.832	4.52
0034	2.232	2.826	2.462	1.832	4.51
0035	1.195	1.485	1.307	1.832	2.40
0036	2.232	2.826	2.462	1.832	4.51
0037	1.294	1.512	1.378	1.832	2.53
0042	2.293	2.407	2.337	1.832	4.28
0046	1.012	1.154	1.067	1.832	1.96
0050	1.283	1.024	1.197	5.475	6.55
0079	1.851	2.848	2.237	1.832	4.10
0083	2.051	2.564	2.249	1.832	4.12
0106	2.137	3.560	2.644	5.139	13.59
0113	2.232	2.826	2.462	1.832	4.51
0170	2.232	2.826	2.462	1.832	4.51
0251	0.652	0.618	0.640	5.139	3.29
0908	108.723	80.679	97.872	1.832	89.67
0909	136.190	252.407	181.156	1.832	165.97
0912	136.190	252.407	181.156	1.832	331.94
0913	108.723	80.679	97.872	1.832	179.33
0917	1.784	2.252	1.965	1.832	3.60
0918	0.383	0.246	0.330	1.832	0.61
1430	3.036	1.975	2.640	2.037	5.38
1438	1.676	1.541	1.625	2.037	3.31
1463	4.792	4.104	4.535	2.037	9.24
1624	0.905	1.004	0.940	5.139	4.83
1655	0.792	0.852	0.813	5.139	4.18
1701	1.736	1.343	1.589	2.037	3.24
1710	0.905	1.004	0.940	5.139	4.83
1747	1.548	1.307	1.458	2.037	2.97
1748	1.472	1.846	1.611	2.037	3.28
1852	3.570	1.846	2.927	2.037	5.96
1853	0.933	0.577	0.800	2.037	1.63
1860	1.031	0.895	0.980	2.037	2.00
1924	1.007	0.949	0.985	2.037	2.01
1925	1.610	7.052	3.642	2.037	7.42
2001	1.750	1.686	1.726	2.037	3.52
2002	1.153	1.464	1.269	2.037	2.58
2003	1.750	1.686	1.726	2.037	3.52
2014	1.795	1.697	1.758	2.037	3.58
2021	1.422	1.366	1.401	2.037	2.85
2039	1.645	1.499	1.591	2.037	3.24

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Section IX - Classification Pricing  
 Subsection I - Average Uncapped Rates  
 7/1/2016

Section IX - I  
 Exhibit 1

## Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (6)	Proposed Average Uncapped Rate (7)
	Indemnity (2)	Medical (4)	Total (5)		
2041	1.385	1.283	1.347	2.037	2.74
2070	2.120	1.944	2.054	2.037	4.18
2081	1.741	2.737	2.113	2.037	4.30
2089	1.551	1.443	1.511	2.037	3.08
2095	1.814	1.617	1.740	2.037	3.54
2101	1.551	1.443	1.511	2.037	3.08
2111	1.120	1.043	1.091	2.037	2.22
2114	1.551	1.443	1.511	2.037	3.08
2115	2.021	2.343	2.141	2.037	4.36
2121	0.681	0.786	0.720	2.037	1.47
2130	0.969	0.889	0.939	2.037	1.91
2131	1.185	1.168	1.179	2.037	2.40
2143	0.878	1.011	0.927	2.037	1.89
2150	2.514	2.604	2.547	2.037	5.19
2156	2.823	2.525	2.711	2.037	5.52
2157	2.140	1.834	2.026	2.037	4.13
2172	1.315	0.758	1.107	2.037	2.25
2174	1.757	1.569	1.687	2.037	3.44
2211	3.586	3.427	3.526	2.037	7.18
2220	1.332	1.515	1.401	2.037	2.85
2260	3.731	3.043	3.474	2.037	7.08
2286	1.332	1.515	1.401	2.037	2.85
2288	1.683	1.621	1.660	2.037	3.38
2302	1.332	1.515	1.401	2.037	2.85
2305	1.860	1.684	1.794	2.037	3.66
2362	0.760	0.848	0.793	2.037	1.61
2380	1.191	1.255	1.215	2.037	2.47
2402	1.083	1.093	1.087	2.037	2.21
2413	1.723	1.874	1.779	2.037	3.62
2416	1.334	1.181	1.277	2.037	2.60
2417	2.013	1.445	1.801	2.037	3.67
2501	1.006	1.056	1.025	2.037	2.09
2503	0.552	0.557	0.554	2.037	1.13
2534	1.006	1.056	1.025	2.037	2.09
2570	2.957	3.425	3.132	2.037	6.38
2576	0.963	0.902	0.940	2.037	1.91
2578	0.963	0.902	0.940	2.037	1.91
2585	1.630	1.635	1.632	2.037	3.32
2586	0.841	0.812	0.830	2.037	1.69
2587	2.243	2.721	2.428	1.832	4.45
2623	2.403	2.544	2.456	2.037	5.00
2640	0.859	0.779	0.829	2.037	1.69

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Section IX - Classification Pricing  
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## Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (6)	Proposed Average Uncapped Rate (7)
	Indemnity (2)	Medical (4)	Total (5)		
2651	0.859	0.779	0.829	2.037	1.69
2660	0.791	1.018	0.876	2.037	1.78
2683	0.838	0.827	0.834	2.037	1.70
2688	1.202	1.214	1.207	2.037	2.46
2702	3.177	3.107	3.152	5.139	16.20
2710	3.191	3.959	3.478	2.037	7.08
2731	1.690	1.723	1.702	2.037	3.47
2741	3.463	3.013	3.295	2.037	6.71
2747	2.775	2.809	2.788	2.037	5.68
2790	0.871	0.849	0.863	2.037	1.76
2802	2.230	2.236	2.232	2.037	4.55
2835	0.957	0.948	0.954	2.037	1.94
2836	1.040	0.993	1.023	2.037	2.08
2841	2.067	1.546	1.872	2.037	3.81
2883	1.583	1.518	1.558	2.037	3.17
2923	0.767	0.791	0.776	2.037	1.58
2942	0.850	0.949	0.887	2.037	1.81
3018	1.861	1.484	1.720	2.037	3.50
3022	1.785	1.688	1.749	2.037	3.56
3027	2.060	2.874	2.364	2.037	4.82
3028	1.370	1.375	1.372	2.037	2.79
3030	3.040	3.058	3.047	2.037	6.21
3040	2.955	2.548	2.803	2.037	5.71
3041	2.300	2.548	2.393	2.037	4.87
3042	3.470	2.440	3.085	2.037	6.28
3064	1.378	1.531	1.435	2.037	2.92
3066	1.378	1.531	1.435	2.037	2.92
3076	1.112	1.243	1.161	2.037	2.37
3081	2.391	2.472	2.421	2.037	4.93
3082	2.391	2.472	2.421	2.037	4.93
3085	2.329	2.036	2.220	2.037	4.52
3110	3.859	4.623	4.144	2.037	8.44
3111	1.023	1.175	1.080	2.037	2.20
3113	0.658	0.693	0.671	2.037	1.37
3114	1.134	1.292	1.193	2.037	2.43
3118	0.902	0.666	0.814	2.037	1.66
3119	0.377	0.469	0.411	2.037	0.84
3120	0.864	0.540	0.743	2.037	1.51
3122	0.795	0.967	0.859	2.037	1.75
3127	0.475	0.640	0.537	2.037	1.09
3131	0.709	0.805	0.744	2.037	1.52
3132	1.608	1.858	1.701	2.037	3.47

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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 (6)	Proposed Average Uncapped Rate (7)
	Indemnity (2)	Medical (4)	Total (5)		
3145	0.775	0.814	0.790	2.037	1.61
3146	0.886	0.894	0.889	2.037	1.81
3169	1.372	1.514	1.425	2.037	2.90
3179	0.612	0.507	0.573	2.037	1.17
3180	1.319	1.360	1.335	2.037	2.72
3188	0.817	0.781	0.804	2.037	1.64
3200	1.147	1.184	1.161	2.037	2.36
3220	1.946	1.325	1.714	2.037	3.49
3227	1.372	1.514	1.425	2.037	2.90
3241	1.007	0.949	0.985	2.037	2.01
3255	1.310	1.193	1.267	2.037	2.58
3257	1.382	1.172	1.304	2.037	2.66
3270	1.006	1.075	1.032	2.037	2.10
3300	1.898	2.105	1.975	2.037	4.02
3315	1.828	1.788	1.813	2.037	3.69
3336	2.311	1.614	2.051	2.037	4.18
3365	1.323	1.198	1.281	5.475	7.02
3372	1.102	1.375	1.204	2.037	2.45
3373	1.877	1.640	1.788	2.037	3.64
3381	1.299	1.270	1.288	2.037	2.62
3383	0.740	0.673	0.715	2.037	1.46
3385	0.399	0.360	0.385	2.037	0.78
3400	1.372	1.514	1.425	2.037	2.90
3507	1.443	1.321	1.398	2.037	2.85
3515	1.250	1.400	1.306	2.037	2.66
3548	0.858	0.788	0.832	2.037	1.69
3558	0.379	0.647	0.479	2.037	0.98
3559	0.858	0.788	0.832	2.037	1.69
3571	0.471	0.437	0.458	2.037	0.93
3574	0.858	0.788	0.832	2.037	1.69
3612	0.929	1.000	0.956	2.037	1.95
3620	2.186	3.576	2.705	2.037	5.51
3629	0.858	0.788	0.832	2.037	1.69
3632	0.858	0.788	0.832	2.037	1.69
3634	0.842	0.767	0.814	2.037	1.66
3635	1.305	1.593	1.412	2.037	2.88
3638	0.858	0.788	0.832	2.037	1.69
3642	0.589	0.459	0.540	2.037	1.10
3643	0.851	0.719	0.802	2.037	1.63
3647	0.943	0.913	0.932	2.037	1.90
3648	0.631	0.738	0.671	2.037	1.37
3681	0.405	0.423	0.412	2.037	0.84

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## Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (6)	Proposed Average Uncapped Rate (7)
	Indemnity (2)	Medical (4)	Total (5)		
3685	0.331	0.307	0.322	2.037	0.66
3724	0.914	0.917	0.915	5.475	5.01
3726	1.694	1.127	1.504	5.475	8.24
3807	1.372	1.514	1.425	2.037	2.90
3808	1.514	1.406	1.474	2.037	3.00
3821	2.355	2.205	2.297	1.832	4.21
3826	2.355	2.752	2.504	2.037	5.10
3830	0.858	0.788	0.832	2.037	1.69
3841	0.626	0.725	0.663	2.037	1.35
4000	0.905	0.809	0.871	5.139	4.48
4021	1.858	2.107	1.951	2.037	3.97
4024	1.537	1.367	1.474	2.037	3.00
4034	3.132	3.522	3.278	2.037	6.68
4036	1.267	0.909	1.133	2.037	2.31
4038	1.685	1.484	1.610	2.037	3.28
4053	0.875	0.943	0.900	2.037	1.83
4061	0.902	0.951	0.921	2.037	1.88
4062	0.902	0.951	0.921	2.037	1.88
4112	0.336	0.300	0.322	2.037	0.66
4113	0.875	0.943	0.900	2.037	1.83
4114	1.123	0.951	1.059	2.037	2.16
4130	1.690	1.659	1.679	2.037	3.42
4133	0.897	0.800	0.861	2.037	1.75
4150	0.345	0.308	0.331	2.037	0.68
4239	1.267	1.261	1.265	2.037	2.58
4243	1.874	1.670	1.798	2.037	3.66
4244	1.239	1.312	1.266	2.037	2.58
4250	1.038	1.251	1.118	2.037	2.28
4251	1.258	0.946	1.141	2.037	2.32
4273	1.034	1.042	1.037	2.037	2.11
4279	1.007	1.058	1.026	2.037	2.09
4282	0.381	0.379	0.380	2.037	0.77
4283	1.015	0.921	0.980	2.037	2.00
4299	0.937	0.950	0.942	2.037	1.92
4301	2.794	2.408	2.650	2.037	5.40
4304	2.158	2.997	2.471	2.037	5.03
4307	0.844	0.898	0.864	2.037	1.76
4308	1.647	0.399	1.181	2.037	2.41
4350	0.313	0.251	0.290	2.037	0.59
4351	0.436	0.373	0.412	2.037	0.84
4352	1.006	0.672	0.881	2.037	1.80
4360	0.421	0.396	0.411	2.037	0.84

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## Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (6)	Proposed Average Uncapped Rate (7)
	Indemnity (2)	Medical (4)	Total (5)		
4361	4.370	4.752	4.525	0.168	0.76
4362	0.352	0.334	0.345	1.832	0.63
4410	1.476	1.212	1.377	2.037	2.81
4417	2.338	1.938	2.188	2.037	4.46
4432	0.518	0.528	0.522	2.037	1.06
4439	1.734	1.803	1.760	2.037	3.58
4452	1.759	1.589	1.695	2.037	3.45
4459	1.351	1.426	1.379	2.037	2.81
4470	0.990	0.860	0.942	2.037	1.92
4484	1.076	1.022	1.056	2.037	2.15
4493	1.251	1.299	1.269	2.037	2.58
4511	0.158	0.161	0.159	1.832	0.29
4512	0.062	0.076	0.068	1.832	0.12
4557	0.997	0.941	0.976	2.037	1.99
4558	0.665	0.705	0.680	2.037	1.39
4561	1.734	1.803	1.760	2.037	3.58
4583	1.985	1.485	1.798	2.037	3.66
4611	0.368	0.321	0.350	2.037	0.71
4635	2.316	2.533	2.397	2.037	4.88
4653	1.059	0.938	1.014	2.037	2.06
4665	3.224	3.130	3.189	2.037	6.50
4692	0.350	0.245	0.311	2.037	0.63
4693	0.472	0.454	0.465	2.037	0.95
4720	0.898	0.999	0.936	2.037	1.91
4740	0.601	0.541	0.579	2.037	1.18
4741	1.193	0.834	1.059	2.037	2.16
4771	4.904	1.285	3.553	2.037	7.24
4777	1.985	1.485	1.798	2.037	3.66
4825	0.335	0.355	0.342	2.037	0.70
4828	0.520	0.430	0.486	2.037	0.99
4829	0.520	0.430	0.486	2.037	0.99
4902	0.850	0.949	0.887	2.037	1.81
4923	0.421	0.396	0.411	2.037	0.84
5020	0.983	0.716	0.894	5.475	4.89
5022	1.831	1.675	1.779	5.475	9.74
5037	4.518	3.443	4.158	5.475	22.76
5040	11.923	8.675	10.836	5.475	59.33
5057	4.894	4.560	4.782	5.475	26.18
5059	3.252	3.107	3.203	5.475	17.54
5069	3.252	3.107	3.203	5.475	17.54
5102	1.209	0.953	1.123	5.475	6.15
5146	1.332	1.420	1.361	5.475	7.45

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## Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (6)	Proposed Average Uncapped Rate (7)
	Indemnity (2)	Medical (4)	Total (5)		
5160	0.627	0.463	0.572	5.475	3.13
5183	0.658	0.582	0.633	5.475	3.46
5188	1.010	0.850	0.957	5.475	5.24
5190	0.470	0.497	0.479	5.475	2.62
5191	0.525	0.520	0.523	1.832	0.96
5192	1.758	1.614	1.703	1.832	3.12
5213	2.919	2.669	2.835	5.475	15.52
5215	1.043	1.022	1.036	5.475	5.67
5221	1.250	1.224	1.242	5.475	6.80
5222	2.116	1.927	2.053	5.475	11.24
5223	0.784	0.798	0.788	5.475	4.32
5348	1.022	0.749	0.931	5.475	5.10
5402	1.363	1.656	1.461	5.475	8.00
5403	2.129	1.795	2.017	5.475	11.04
5437	0.999	1.040	1.013	5.475	5.54
5443	0.724	0.746	0.731	5.475	4.00
5445	1.388	1.022	1.265	5.475	6.93
5462	1.530	1.178	1.412	5.475	7.73
5472	1.818	1.466	1.700	5.475	9.31
5473	1.828	1.985	1.880	5.475	10.29
5474	1.009	1.095	1.038	5.475	5.68
5478	1.184	0.914	1.094	5.475	5.99
5479	1.507	1.881	1.632	5.475	8.94
5480	0.906	0.743	0.851	5.475	4.66
5506	1.260	1.251	1.257	5.475	6.88
5507	1.327	1.553	1.402	5.475	7.68
5508	1.283	1.024	1.197	5.475	6.55
5509	0.666	0.713	0.681	5.475	3.73
5538	0.781	0.767	0.776	5.475	4.25
5545	6.412	7.659	6.829	5.475	37.39
5547	2.265	2.893	2.475	5.475	13.55
5606	0.334	0.362	0.343	5.475	1.88
5610	1.507	1.163	1.392	5.475	7.62
5645	1.384	1.694	1.488	5.475	8.15
5651	1.384	1.694	1.488	5.475	8.15
5701	3.913	6.138	4.657	5.475	25.50
5703	2.843	2.213	2.632	5.475	14.41
5705	2.529	2.364	2.473	5.475	13.54
6003	2.085	1.588	1.919	5.475	10.51
6005	1.283	1.024	1.197	5.475	6.55
6204	1.368	1.101	1.279	5.475	7.00
6217	0.815	0.863	0.831	5.475	4.55



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## Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (6)	Proposed Average Uncapped Rate (7)
	Indemnity (2)	Medical (4)	Total (5)		
6229	0.841	0.829	0.837	5.475	4.58
6233	0.876	0.574	0.775	5.475	4.24
6251	1.410	0.676	1.165	5.475	6.38
6252	1.904	1.876	1.894	5.475	10.37
6306	1.933	1.710	1.859	5.475	10.18
6319	0.774	0.917	0.822	5.475	4.50
6325	0.870	0.893	0.878	5.475	4.81
6400	1.096	1.108	1.100	5.475	6.02
6504	1.551	1.443	1.511	2.037	3.08
6834	0.487	0.533	0.503	5.139	2.59
6836	0.782	0.946	0.840	5.139	4.32
7219	2.085	1.793	1.981	5.139	10.18
7230	2.084	1.992	2.051	5.139	10.54
7231	2.104	1.830	2.006	5.139	10.31
7360	1.105	1.184	1.133	5.139	5.82
7370	0.751	0.870	0.794	5.139	4.08
7380	1.256	1.189	1.232	5.139	6.33
7382	0.701	0.849	0.754	5.139	3.87
7403	0.934	1.302	1.065	5.139	5.48
7405	0.299	0.316	0.305	5.139	1.57
7420	2.083	0.880	1.655	5.139	8.50
7421	0.378	0.248	0.332	5.139	1.71
7422	0.378	0.248	0.332	5.139	1.71
7425	0.669	0.306	0.540	5.139	2.77
7431	0.378	0.248	0.332	5.139	1.71
7502	0.443	0.435	0.440	5.139	2.26
7515	0.334	0.633	0.441	5.139	2.26
7520	0.652	0.618	0.640	5.139	3.29
7538	1.173	0.957	1.100	5.475	6.02
7539	0.274	0.234	0.260	5.139	1.34
7580	0.627	0.779	0.681	5.139	3.50
7590	0.766	0.708	0.746	5.139	3.83
7600	0.869	0.689	0.805	5.139	4.14
7601	0.946	1.068	0.987	5.475	5.40
7610	3.118	2.182	2.737	0.168	0.46
7704	0.854	1.070	0.931	5.139	4.79
7720	0.344	0.353	0.347	5.139	1.79
7855	1.016	0.818	0.950	5.475	5.20
8001	0.954	1.224	1.058	1.832	1.94
8002	0.815	0.969	0.874	1.832	1.60
8006	0.786	0.866	0.817	1.832	1.50
8008	0.468	0.447	0.460	1.832	0.84

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## Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (6)	Proposed Average Uncapped Rate (7)
	Indemnity (2)	Medical (4)	Total (5)		
8010	0.796	0.836	0.811	1.832	1.49
8013	0.225	0.252	0.235	1.832	0.43
8017	0.583	0.651	0.610	1.832	1.12
8018	1.805	1.587	1.721	1.832	3.15
8021	1.698	1.677	1.690	1.832	3.10
8031	1.283	1.077	1.203	1.832	2.21
8032	0.912	0.835	0.882	1.832	1.62
8033	1.019	1.230	1.101	1.832	2.02
8034	1.942	1.632	1.822	1.832	3.34
8039	0.613	0.772	0.674	1.832	1.24
8044	1.985	2.702	2.262	1.832	4.15
8046	1.090	1.262	1.157	1.832	2.12
8048	1.666	1.350	1.543	1.832	2.83
8050	0.816	0.858	0.832	1.832	1.52
8058	1.240	1.636	1.394	1.832	2.55
8103	1.608	1.421	1.536	1.832	2.81
8105	4.312	3.459	3.982	1.832	7.30
8106	3.520	3.685	3.584	1.832	6.57
8107	1.491	1.495	1.493	1.832	2.73
8111	1.542	1.458	1.509	1.832	2.77
8116	1.491	1.495	1.493	1.832	2.73
8203	3.537	3.813	3.644	1.832	6.68
8204	2.145	1.963	2.074	1.832	3.80
8215	2.330	2.573	2.424	1.832	4.44
8227	0.884	1.091	0.953	5.475	5.22
8232	3.701	3.866	3.765	1.832	6.90
8233	3.439	3.607	3.504	1.832	6.42
8235	2.471	2.466	2.469	1.832	4.52
8263	2.347	2.769	2.510	1.832	4.60
8264	3.449	3.021	3.283	1.832	6.02
8265	3.439	3.607	3.504	1.832	6.42
8279	2.833	3.672	3.157	1.832	5.79
8291	2.407	2.313	2.371	1.832	4.34
8292	1.628	1.369	1.527	1.832	2.80
8293	5.300	5.539	5.393	1.832	9.88
8350	3.336	3.125	3.254	1.832	5.96
8380	1.785	1.713	1.757	1.832	3.22
8381	0.985	1.303	1.108	1.832	2.03
8385	1.569	1.440	1.519	1.832	2.78
8392	0.914	0.878	0.900	1.832	1.65
8393	1.340	1.107	1.250	1.832	2.29
8500	3.439	3.607	3.504	1.832	6.42

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## Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (6)	Proposed Average Uncapped Rate (7)
	Indemnity (2)	Medical (4)	Total (5)		
8601	1.591	1.658	1.618	0.168	0.27
8710	3.528	2.978	3.315	1.832	6.07
8719	3.528	2.978	3.315	1.832	6.07
8720	0.544	0.462	0.512	1.832	0.94
8721	2.028	4.562	3.057	0.168	0.51
8742	0.960	0.973	0.965	0.168	0.16
8745	3.291	4.066	3.591	1.832	6.58
8747	0.567	0.503	0.542	1.832	0.99
8748	3.951	3.752	3.870	0.168	0.65
8800	7.843	7.137	7.557	0.168	1.27
8803	0.221	0.241	0.229	0.168	0.04
8810	0.423	0.451	0.434	0.168	0.07
8820	0.562	0.507	0.540	0.168	0.09
8829	1.245	1.081	1.182	1.832	2.17
8831	0.426	0.755	0.554	1.832	1.01
8832	2.102	1.735	1.953	0.168	0.33
8833	8.329	7.032	7.802	0.168	1.31
8835	1.261	1.000	1.160	1.832	2.13
8868	4.872	5.386	5.081	0.168	0.85
8901	0.423	0.451	0.434	0.168	0.07
9014	1.746	1.487	1.646	1.832	3.02
9015	1.944	1.607	1.813	1.832	3.32
9016	0.982	1.725	1.270	1.832	2.33
9019	0.583	0.357	0.502	5.139	2.58
9033	2.103	1.783	1.979	1.832	3.63
9040	1.749	1.719	1.738	1.832	3.18
9052	1.030	1.022	1.027	1.832	1.88
9058	0.845	0.873	0.856	1.832	1.57
9060	0.496	0.635	0.550	1.832	1.01
9061	0.509	0.571	0.533	1.832	0.98
9063	0.401	0.533	0.452	1.832	0.83
9079	0.567	0.713	0.623	1.832	1.14
9089	0.566	0.685	0.612	1.832	1.12
9093	0.563	0.912	0.698	1.832	1.28
9101	1.527	1.862	1.657	1.832	3.04
9102	0.496	0.617	0.539	5.139	2.77
9154	0.375	0.492	0.417	5.139	2.14
9156	8.591	10.657	9.430	0.168	1.58
9178	1.565	4.750	2.700	5.139	13.88
9179	5.518	5.440	5.490	5.139	28.21
9180	0.648	1.164	0.832	5.139	4.27
9182	0.526	1.005	0.697	5.139	3.58

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## Calculation of Average Uncapped Rates All Industry Groups

Class (1)	Balanced Formula Relativity			Uncapped Rate Level Factor (6)	Proposed Average Uncapped Rate (7)
	Indemnity (2)	Medical (4)	Total (5)		
9186	0.648	1.164	0.832	5.139	4.27
9220	1.857	1.736	1.810	1.832	3.32
9402	0.996	0.930	0.973	5.139	5.00
9403	2.074	1.831	1.987	5.139	10.21
9410	1.350	1.929	1.574	1.832	2.88
9501	1.142	1.287	1.196	2.037	2.44
9505	1.142	1.287	1.196	2.037	2.44
9519	2.184	2.157	2.173	1.832	3.98
9521	1.818	1.550	1.718	2.037	3.50
9522	0.954	0.846	0.914	2.037	1.86
9533	3.143	2.610	2.965	5.475	16.23
9534	1.338	1.525	1.400	5.475	7.67
9545	0.784	0.784	0.784	5.475	4.29
9549	0.925	0.866	0.906	5.475	4.96
9552	1.375	1.239	1.330	5.475	7.28
9553	1.375	1.239	1.330	5.475	7.28
9586	0.221	0.190	0.209	1.832	0.38
9620	0.404	0.434	0.415	1.832	0.76

Notes:

(2), (3), (4), (5): Section IX - G.

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

(7) = (5) x (6)

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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)
0005	2.72	2.55	2.56
0008	2.56	2.53	2.54
0016	4.03	4.52	4.54
0034	4.01	4.51	4.53
0035	2.17	2.40	2.41
0036	4.01	4.51	4.53
0037	2.56	2.53	2.54
0042	4.30	4.28	4.30
0046	2.67	1.96	2.32
0050	6.25	6.55	6.57
0079	2.71	4.10	3.16
0083	5.31	4.12	4.61
0106	16.54	13.59	14.33
0113	4.01	4.51	4.53
0170	4.01	4.51	4.53
0251	3.62	3.29	3.32
0908	88.68	89.67	90.06
0909	154.93	165.97	166.70
0912	309.86	331.94	333.39
0913	177.36	179.33	180.12
0917	2.93	3.60	3.42
0918	0.68	0.61	0.61
1430	10.72	5.38	9.15
1438	3.15	3.31	3.39
1463	8.66	9.24	9.45
1624	5.59	4.83	4.87
1655	5.73	4.18	4.96
1701	4.43	3.24	3.78
1710	5.59	4.83	4.87
1747	3.71	2.97	3.17
1748	3.01	3.28	3.36
1852	6.90	5.96	6.10
1853	1.62	1.63	1.67
1860	2.41	2.00	2.06
1924	2.40	2.01	2.05
1925	3.99	7.42	4.61
2001	3.39	3.52	3.60
2002	3.41	2.58	2.91
2003	3.39	3.52	3.60
2014	3.49	3.58	3.66
2021	3.03	2.85	2.92
2039	2.56	3.24	2.96
2041	2.34	2.74	2.71
2070	3.90	4.18	4.28
2081	3.58	4.30	4.13
2089	2.30	3.08	2.65
2095	3.88	3.54	3.62
2101	2.30	3.08	2.65

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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)
2111	2.42	2.22	2.27
2114	2.30	3.08	2.65
2115	3.50	4.36	4.04
2121	1.97	1.47	1.68
2130	2.46	1.91	2.10
2131	2.16	2.40	2.46
2143	2.82	1.89	2.41
2150	5.45	5.19	5.31
2156	7.21	5.52	6.16
2157	5.23	4.13	4.46
2172	1.89	2.25	2.19
2174	4.15	3.44	3.55
2211	5.79	7.18	6.68
2220	3.26	2.85	2.92
2260	6.16	7.08	7.10
2286	3.26	2.85	2.92
2288	2.45	3.38	2.83
2302	3.26	2.85	2.92
2305	2.28	3.66	2.63
2362	2.17	1.61	1.85
2380	2.64	2.47	2.53
2402	2.80	2.21	2.39
2413	3.25	3.62	3.71
2416	2.97	2.60	2.66
2417	3.31	3.67	3.75
2501	2.17	2.09	2.13
2503	1.01	1.13	1.15
2534	2.17	2.09	2.13
2570	4.50	6.38	5.19
2576	2.95	1.91	2.52
2578	2.95	1.91	2.52
2585	3.19	3.32	3.40
2586	1.56	1.69	1.73
2587	2.85	4.45	3.33
2623	3.96	5.00	4.57
2640	2.24	1.69	1.91
2651	2.24	1.69	1.91
2660	1.90	1.78	1.82
2683	1.96	1.70	1.74
2688	2.54	2.46	2.51
2702	16.67	16.20	16.34
2710	6.76	7.08	7.24
2731	4.28	3.47	3.66
2741	5.52	6.71	6.38
2747	7.07	5.68	6.04
2790	2.06	1.76	1.80
2802	4.12	4.55	4.65
2835	2.04	1.94	1.99

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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)
2836	2.93	2.08	2.50
2841	3.60	3.81	3.90
2883	3.34	3.17	3.25
2923	1.81	1.58	1.62
2942	2.06	1.81	1.85
3018	3.17	3.50	3.58
3022	3.58	3.56	3.64
3027	4.35	4.82	4.92
3028	3.96	2.79	3.38
3030	7.58	6.21	6.48
3040	7.36	5.71	6.29
3041	4.45	4.87	4.98
3042	5.31	6.28	6.12
3064	2.74	2.92	2.99
3066	2.74	2.92	2.99
3076	2.43	2.37	2.42
3081	7.52	4.93	6.42
3082	7.52	4.93	6.42
3085	4.49	4.52	4.62
3110	7.66	8.44	8.63
3111	2.35	2.20	2.25
3113	2.00	1.37	1.71
3114	3.30	2.43	2.82
3118	2.00	1.66	1.71
3119	0.94	0.84	0.86
3120	1.78	1.51	1.55
3122	2.38	1.75	2.04
3127	0.82	1.09	0.94
3131	1.95	1.52	1.67
3132	3.10	3.47	3.54
3145	1.77	1.61	1.64
3146	1.93	1.81	1.85
3169	3.96	2.90	3.38
3179	1.55	1.17	1.32
3180	2.64	2.72	2.78
3188	3.13	1.64	2.67
3200	2.91	2.36	2.49
3220	2.30	3.49	2.66
3227	3.96	2.90	3.38
3241	2.40	2.01	2.05
3255	3.17	2.58	2.71
3257	2.80	2.66	2.72
3270	2.30	2.10	2.15
3300	6.50	4.02	5.55
3315	3.04	3.69	3.50
3336	3.30	4.18	3.81
3365	9.10	7.02	7.81
3372	2.29	2.45	2.51

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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)
3373	4.05	3.64	3.72
3381	3.09	2.62	2.68
3383	1.28	1.46	1.48
3385	0.79	0.78	0.80
3400	3.96	2.90	3.38
3507	3.08	2.85	2.91
3515	2.66	2.66	2.72
3548	1.78	1.69	1.73
3558	0.72	0.98	0.83
3559	1.78	1.69	1.73
3571	1.14	0.93	0.97
3574	1.78	1.69	1.73
3612	1.80	1.95	1.99
3620	5.84	5.51	5.63
3629	1.78	1.69	1.73
3632	1.78	1.69	1.73
3634	1.74	1.66	1.70
3635	3.57	2.88	3.05
3638	1.78	1.69	1.73
3642	1.08	1.10	1.13
3643	1.55	1.63	1.67
3647	2.58	1.90	2.20
3648	1.61	1.37	1.40
3681	0.75	0.84	0.86
3685	0.75	0.66	0.67
3724	5.15	5.01	5.02
3726	14.51	8.24	12.45
3807	3.96	2.90	3.38
3808	3.53	3.00	3.07
3821	4.64	4.21	4.23
3826	2.80	5.10	3.24
3830	1.78	1.69	1.73
3841	1.67	1.35	1.43
4000	4.62	4.48	4.52
4021	4.00	3.97	4.06
4024	2.90	3.00	3.07
4034	5.40	6.68	6.24
4036	2.63	2.31	2.36
4038	2.23	3.28	2.58
4053	1.89	1.83	1.88
4061	2.77	1.88	2.37
4062	2.77	1.88	2.37
4112	0.64	0.66	0.67
4113	1.89	1.83	1.88
4114	2.46	2.16	2.21
4130	4.67	3.42	3.99
4133	1.85	1.75	1.79
4150	0.94	0.68	0.80



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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)
4239	3.16	2.58	2.70
4243	3.21	3.66	3.71
4244	3.54	2.58	3.03
4250	1.97	2.28	2.28
4251	1.81	2.32	2.09
4273	2.87	2.11	2.45
4279	3.38	2.09	2.89
4282	0.83	0.77	0.79
4283	2.74	2.00	2.34
4299	2.00	1.92	1.96
4301	4.80	5.40	5.52
4304	3.64	5.03	4.20
4307	1.49	1.76	1.72
4308	1.10	2.41	1.27
4350	0.59	0.59	0.60
4351	1.01	0.84	0.86
4352	1.04	1.80	1.20
4360	1.21	0.84	1.04
4361	0.55	0.76	0.65
4362	0.66	0.63	0.63
4410	4.22	2.81	3.61
4417	4.91	4.46	4.56
4432	1.18	1.06	1.09
4439	2.83	3.58	3.27
4452	3.27	3.45	3.53
4459	2.84	2.81	2.87
4470	2.67	1.92	2.28
4484	2.28	2.15	2.20
4493	3.08	2.58	2.64
4511	0.33	0.29	0.29
4512	0.14	0.12	0.12
4557	1.71	1.99	1.98
4558	1.64	1.39	1.42
4561	2.83	3.58	3.27
4583	3.05	3.66	3.53
4611	1.47	0.71	1.26
4635	3.49	4.88	4.03
4653	2.92	2.06	2.49
4665	7.95	6.50	6.79
4692	0.61	0.63	0.65
4693	0.92	0.95	0.97
4720	1.77	1.91	1.95
4740	1.16	1.18	1.21
4741	3.11	2.16	2.65
4771	10.63	7.24	9.08
4777	3.05	3.66	3.53
4825	0.70	0.70	0.71
4828	1.19	0.99	1.01

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Section IX - Classification Pricing  
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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)
4829	1.19	0.99	1.01
4902	2.06	1.81	1.85
4923	1.21	0.84	1.04
5020	5.88	4.89	5.04
5022	9.93	9.74	9.77
5037	22.12	22.76	22.83
5040	56.23	59.33	59.49
5057	31.04	26.18	26.64
5059	31.04	17.54	26.64
5069	31.04	17.54	26.64
5102	6.48	6.15	6.17
5146	5.55	7.45	6.43
5160	3.96	3.13	3.40
5183	3.30	3.46	3.47
5188	4.30	5.24	4.98
5190	2.78	2.62	2.63
5191	1.09	0.96	0.96
5192	3.80	3.12	3.30
5213	17.74	15.52	15.57
5215	5.02	5.67	5.69
5221	6.49	6.80	6.82
5222	9.05	11.24	10.48
5223	5.02	4.32	4.33
5348	6.01	5.10	5.16
5402	10.81	8.00	9.28
5403	10.00	11.04	11.08
5437	4.92	5.54	5.56
5443	4.96	4.00	4.25
5445	7.53	6.93	6.95
5462	9.01	7.73	7.75
5472	9.10	9.31	9.33
5473	11.86	10.29	10.32
5474	5.29	5.68	5.70
5478	4.86	5.99	5.63
5479	8.09	8.94	8.96
5480	4.87	4.66	4.67
5506	7.18	6.88	6.90
5507	7.33	7.68	7.70
5508	6.25	6.55	6.57
5509	3.23	3.73	3.74
5538	5.38	4.25	4.61
5545	32.22	37.39	37.31
5547	16.06	13.55	13.78
5606	1.69	1.88	1.88
5610	5.64	7.62	6.53
5645	8.17	8.15	8.17
5651	8.17	8.15	8.17
5701	22.41	25.50	25.57

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Section IX - Classification Pricing  
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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)
5703	25.13	14.41	21.57
5705	10.49	13.54	12.15
6003	12.15	10.51	10.53
6005	6.25	6.55	6.57
6204	9.14	7.00	7.84
6217	4.52	4.55	4.56
6229	4.52	4.58	4.59
6233	3.97	4.24	4.26
6251	6.12	6.38	6.39
6252	8.14	10.37	9.42
6306	7.91	10.18	9.16
6319	4.72	4.50	4.51
6325	4.55	4.81	4.82
6400	6.63	6.02	6.04
6504	2.30	3.08	2.65
6834	2.86	2.59	2.61
6836	2.80	4.32	3.26
7219	9.52	10.18	10.27
7230	7.18	10.54	8.37
7231	7.28	10.31	8.49
7360	6.30	5.82	5.87
7370	4.92	4.08	4.26
7380	6.46	6.33	6.39
7382	4.18	3.87	3.91
7403	5.16	5.48	5.52
7405	1.42	1.57	1.58
7420	6.75	8.50	7.87
7421	2.16	1.71	1.87
7422	2.16	1.71	1.87
7425	3.70	2.77	3.20
7431	2.16	1.71	1.87
7502	3.60	2.26	3.12
7515	2.43	2.26	2.28
7520	3.62	3.29	3.32
7538	5.60	6.02	6.04
7539	1.36	1.34	1.35
7580	2.84	3.50	3.31
7590	5.96	3.83	5.16
7600	3.71	4.14	4.17
7601	5.60	5.40	5.42
7610	0.21	0.46	0.25
7704	2.08	4.79	2.42
7720	1.98	1.79	1.80
7855	5.80	5.20	5.21
8001	1.68	1.94	1.95
8002	2.14	1.60	1.85
8006	1.64	1.50	1.50
8008	0.73	0.84	0.85

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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)
8010	1.55	1.49	1.49
8013	0.46	0.43	0.43
8017	1.17	1.12	1.12
8018	3.04	3.15	3.17
8021	2.94	3.10	3.11
8031	2.57	2.21	2.23
8032	1.59	1.62	1.62
8033	2.02	2.02	2.03
8034	3.92	3.34	3.40
8039	1.52	1.24	1.32
8044	3.69	4.15	4.16
8046	2.48	2.12	2.15
8048	3.07	2.83	2.84
8050	1.64	1.52	1.53
8058	2.70	2.55	2.56
8103	3.11	2.81	2.83
8105	4.67	7.30	5.45
8106	7.28	6.57	6.60
8107	3.74	2.73	3.25
8111	3.14	2.77	2.78
8116	3.74	2.73	3.25
8203	5.89	6.68	6.71
8204	5.12	3.80	4.44
8215	3.38	4.44	3.95
8227	4.09	5.22	4.73
8232	4.97	6.90	5.81
8233	8.26	6.42	7.17
8235	4.37	4.52	4.54
8263	6.56	4.60	5.69
8264	5.37	6.02	6.04
8265	8.26	6.42	7.17
8279	5.02	5.79	5.81
8291	4.64	4.34	4.36
8292	3.63	2.80	3.15
8293	9.52	9.88	9.92
8350	6.12	5.96	5.99
8380	2.82	3.22	3.23
8381	1.93	2.03	2.04
8385	3.12	2.78	2.80
8392	1.42	1.65	1.66
8393	1.99	2.29	2.30
8500	8.26	6.42	7.17
8601	0.30	0.27	0.29
8710	2.51	6.07	2.93
8719	2.51	6.07	2.93
8720	0.95	0.94	0.94
8721	0.19	0.51	0.23
8742	0.17	0.16	0.17

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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)
8745	3.77	6.58	4.41
8747	1.08	0.99	1.00
8748	0.51	0.65	0.61
8800	0.87	1.27	1.02
8803	0.05	0.04	0.04
8810	0.09	0.07	0.08
8820	0.10	0.09	0.10
8829	2.17	2.17	2.17
8831	1.15	1.01	1.02
8832	0.25	0.33	0.29
8833	1.23	1.31	1.39
8835	2.05	2.13	2.13
8868	0.70	0.85	0.83
8901	0.09	0.07	0.08
9014	2.69	3.02	3.03
9015	3.13	3.32	3.34
9016	1.81	2.33	2.12
9019	3.41	2.58	2.96
9033	4.39	3.63	3.81
9040	2.77	3.18	3.20
9052	1.65	1.88	1.89
9058	1.65	1.57	1.58
9060	1.06	1.01	1.01
9061	1.01	0.98	0.98
9063	0.75	0.83	0.83
9079	1.21	1.14	1.15
9089	1.27	1.12	1.13
9093	1.23	1.28	1.28
9101	3.49	3.04	3.05
9102	2.58	2.77	2.79
9154	1.38	2.14	1.61
9156	1.26	1.58	1.48
9178	16.66	13.88	14.43
9179	26.56	28.21	28.46
9180	4.58	4.27	4.31
9182	3.89	3.58	3.61
9186	4.58	4.27	4.31
9220	3.44	3.32	3.33
9402	5.66	5.00	5.04
9403	8.94	10.21	10.30
9410	2.23	2.88	2.61
9501	2.79	2.44	2.49
9505	2.79	2.44	2.49
9519	2.90	3.98	3.39
9521	4.03	3.50	3.58
9522	1.75	1.86	1.90
9533	19.68	16.23	16.89
9534	5.83	7.67	6.75

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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)
9545	4.26	4.29	4.30
9549	4.82	4.96	4.97
9552	8.29	7.28	7.30
9553	8.29	7.28	7.30
9586	0.45	0.38	0.39
9620	0.75	0.76	0.76

Notes:

(2) = (4) from Section IX - J, Exhibit 1 of the 04/01/2014 stipulation.

(3): Section IX - I.

(4): Total Balanced Formula Relativity (from Section IX - I, Exhibit 1) x Capped Rate Level Factors and subject to maximum and minimum caps (from Section IX - H, Exhibit 1.)

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Section IX - Classification Pricing  
Subsection J - Average Rates and Proposed Premium Change  
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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	582,618,204	583,457,005	0.1%	0.1%	2.083
Construction	1,320,439,426	1,329,253,670	0.7%	0.7%	5.490
Office & Clerical	542,268,759	561,566,784	3.6%	3.6%	0.178
Goods & Services	1,361,372,778	1,387,935,585	2.0%	2.0%	1.840
Miscellaneous	611,611,300	622,383,817	1.8%	1.8%	5.185
All Groups	4,418,310,467	4,484,596,861	1.5%		

### 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  
7/1/2016

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 =	1.052	The offset for ARAP
(3)	Factor 3 =	0.958	For eligible classes, the offset for the Construction Classification Premium Adjustment Program
(4)	Factor 4 =	-0.0023	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)
2009	66	Non Rated	71,575	40%	17,991,492	2%	17,988,955	1.000	
		Merit Rated	75,350	42%	137,175,356	17%	134,507,139	0.981	
		Intrastate Rated	17,688	10%	378,026,433	47%	381,381,275	1.009	
		Interstate Rated	15,089	8%	271,300,652	34%	257,971,634	0.951	
		Total	179,702	100%	804,493,933	100%	791,849,003	0.984	
2010	54	Non Rated	76,846	41%	19,446,994	2%	19,441,191	1.000	
		Merit Rated	76,109	41%	139,291,657	16%	136,541,823	0.980	
		Intrastate Rated	18,079	10%	403,355,955	46%	408,500,269	1.013	
		Interstate Rated	15,448	8%	311,569,823	36%	296,442,403	0.951	
		Total	186,482	100%	873,664,429	100%	860,925,686	0.985	
2011	42	Non Rated	78,315	41%	18,887,061	2%	18,885,489	1.000	
		Merit Rated	75,684	40%	139,468,376	15%	136,698,750	0.980	
		Intrastate Rated	18,303	10%	406,164,423	44%	423,307,077	1.042	
		Interstate Rated	17,202	9%	353,821,066	39%	340,122,693	0.961	
		Total	189,504	100%	918,340,926	100%	919,014,009	1.001	
2012	30	Non Rated	85,000	43%	20,260,853	2%	20,258,951	1.000	
		Merit Rated	76,967	39%	142,965,257	15%	140,003,067	0.979	
		Intrastate Rated	18,682	9%	415,356,867	44%	428,725,097	1.032	
		Interstate Rated	18,050	9%	369,639,050	39%	351,054,379	0.950	
		Total	198,699	100%	948,222,027	100%	940,041,494	0.991	
2013	18	Non Rated	88,278	43%	21,030,844	2%	21,028,896	1.000	
		Merit Rated	78,843	38%	147,246,492	15%	144,124,831	0.979	
		Intrastate Rated	19,669	10%	434,345,928	43%	446,472,083	1.028	
		Interstate Rated	19,023	9%	402,570,604	40%	374,044,621	0.929	
		Total	205,813	100%	1,005,193,868	100%	985,670,431	0.981	
Total		Non Rated	400,014	42%	97,617,244	2%	97,603,482	1.000	1.000
		Merit Rated	382,953	40%	706,147,138	16%	691,875,610	0.980	0.980
		Intrastate Rated	92,421	10%	2,037,249,606	45%	2,088,385,801	1.025	1.000
		Interstate Rated	84,812	9%	1,708,901,195	38%	1,619,635,730	0.948	1.000
		Total	960,200	100%	4,549,915,183	100%	4,497,500,623	0.988	0.997

Notes:

Unit Statistical Plan data, excluding Large Deductibles and SIGs.

Non Rated, Merit Rated and Intrastate Rated categories are estimated based on manual premium.

(10): Set to 1.000 for Non Rated, Intrastate Rated and Interstate Rated. Total of (10) calculated as weighted average of (10) using (6).

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Section IX - Classification Pricing  
 Subsection K - Adjustments to Derive Final Manual Rates  
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Section IX - K  
 Exhibit 3

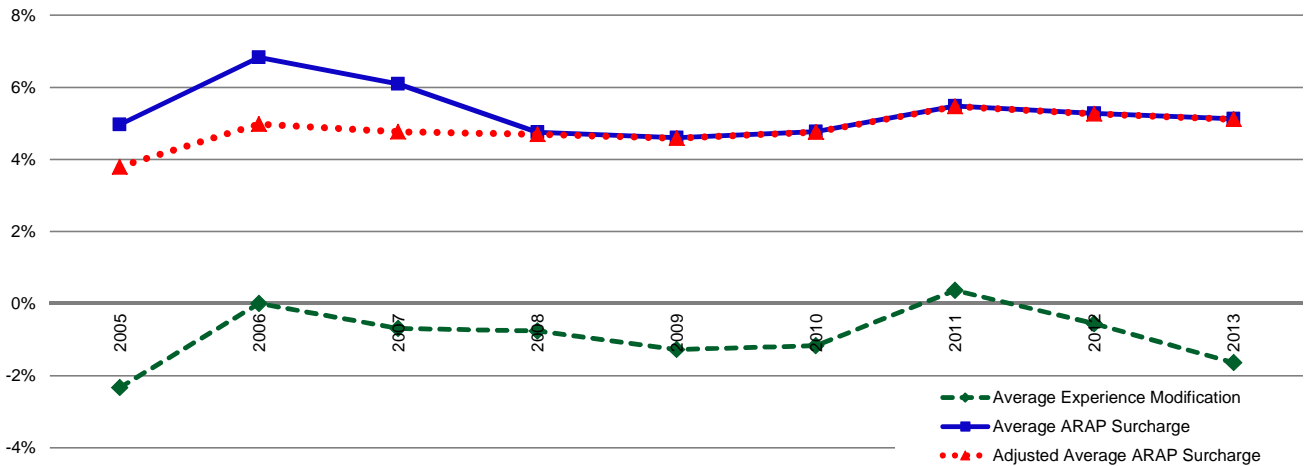
## Offset for ARAP Estimate of Average ARAP Surcharge for Prospective Effective Period

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)
2005	1,026,437,295	1,002,528,513	49,807,902	38,486,929	5.0%	-2.3%	3.8%
2006	1,031,565,700	1,031,637,783	70,457,323	52,270,936	6.8%	0.0%	5.0%
2007	996,554,922	989,659,602	60,294,905	47,767,939	6.1%	-0.7%	4.8%
2008	831,849,797	825,540,573	39,209,431	38,814,926	4.7%	-0.8%	4.7%
2009	802,103,348	791,849,003	36,429,335	36,350,690	4.6%	-1.3%	4.6%
2010	871,101,143	860,925,686	41,071,742	40,984,794	4.8%	-1.2%	4.8%
2011	915,618,912	919,014,009	50,389,563	50,280,063	5.5%	0.4%	5.5%
2012	945,333,717	940,041,494	49,592,635	49,475,432	5.3%	-0.6%	5.3%
2013	1,002,110,960	985,670,431	50,489,295	50,386,566	5.1%	-1.6%	5.1%

Regression of Average ARAP Surcharge on Average Experience Modification

(9) R-Squared	0.595
(10) Slope	0.451
(11) Intercept	0.052
(12) Projected Average ARAP Surcharge = (11)	0.052



Notes:

- (2)-(4): Unit Statistical Plan data, excluding Large Deductibles and SIGs. ARAP adjusted from company level to DSR level.
- (5): (4) adjusted to maximum ARAP surcharge factor of 1.25.

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Section IX - Classification Pricing  
Subsection K - Adjustments to Derive Final Manual Rates  
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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)
2012	300,940,336	17,613,478	4.3%
2013	327,001,432	18,576,392	4.2%
(5) Selected Average Credit for Eligible Class Codes in Prospective Effective Period			4.2%

Note:

(2),(3): Unit Statistical Plan data, excluding Large Deductibles and SIGs.

(4):  $[(3) / (2)] \times$  ratio of the average proposed structure credit to the existing structure credit.

# IX 000301 STIP

Section IX - Classification Pricing  
Subsection K - Adjustments to Derive Final Manual Rates  
7/1/2016

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 4/1/15 and ending 6/30/16, absent Insolvency loads	1,596,575,394
(2)	Unanticipated Insolvency Assessment Recoupment Rate (As a % of premium absent insolvency loads)	0.19%
(3)	Unanticipated Insolvency Assessment Recoupments	3,033,493
(4)	Interest Adjustment Factor	1.013
(5)	Adjusted Unanticipated Insolvency Assessment Recoupments	3,072,322

### Net Assessments

(6)	Amount Sufficient to Recoup Assessment	0
(7)	Net Assessments	(3,072,322)

### Loading for Recoupment

(8)	Estimated Written Premium in the Prospective Effective Period, absent insolvency loads	1,324,629,519
(9)	Indicated Loading for Recoupment of Insolvency Fund Assessments	<b>-0.23%</b>

#### Notes:

- (1): consistent with Page 2.
- (2): loading for insolvency fund in 04/01/2014 effective rates.
- (3) = (1) x (2)
- (4): 1.1% 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 Assessments in 2014 or 2015.
- (7) = (6) - (5)
- (8): Page 2.
- (9) = (7) / [ (7) + (8) ]

# IX 000302 STIP

Section IX - Classification Pricing  
Subsection K - Adjustments to Derive Final Manual Rates  
7/1/2016

Section IX - K  
Exhibit 5  
Page 2

## Expected Workers' Compensation Written Premium in Prospective Effective Period

(1)	2014 Calendar Year Written Premium, absent insolvency loads	1,224,684,265
(2)	Estimated Exposure Growth Factor from Calendar Year 2014 to Policy Period ending 6/30/16	1.039
(3)	Rate Change from Calendar Year 2014 Written to the Policy Period ending 6/30/16	0.0%
(4)	Estimated Written Premium for the Policy Period ending 6/30/16, absent Insolvency Loads = (1) x (2) x [ 1.0 + (3) ]	1,272,286,799
(5)	Estimated Exposure Growth Factor from the Policy Period ending 6/30/16 to the Prospective Effective Period	1.026
(6)	Average Indicated Rate Change	1.5%
(7)	Estimated Written Premium in Prospective Effective Period, absent insolvency loads = (4) x (5) x [ 1.0 + (6) ]	1,324,629,519

### Notes:

- (1): Adjusted to remove any loading for recoupment of insolvency fund assessments.
- (2): Assumes a 2.6% (from Section V-H, Exhibit 3).
- (3): The 4/1/14 rate change was 0.0%.
- (5): Assumes a 2.6% annual change (from Section V-H, Exhibit 3) compounded for 1 year.
- (6): Section I-A, Exhibit 1.

# IX 000303 STIP

Section IX - Classification Pricing  
 Subsection L - Pricing Example  
 7/1/2016

Section IX - L  
 Exhibit 1  
 Page 1

## Pricing Example for Class 2660 Boot Or Shoe Mfg Noc

Calculation of MA Indicated Relativity:

(A). Limited Losses (Unit Statistical Plan data, excluding Large Deductibles)									
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
		Indemnity	2009	0	0	0	0	0	
2010	0		0	0	0	0	0	62	0
2011	0		0	0	0	55,116	0	0	0
2012	0		0	0	0	7,424	0	2,636	0
2013	0		0	0	0	0	0	1,519	0
Medical	2009	0	0	0	0	0	0	0	2,183
	2010	0	0	0	0	0	0	2,712	4,851
	2011	0	0	0	0	64,187	0	0	2,537
	2012	0	0	0	0	2,766	0	1,349	1,153
	2013	0	0	0	0	0	0	7,015	0

(B). Primary Conversion Factors (Section IX - B, Exhibit 1, Page 1)									
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
		Indemnity	2009	0.969	0.972	0.968	0.989	0.992	
2010	1.015		1.013	1.013	1.036	1.034	0.999	0.996	0.000
2011	1.068		1.052	1.065	1.085	1.069	1.052	1.037	0.000
2012	1.276		1.200	1.270	1.289	1.211	1.259	1.184	0.000
2013	1.835		1.562	1.825	1.847	1.573	1.811	1.542	0.000
Medical	2009	0.910	0.960	0.910	0.910	0.960	0.910	0.960	0.745
	2010	0.944	1.007	0.944	0.944	1.007	0.944	1.007	0.760
	2011	0.949	0.985	0.949	0.949	0.985	0.949	0.985	0.807
	2012	0.994	0.968	0.994	0.994	0.968	0.994	0.968	0.863
	2013	1.101	0.989	1.101	1.101	0.989	1.101	0.989	0.904

(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	2009	0	0	0	0	0	
2010	0		0	0	0	0	0	62	0
2011	0		0	0	0	58,914	0	0	0
2012	0		0	0	0	8,990	0	3,120	0
2013	0		0	0	0	0	0	2,342	0
Medical	2009	0	0	0	0	0	0	0	1,625
	2010	0	0	0	0	0	0	2,731	3,686
	2011	0	0	0	0	63,212	0	0	2,048
	2012	0	0	0	0	2,678	0	1,306	995
	2013	0	0	0	0	0	0	6,937	0

# IX 000304 STIP

Section IX - Classification Pricing  
 Subsection L - Pricing Example  
 7/1/2016

Section IX - L  
 Exhibit 1  
 Page 2

## Pricing Example for Class 2660 Boot Or Shoe Mfg Noc

Calculation of MA Indicated Relativity:

		(D). Unadjusted Excess Losses [ (Excess Factor -1.0) x (C) ]							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2009	0	0	0	0	0	0	0	0
	2010	0	0	0	0	0	0	8	0
	2011	0	0	0	0	7,356	0	0	0
	2012	0	0	0	0	1,122	0	390	0
	2013	0	0	0	0	0	0	292	0
Medical	2009	0	0	0	0	0	0	0	203
	2010	0	0	0	0	0	0	341	460
	2011	0	0	0	0	7,893	0	0	256
	2012	0	0	0	0	334	0	163	124
	2013	0	0	0	0	0	0	866	0

		(E). Adjusted Excess Losses							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2009	0	0	0	0	0	0	0	0
	2010	0	0	0	0	0	0	5	0
	2011	0	0	0	0	5,149	0	0	0
	2012	0	0	0	0	786	0	273	0
	2013	0	0	0	0	0	0	205	0
Medical	2009	0	0	0	0	0	0	0	203
	2010	0	0	0	0	0	0	343	460
	2011	0	0	0	0	10,099	0	0	256
	2012	0	0	0	0	671	0	280	124
	2013	0	0	0	0	0	0	954	0

(F). Secondary Conversion Factors					
	Fatal	Permanent	Permanent Partial	Temporary Total	Medical
Indemnity	1.043	1.000	1.224	1.232	0.000
Medical	1.200	0.999	1.223	1.231	1.200

		(G). Converted Unlimited Losses							
	Policy Year	Fatal		Permanent Total	Permanent Partial		Temporary Total		Medical Only
		LD	NLD		LD	NLD	LD	NLD	
Indemnity	2009	0	0	0	0	0	0	0	0
	2010	0	0	0	0	0	0	83	0
	2011	0	0	0	0	78,439	0	0	0
	2012	0	0	0	0	11,969	0	4,178	0
	2013	0	0	0	0	0	0	3,137	0
Medical	2009	0	0	0	0	0	0	0	2,194
	2010	0	0	0	0	0	0	3,783	4,975
	2011	0	0	0	0	89,693	0	0	2,765
	2012	0	0	0	0	4,098	0	1,952	1,343
	2013	0	0	0	0	0	0	9,711	0

(H). Total						
Policy Year	Exposure	Indemnity			Medical	
		LD	NLD	LD	NLD	
2009	33,512	0	0	0	0	2,194
2010	38,376	0	83	0	0	8,759
2011	43,694	0	78,439	0	0	92,458
2012	48,173	0	16,147	0	0	7,393
2013	44,048	0	3,137	0	0	9,711
<b>Total</b>	<b>207,803</b>	<b>0</b>	<b>97,805</b>	<b>0</b>	<b>0</b>	<b>120,515</b>

	Indemnity	Medical
(I). Indicated Pure Premium	0.471	0.580
(J). Manufacturing Industry Group Pure Premium	1.080	0.644
(K). MA Indicated Relativity	0.436	0.901

Notes:

(E): Indemnity Adjusted Excess Losses = Indemnity Unadjusted Excess Losses x 0.7

Medical Adjusted Excess Losses = Medical Unadjusted Excess Losses + 0.3 x Indemnity Unadjusted Excess Losses

(F): Section IX-B, Exhibit 1, Page 3.

(G) = [ (C) + (E) ] x (F)

(I) = Total Losses / Total Exposure

(J): Industry Group Pure Premium from Section IX - C, Exhibit 1, Page 2.

(K) = (I) / (J)

# IX 000305 STIP

## 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	1,544	0	23,440	0	1	4,723,750
Arkansas	3	5,111	36,564	25,811	249,095	1	14	40,894,282
Colorado	5	0	0	0	1,104	0	0	2,168,734
Connecticut	6	0	0	0	0	0	0	76,924
D.C.	8	0	0	0	0	0	0	0
Florida	9	0	29,015	0	52,015	0	5	3,971,082
Georgia	10	0	34,400	0	47,101	0	2	1,489,359
Idaho	11	0	0	0	0	0	0	1,030,943
Illinois	12	255,381	175,871	196,029	146,669	14	11	15,504,804
Indiana	13	0	0	0	4,885	0	0	2,667,118
Iowa	14	0	0	0	0	0	0	535,553
Kansas	15	0	0	0	0	0	0	0
Kentucky	16	0	2,459	0	21,703	0	3	5,746,854
Louisiana	17	0	0	0	0	0	0	0
Maine	18	71,757	394,447	60,052	1,290,701	2	37	106,182,553
Maryland	19	0	0	0	0	0	0	28,756
Minnesota	22	0	2,849	0	22,698	0	1	4,758,447
Mississippi	23	0	0	0	0	0	0	0
Missouri	24	215,784	390,322	313,659	760,094	10	55	68,532,223
Montana	25	0	13,889	0	80,711	0	2	565,333
Nebraska	26	0	0	0	0	0	0	897,406
Nevada	27	0	0	0	0	0	0	105,728
New Hampshire	28	0	25,017	0	27,520	0	5	1,344,989
New Mexico	30	0	0	0	0	0	0	132,093
North Carolina	32	0	160,818	0	100,694	0	10	10,226,668
Oklahoma	35	0	0	0	0	0	0	0
Oregon	36	0	204,486	0	300,987	0	15	34,365,706
Rhode Island	38	0	0	0	0	0	0	59,526
South Carolina	39	0	0	0	1,445	0	0	5,858,310
South Dakota	40	0	0	0	0	0	0	0
Tennessee	41	0	95,353	0	296,184	0	16	15,397,304
Utah	43	0	0	0	988	0	0	281,679
Vermont	44	0	0	0	0	0	0	14,695
Virginia	45	0	3,424	0	14,136	0	1	8,801,783
West Virginia	47	0	0	0	0	0	0	0
Hawaii	52	0	0	0	0	0	0	1,746,370
Alaska	54	0	0	0	0	0	0	0
<b>Total</b>		<b>548,033</b>	<b>1,570,458</b>	<b>595,551</b>	<b>3,442,170</b>	<b>27</b>	<b>178</b>	<b>338,108,972</b>

Note:

(3) - (9): Data are total for latest three policy years. See Section IX-D, Exhibit 3.



# IX 000306 STIP

Section IX - Classification Pricing  
 Subsection L - Pricing Example  
 7/1/2016

Section IX - L  
 Exhibit 2  
 Page 2

Pricing Example for Class 2660  
 Boot Or Shoe Mfg Noc

Calculation of Countrywide Relativity

State (1)	State Code (2)	Manufacturing Pitch Factors		Pure Premiums, on MA Level		Total (7)
		Indemnity (3)	Medical (4)	Indemnity (5)	Medical (6)	
Alabama	1	2.211	0.443	0.000	0.000	
Arizona	2	3.091	0.540	0.101	0.268	
Arkansas	3	3.500	0.790	0.357	0.531	
Colorado	5	1.376	0.500	0.000	0.025	
Connecticut	6	0.639	0.292	0.000	0.000	
D.C.	8	0.465	0.345	0.000	0.000	
Florida	9	1.879	0.462	1.373	0.605	
Georgia	10	1.411	0.747	3.260	2.362	
Idaho	11	1.635	0.383	0.000	0.000	
Illinois	12	0.790	0.375	2.197	0.829	
Indiana	13	3.694	0.705	0.000	0.129	
Iowa	14	0.988	0.316	0.000	0.000	
Kansas	15	1.422	0.424	0.000	0.000	
Kentucky	16	2.521	0.791	0.108	0.299	
Louisiana	17	1.371	0.465	0.000	0.000	
Maine	18	1.099	0.531	0.482	0.675	
Maryland	19	1.279	0.595	0.000	0.000	
Minnesota	22	1.252	0.559	0.075	0.267	
Mississippi	23	1.451	0.521	0.000	0.000	
Missouri	24	1.391	0.465	1.230	0.729	
Montana	25	0.526	0.203	1.292	2.897	
Nebraska	26	1.704	0.473	0.000	0.000	
Nevada	27	1.045	0.171	0.000	0.000	
New Hampshire	28	1.580	0.267	2.938	0.547	
New Mexico	30	1.644	0.511	0.000	0.000	
North Carolina	32	1.236	0.671	1.944	0.661	
Oklahoma	35	0.878	0.383	0.000	0.000	
Oregon	36	1.614	0.631	0.960	0.553	
Rhode Island	38	0.487	0.544	0.000	0.000	
South Carolina	39	1.060	0.673	0.000	0.017	
South Dakota	40	3.125	0.522	0.000	0.000	
Tennessee	41	1.646	0.469	1.020	0.903	
Utah	43	4.652	0.733	0.000	0.257	
Vermont	44	1.105	0.455	0.000	0.000	
Virginia	45	3.033	0.651	0.118	0.105	
West Virginia	47	1.348	0.579	0.000	0.000	
Hawaii	52	1.224	0.500	0.000	0.000	
Alaska	54	1.098	0.218	0.000	0.000	
(8)	Average of (5), (6) weighted by Payroll from Page 1, respectively			0.799	0.621	1.420
(9)	CW Manufacturing Pure Premium			0.965	0.558	1.523
(10)	CW Relativity = (8) / (9)			0.828	1.112	0.932
(11)	CW Relativity, balanced to unity			0.816	1.094	

**Notes:**

(3), (4) = (MA Total Unlimited Losses) / [(State Pure Premium) x (MA Total Exposure)] for Industry Code 1. See Section IX - D, Exhibit 2.

(5) = 100 x [ State Indemnity Losses / State Payroll ] x (3), where State Indemnity Losses and State Payroll from page 1.

(6) = 100 x [ State Medical Losses / State Payroll ] x (4), where State Medical Losses and State Payroll from page 1.

(9) = (8) weighted by MA five year Manufacturing Exposure

(11): Relativities balanced to unity (weighted by MA exposure) over Manufacturing Industry Group.

# IX 000307 STIP

Section IX - Classification Pricing  
 Subsection L - Pricing Example  
 7/1/2016

Section IX - L  
 Exhibit 3

## Pricing Example for Class 2660 Boot Or Shoe Mfg Noc

Calculation of Credibility and Balanced Formula Relativity:

- (1) MA Indicated Relativity
- (2) Countrywide Indicated Relativity
- (3) Relativity to Underlying Present Rate

Injury Type	
Indemnity	Medical
0.436	0.901
0.816	1.094
0.899	1.020

Calculation of MA Credibility:

The MA Credibilities are calculated using the formula  $Z=(E / F)^{0.4}$  where E are expected losses for that injury type.

- (4) Adopted Relativity
- (5) Industry Group Pure Premium Underlying Present Rate Factor
- (6) Pure Premium Underlying Present Rate  
 = (4) x (5)
- (7) Expected Losses  
 = (6) x [(Total Exposure from Exhibit 1)]
- (8) Full Credibility Standards
- (9) MA Credibility  
 = Minimum of {100%, [(7) / (8)]<sup>0.4</sup>}

Injury Type	
Indemnity	Medical
0.885	1.005
0.901	0.609
0.798	0.612
165,754	127,163
27,200,000	6,400,000
13%	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)]<sup>0.4</sup>, 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
205	205
1,150	1,000
44%	40%
43%	39%
0.802	1.025
1.014	1.007

- (16) Balanced Formula Relativity

Injury Type		
Indemnity	Medical	Total
0.791	1.018	0.876

Notes:

- (1): Exhibit 1, Page 2.
- (2): Exhibit 2, Page 2.
- (3): Relativity of (6) to Industry Group average, using 5 year Schedule Z exposure as weights.
- (4): Section IX-F, Exhibit 1.
- (5): Section IX-E, Exhibit 1.
- (8), (11): Section IX-D, Exhibit 1, Page 1.
- (10): Exhibit 2, Page 1.
- (15): Factor to balance Formula relativities across industry group to unity using 5 year Schedule Z exposure by injury type.
- (16) = (14) / (15) , Total Balanced Formula Relativity is the weighted average of Partial Relativities using the MA Industry Group Pure Premium as weights.

# IX 000308 STIP

Section IX - Classification Pricing  
Subsection L - Pricing Example  
7/1/2016

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	0.876
(2) Capped Rate Level Factor	2.083
(3) Proposed Average Capped Rate = (1) x (2)	1.82
(4) Offset for Merit Rating	0.997
(5) Offset for ARAP	1.052
(6) Offset for Construction Classification Premium Adjustment Program	1.000
(7) Provision for Insolvency Fund Assessment Recoupment	-0.0023
(8) Proposed Manual Rate = {(3) / [(4) x (5) x (6)]} x {1.000 / [1.000 - (7)]}	1.73
(9) Minimum Premium	220
(10) Loss Constant	0
(11) Expected Loss Rate	0.86
(12) D-Ratio	0.18

### 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 7/1/2014 to 6/30/2015	A	0.642	0.024	1.009	0.963	1.488	1.042	1.018	0.409
	B	0.642	0.062	1.009	0.963	1.517	1.051	1.014	0.383
	C	0.642	0.082	1.009	0.963	1.536	1.057	1.013	0.369
	D	0.642	0.118	1.009	0.963	1.537	1.055	1.014	0.354
	E	0.642	0.229	1.009	0.963	1.560	1.055	0.992	0.312
	F	0.642	0.224	1.009	0.963	1.554	1.055	1.001	0.313
	G	0.642	0.348	1.009	0.963	1.547	1.045	0.967	0.276
2nd Report 7/1/2013 to 6/30/2014	A	0.642	0.029	1.014	0.945	1.177	1.042	1.018	0.522
	B	0.642	0.073	1.014	0.945	1.200	1.051	1.014	0.486
	C	0.642	0.097	1.014	0.945	1.214	1.057	1.013	0.465
	D	0.642	0.139	1.014	0.945	1.215	1.055	1.014	0.443
	E	0.642	0.270	1.014	0.945	1.234	1.055	0.992	0.379
	F	0.642	0.264	1.014	0.945	1.229	1.055	1.001	0.380
	G	0.642	0.410	1.014	0.945	1.223	1.045	0.967	0.320
3rd Report 7/1/2012 to 6/30/2013	A	0.642	0.030	1.016	0.927	1.061	1.042	1.018	0.588
	B	0.642	0.078	1.016	0.927	1.081	1.051	1.014	0.545
	C	0.642	0.103	1.016	0.927	1.094	1.057	1.013	0.522
	D	0.642	0.148	1.016	0.927	1.095	1.055	1.014	0.495
	E	0.642	0.287	1.016	0.927	1.112	1.055	0.992	0.418
	F	0.642	0.280	1.016	0.927	1.107	1.055	1.001	0.419
	G	0.642	0.435	1.016	0.927	1.102	1.045	0.967	0.345

1st - 3rd Report Average	A	0.506
	B	0.471
	C	0.452
	D	0.431
	E	0.369
	F	0.371
	G	0.314

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. Net Trend applied from USR policy effective period to prospective effective period.
- (7): Exhibit 4, Page 1, (6).
- (8): Exhibit 5, Page 1, (7).
- (9): Exhibit 6, (7).
- (10) = { (3) x [ 1.0 - (4) ] } / [ (5) x (6) x (7) x (8) x (9) ]

X 000007 STIP

Loss Elimination Ratios for Losses in Excess of Experience Rating Caps  
 By Hazard Group

Hazard Group	Adjusted Total Losses	Adjusted Excess Losses	Implied Loss Elimination Ratio = (3) / (2)	Expected Losses	Expected Losses Wgtd LER	Balanced LER Differential	Selected LER Differential
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A	61,863,756	1,743,221	0.028	81,591,586	0.028	0.16	0.16
B	217,172,714	15,733,978	0.072	270,391,540	0.072	0.41	0.41
C	406,971,213	38,804,374	0.095	526,615,181	0.095	0.54	0.54
D	192,811,531	26,526,825	0.138	242,969,945	0.138	0.78	0.78
E	298,037,582	79,440,240	0.267	380,170,885	0.267	1.51	1.51
F	343,307,164	89,435,359	0.261	468,335,242	0.261	1.48	1.48
G	62,943,933	25,479,226	0.405	83,306,845	0.405	2.29	2.29
Total	1,583,107,893	277,163,221	0.175	2,053,381,226	0.177	1.00	1.00

Loss Elimination Ratio by Hazard Group

Hazard Group	First Report	Second Report	Third Report
(9)	(10)	(11)	(12)
A	0.024	0.029	0.030
B	0.062	0.073	0.078
C	0.082	0.097	0.103
D	0.118	0.139	0.148
E	0.229	0.270	0.287
F	0.224	0.264	0.280
G	0.348	0.410	0.435
Total	0.152	0.179	0.190

Notes:

- (2): Unit Statistical Plan losses, PYs 2011 - 2013. Adjusted by factors from Section X - B, Exhibit 1, Page 2.
- (3): Adjusted losses above per claim limit of \$210,000
- (5): PYs 2011 - 2013, exposure times pure premium underlying present rates.
- (6): Total = (6) Weighted by (5)
- (7) = (6) / [ Total for (6) ]
- (10) - (12) = [ Exhibit 3, (5) ] x (8)

Loss Elimination Ratio  
 Factor to Reflect the State Accident Limitation of \$210,000

Report (1)	Injury Type (2)	Adjusted Total Losses (3)	Adjusted Excess Losses (4)	Loss Elimination Ratio = (4) / (3) (5)
1st	Fatal	9,939,515	5,615,109	0.565
1st	Permanent Total	30,397,104	27,912,663	0.918
1st	Permanent Partial	166,836,780	22,737,350	0.136
1st	Temporary Total	227,529,047	13,884,844	0.061
1st	Medical Only	27,647,462	0	0.000
1st	Total	462,349,908	70,149,966	0.152
2nd	Fatal	8,809,141	5,498,021	0.624
2nd	Permanent Total	43,998,923	34,991,392	0.795
2nd	Permanent Partial	269,074,263	39,186,123	0.146
2nd	Temporary Total	190,632,417	16,770,141	0.088
2nd	Medical Only	26,233,228	0	0.000
2nd	Total	538,747,973	96,445,676	0.179
3rd	Fatal	8,426,195	3,987,195	0.473
3rd	Permanent Total	40,912,750	27,800,214	0.680
3rd	Permanent Partial	325,624,686	63,875,927	0.196
3rd	Temporary Total	180,172,775	14,904,243	0.083
3rd	Medical Only	26,873,607	0	0.000
3rd	Total	582,010,012	110,567,579	0.190

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 \$210,000

X 000009 STIP

# X 000010 STIP

Section X - Experience Rating  
 Subsection A - Expected Loss Rates  
 7/1/2016

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	17,426,123	0.966	0.966	1.488
1st to 10th	B	56,603,339	0.985	0.984	1.517
1st to 10th	C	111,613,561	0.997	0.997	1.536
1st to 10th	D	56,730,007	0.998	0.997	1.537
1st to 10th	E	90,658,710	1.013	1.012	1.560
1st to 10th	F	97,298,887	1.009	1.008	1.554
1st to 10th	G	11,359,742	1.004	1.004	1.547
1st to 10th	Total	441,690,369	1.000	1.000	1.541
2nd to 10th	A	19,623,646	0.966	0.966	1.177
2nd to 10th	B	71,952,945	0.985	0.985	1.200
2nd to 10th	C	128,865,777	0.997	0.997	1.214
2nd to 10th	D	57,185,022	0.998	0.998	1.215
2nd to 10th	E	86,155,193	1.013	1.013	1.234
2nd to 10th	F	121,836,531	1.009	1.009	1.229
2nd to 10th	G	29,646,812	1.004	1.004	1.223
2nd to 10th	Total	515,265,926	1.000	1.000	1.218
3rd to 10th	A	22,055,652	0.966	0.966	1.061
3rd to 10th	B	78,872,075	0.985	0.985	1.081
3rd to 10th	C	148,195,032	0.997	0.997	1.094
3rd to 10th	D	70,169,144	0.998	0.998	1.095
3rd to 10th	E	107,784,931	1.013	1.013	1.112
3rd to 10th	F	108,694,596	1.009	1.009	1.107
3rd to 10th	G	19,088,004	1.004	1.005	1.102
3rd to 10th	Total	554,859,434	1.000	1.000	1.097

**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	0.985	0.976	0.938	0.966	0.966
B	0.995	0.984	0.974	0.985	0.985
C	0.999	0.997	0.994	0.997	0.997
D	1.000	1.000	0.992	0.998	0.998
E	1.002	1.009	1.026	1.013	1.013
F	1.003	1.011	1.012	1.009	1.009
G	1.011	0.994	1.007	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	0.998	0.992	0.985	0.992	0.992
E	1.001	1.005	1.016	1.007	1.007
F	1.001	1.007	1.002	1.003	1.003
G	1.009	0.990	0.998	0.999	0.999

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)



Loss Development of Schedule Z to Tenth Report by Hazard Group

Policy Year 2013 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) (10)	Total Developed Losses =(3)+(5)+(7)+(9) (11)	Develop. Factor = (11) / (10) (12)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A	2,035,663	4,352,098	5,758,149	9,872,826	1,579,203	2,285,679	8,053,108	8,664,335	17,426,123	25,174,938	1.445
B	9,905,480	20,806,301	18,563,461	31,746,565	6,075,709	8,675,922	22,058,689	23,735,968	56,603,339	84,964,755	1.501
C	21,275,778	44,775,290	38,356,837	65,267,882	14,298,275	20,412,601	37,682,671	40,551,785	111,613,561	171,007,558	1.532
D	9,274,493	19,662,047	21,832,858	37,490,740	5,486,953	7,893,227	20,135,703	21,671,119	56,730,007	86,717,133	1.529
E	17,873,137	38,604,750	27,546,457	47,798,497	23,350,670	33,351,671	21,888,446	23,544,377	90,658,710	143,299,295	1.581
F	18,107,738	37,990,321	34,095,846	58,273,366	20,267,475	28,734,149	24,827,828	26,719,088	97,298,887	151,716,924	1.559
G	1,271,615	2,755,371	5,841,215	10,131,909	498,761	713,659	3,748,151	4,030,319	11,359,742	17,631,257	1.552
A, B, C, D, E, F, G	79,743,904	168,946,178	151,994,823	260,581,785	71,557,046	102,066,907	138,394,596	148,916,990	441,690,369	680,511,860	1.541
C, E, F, G	58,528,268	124,125,733	105,840,355	181,471,654	58,415,181	83,212,080	88,147,096	94,845,568	310,930,900	483,655,035	1.556

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, Pages 5 and 6.

X 000012 STIP

Loss Development of Schedule Z to Tenth Report by Hazard Group

Policy Year 2012 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	3,223,865	4,550,675	7,232,785	9,101,632	1,790,353	2,088,221	7,376,643	7,580,596	19,623,646	23,321,125	1.188
B	12,696,881	17,844,439	27,899,185	35,225,293	7,402,630	8,599,334	23,954,249	24,607,382	71,952,945	86,276,448	1.199
C	29,493,623	41,422,638	47,943,670	60,314,245	13,587,905	15,768,622	37,840,579	38,944,467	128,865,777	156,449,972	1.214
D	14,305,867	20,133,635	19,508,998	24,531,452	7,301,988	8,487,624	16,068,169	16,539,900	57,185,022	69,692,612	1.219
E	20,537,041	28,970,266	33,074,741	42,008,986	11,495,401	13,396,648	21,048,010	21,561,955	86,155,193	105,937,855	1.230
F	31,470,491	44,224,672	40,233,554	50,757,643	27,416,124	31,719,175	22,716,362	23,366,148	121,836,531	150,067,639	1.232
G	5,154,664	7,254,399	6,946,864	8,785,795	14,334,358	16,566,651	3,210,926	3,300,725	29,646,812	35,907,570	1.211
A, B, C, D, E, F, G	116,882,432	164,400,724	182,839,797	230,725,047	83,328,759	96,626,276	132,214,938	135,901,174	515,265,926	627,653,220	1.218
C, E, F, G	86,655,819	121,871,975	128,198,829	161,866,669	66,833,788	77,451,097	84,815,877	87,173,295	366,504,313	448,363,036	1.223

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, Pages 5 and 6.

X 000013 STIP

Loss Development of Schedule Z to Tenth Report by Hazard Group

Policy Year 2011 at 42 Months  
 Third Report to Tenth Report

Hazard Group	Indemnity Losses Likely To Develop		Indemnity Losses Not Likely To Develop		Medical Losses Likely To Develop		Medical Losses Not Likely To Develop		Total Losses		
	Reported Losses	Losses Developed to 10th Report	Reported Losses	Losses Developed to 10th Report	Reported Losses	Losses Developed to 10th Report	Reported Losses	Losses Developed to 10th Report	Total Reported Losses =(2)+(4)+(6)+(8)	Total Developed Losses =(3)+(5)+(7)+(9)	Develop. Factor = (11) / (10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A	3,801,826	4,477,358	7,919,334	8,802,451	2,405,659	2,574,188	7,928,833	7,987,072	22,055,652	23,841,068	1.081
B	18,364,717	21,632,678	28,426,351	31,615,276	9,350,812	10,005,821	22,730,195	22,894,860	78,872,075	86,148,636	1.092
C	38,587,496	45,456,193	53,628,949	59,591,138	16,809,833	17,987,288	39,168,754	39,491,522	148,195,032	162,526,141	1.097
D	17,383,555	20,483,293	25,696,085	28,602,719	10,119,502	10,825,299	16,970,002	17,107,692	70,169,144	77,019,003	1.098
E	28,171,635	33,192,021	33,457,429	37,271,694	26,175,918	28,007,780	19,979,949	20,090,139	107,784,931	118,561,634	1.100
F	25,445,509	29,975,233	45,862,705	51,015,227	14,822,080	15,854,138	22,564,302	22,749,057	108,694,596	119,593,655	1.100
G	5,642,137	6,646,735	8,026,847	8,945,778	2,063,302	2,207,908	3,355,718	3,372,645	19,088,004	21,173,067	1.109
A, B, C, D, E, F, G	137,396,875	161,863,511	203,017,700	225,844,283	81,747,106	87,462,422	132,697,753	133,692,986	554,859,434	608,863,203	1.097
C, E, F, G	97,846,777	115,270,182	140,975,930	156,823,838	59,871,133	64,057,115	85,068,723	85,703,363	383,762,563	421,854,497	1.099

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, Pages 5 and 6.

X 000014 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	13,380,131	27,776,909	6,948,088	24,232,002	1.042	1.042
B	60,283,417	98,587,134	27,281,077	71,238,210	1.051	1.051
C	131,654,121	185,173,265	54,168,511	118,987,774	1.057	1.057
D	60,278,975	90,624,911	27,206,150	55,318,712	1.055	1.055
E	100,767,038	127,079,176	74,756,100	65,196,471	1.055	1.055
F	112,190,226	160,046,236	76,307,462	72,834,293	1.055	1.055
G	16,656,504	27,863,482	19,488,218	10,703,689	1.045	1.045
TOTAL	495,210,413	717,151,115	286,155,606	418,511,150	1.054	1.054

Notes:

(2) - (5): Exhibit 4, Pages 3-5.

(6): Weighted Average of Development Factors from Page 2.

(Likely to Dev. Ind. 1.183, Not Likely to Dev. Ind.1.032, Likely to Dev. Med. 0.973, Not Likely to Dev. Med. 0.995)

(7): Factors are balanced to the total development factor from Page 2.

X 000015 STIP

# X 000016 STIP

Section X - Experience Rating  
 Subsection A - Expected Loss Rates  
 7/1/2016

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)
<b>Indemnity</b>					
2013	429,527,963	1.067	1.025	469,758,631	1.094
2012	395,125,770	1.067	1.025	432,134,243	1.094
2011	387,707,794	1.067	1.025	424,021,481	1.094
<b>Total</b>	<b>1,212,361,527</b>			<b>1,325,914,356</b>	<b>1.094</b>
<b>Medical</b>					
2013	250,983,897	0.986	1.000	247,557,393	0.986
2012	232,527,449	0.986	1.000	229,352,918	0.986
2011	221,155,409	0.986	1.000	218,136,132	0.986
<b>Total</b>	<b>704,666,756</b>			<b>695,046,443</b>	<b>0.986</b>
<b>Ind.+ Med.</b>					
2013	680,511,860			717,316,025	1.054
2012	627,653,220			661,487,162	1.054
2011	608,863,203			642,157,613	1.055
<b>Total</b>	<b>1,917,028,283</b>			<b>2,020,960,799</b>	<b>1.054</b>

(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	495,210,413	1.183	a. Likely to Develop	286,155,606	0.973
b. Not Likely to Develop	717,151,115	1.032	b. Not Likely to Develop	418,511,150	0.995
<b>c. Total</b>	<b>1,212,361,527</b>	<b>1.094</b>	<b>c. Total</b>	<b>704,666,756</b>	<b>0.986</b>

**Notes:**

(2): Page 4.

(3): Page 3.

(4): Page 11.

(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 000017 STIP

Section X - Experience Rating  
Subsection A - Expected Loss Rates  
7/1/2016

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) PY2013 Paid + Case Losses Developed to 10th report		
(a) Remainder of Industry	370,153,936	225,518,355
(b) AIG	59,374,027	25,465,543
(c) Total	429,527,963	250,983,898
(2) Development Factor based on Paid + Case 132 Months to Ult.		
(a) Remainder of Industry	1.045	1.054
(b) AIG	1.031	1.055
(c) Weighted Average	1.043	1.054
(3) Est. Ultimate Losses (Prior to Escalation Adj.) based on Paid + Case Develop. Method		
(a) PY2012	404,776,545	231,806,051
(b) PY2013	447,606,910	249,261,632
(c) Average	426,191,728	240,533,841
(4) Est. Ultimate Losses (Prior to Escalation Adj.) based on Paid Develop. Method		
(a) PY2012	425,417,338	208,023,641
(b) PY2013	465,682,378	211,381,562
(c) Average	445,549,858	209,702,602
(5) Ratio of Est. Ultimate Losses based on average of Paid and Paid + Case indications to Est. Ultimate Losses based on Paid + Case = { [ (3c) + (4c) ] / 2.000 } / (3c)	1.023	0.936
(6) Development Factor to bring Unit Statistical Plan Data 10th report to Aggregate Financial Ultimate Level = (2c) x (5)	1.067	0.986

## Notes:

- (1): Unit Statistical Plan Losses and LDFs from Pages 5 and 6.
- (2): 132 Months to 252 Months LDF from Section II-B, Exhibit 1, Pages 1 and 2.  
    x 252 Months to Ult LDF from Section II-C, Exhibit 2, Page 1.
- (3),(4): Section II-A, Exhibit 1.

Losses Developed to 10th Report

Policy Year (1)	Loss Development Category (2)	Paid + Case			
		Reported Schedule Z Losses		Losses Developed to 10th Report	
		Indemnity (3)	Medical (4)	Indemnity (5)	Medical (6)
2013	Likely	79,743,904	71,557,046	168,946,178	102,066,907
2013	Not Likely	151,994,823	138,394,596	260,581,785	148,916,990
2013	TOTALS	231,738,727	209,951,642	429,527,963	250,983,897
2012	Likely	116,882,432	83,328,759	164,400,724	96,626,276
2012	Not Likely	182,839,797	132,214,938	230,725,047	135,901,174
2012	TOTALS	299,722,229	215,543,697	395,125,770	232,527,449
2011	Likely	137,396,875	81,747,106	161,863,511	87,462,422
2011	Not Likely	203,017,700	132,697,753	225,844,283	133,692,986
2011	TOTALS	340,414,575	214,444,859	387,707,794	221,155,409

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, Pages 5 and 6.

# X 000019 STIP

Section X - Experience Rating  
 Subsection A - Expected Loss Rates  
 7/1/2016

Section X - A  
 Exhibit 5  
 Page 5

## Summary of Development Factors Remainder of 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
		<b>(1) Indemnity Paid + Case Losses</b>								
2Yr Weighted Average		1.480	1.190	1.094	1.035	1.011	1.017	1.002	1.011	0.999
Cumulative		2.073	1.401	1.177	1.076	1.040	1.029	1.012	1.010	0.999
		<b>(2) Medical Paid + Case Losses</b>								
2Yr Weighted Average		1.219	1.080	1.022	0.994	1.019	1.038	0.988	1.001	1.006
Cumulative		1.409	1.156	1.070	1.047	1.053	1.033	0.995	1.007	1.006
		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
		<b>(3) Indemnity Paid + Case Losses</b>								
2Yr Weighted Average		1.340	1.131	1.061	1.014	1.012	1.009	1.003	1.001	1.003
Cumulative		1.677	1.252	1.107	1.043	1.028	1.016	1.007	1.004	1.003
		<b>(4) Medical Paid + Case Losses</b>								
2Yr Weighted Average		1.043	1.018	1.005	0.999	1.001	1.001	1.006	1.000	1.002
Cumulative		1.077	1.033	1.014	1.009	1.010	1.009	1.008	1.002	1.002

Notes:  
 (1),(2): Page 7.  
 (3),(4): Page 9.



# X 000020 STIP

Section X - Experience Rating  
 Subsection A - Expected Loss Rates  
 7/1/2016

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 Exhibit 5  
 Page 6

## Summary of Development Factors AIG

		Likely to Develop								
		Development Factors From:								
		18-30	30-42	42-54	54-66	66-78	78-90	90-102	102-114	114-126
		<b>(1) Indemnity Paid + Case Losses</b>								
5Yr Weighted Average		1.682	1.227	1.097	1.035	1.020	0.999	1.010	1.002	1.009
Cumulative		2.438	1.449	1.181	1.077	1.040	1.020	1.020	1.011	1.009
		<b>(2) Medical Paid + Case Losses</b>								
5Yr Weighted Average		1.339	1.132	1.030	1.046	0.992	0.965	1.058	0.978	1.002
Cumulative		1.620	1.210	1.069	1.038	0.992	1.000	1.037	0.980	1.002
		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
		<b>(3) Indemnity Paid + Case Losses</b>								
5Yr Weighted Average		1.499	1.169	1.077	1.038	1.005	1.002	1.011	0.998	1.001
Cumulative		1.995	1.331	1.139	1.057	1.018	1.013	1.010	0.999	1.001
		<b>(4) Medical Paid + Case Losses</b>								
5Yr Weighted Average		1.081	1.016	1.009	0.991	0.991	0.997	0.993	0.998	0.997
Cumulative		1.070	0.991	0.975	0.967	0.976	0.985	0.988	0.995	0.997

Notes:  
 (1),(2): Page 8.  
 (3),(4): Page 10.

# X 000021 STIP

Section X - Experience Rating  
 Subsection A - Expected Loss Rates  
 7/1/2016

Section X - A  
 Exhibit 5  
 Page 7

## Calculation of Likely to Develop Development Factors Remainder of 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			Link Ratio
	2012	66,083,682	98,911,662	1.497		63,821,201	75,388,222	1.181		
	2011	56,158,224	81,994,802	1.460		40,731,403	52,064,931	1.278		
	Weighted Average			1.480				1.219		
	2011	85,986,609	101,060,061	1.175		53,996,547	58,581,096	1.085		
	2010	80,062,130	96,579,947	1.206		56,828,273	61,068,068	1.075		
	Weighted Average			1.190				1.080		
	2010	100,423,775	106,884,388	1.064		63,192,239	62,649,530	0.991		
	2009	94,072,186	105,817,481	1.125		52,216,244	55,348,655	1.060		
	Weighted Average			1.094				1.022		
	2009	110,781,786	113,847,099	1.028		56,627,207	56,155,925	0.992		
	2008	101,510,433	105,772,734	1.042		47,288,444	47,136,131	0.997		
	Weighted Average			1.035				0.994		
	2008	106,930,343	106,768,909	0.998		47,620,193	46,904,363	0.985		
	2007	100,633,840	103,132,470	1.025		55,842,890	58,571,449	1.049		
	Weighted Average			1.011				1.019		
	2007	109,098,798	110,556,643	1.013		59,827,544	63,596,824	1.063		
	2006	102,748,655	104,838,408	1.020		53,004,312	53,561,153	1.011		
	Weighted Average			1.017				1.038		
	2006	105,710,037	106,153,344	1.004		54,830,977	54,387,492	0.992		
	2005	97,708,574	97,719,047	1.000		52,069,780	51,260,120	0.984		
	Weighted Average			1.002				0.988		
	2005	97,719,047	98,575,003	1.009		51,260,120	51,905,660	1.013		
	2004	116,142,482	117,590,854	1.012		62,591,799	62,075,754	0.992		
	Weighted Average			1.011				1.001		
	2004	118,279,628	117,304,573	0.992		62,241,023	62,545,410	1.005		
	2003	114,378,450	115,095,429	1.006		59,134,088	59,500,601	1.006		
	Weighted Average			0.999				1.006		

Note:  
 Unit Statistical Plan Data, Excluding Large Deductible Policies.

# X 000022 STIP

Section X - Experience Rating  
 Subsection A - Expected Loss Rates  
 7/1/2016

Section X - A  
 Exhibit 5  
 Page 8

## Calculation of Likely to Develop Development Factors AIG

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	
2012	7,780,547	12,602,807	1.620	4,701,318	6,023,410	1.281
2011	14,703,036	23,437,482	1.594	11,079,616	15,999,454	1.444
2010	13,905,078	23,105,417	1.662	7,733,192	9,201,798	1.190
2009	10,299,002	19,573,964	1.901	8,016,511	12,370,999	1.543
2008	16,723,619	27,950,936	1.671	10,231,782	12,310,438	1.203
Weighted Average			1.682			1.339
	30	42		30	42	
2011	23,981,911	31,108,643	1.297	16,156,833	21,324,838	1.320
2010	23,570,653	30,857,293	1.309	9,235,111	10,076,019	1.091
2009	19,840,180	24,174,338	1.218	12,428,543	12,536,450	1.009
2008	29,042,726	33,937,333	1.169	12,378,904	13,810,001	1.116
2007	38,443,577	45,381,373	1.180	16,126,546	17,340,481	1.075
Weighted Average			1.227			1.132
	42	54		42	54	
2010	31,461,730	32,560,130	1.035	10,128,568	10,184,787	1.006
2009	24,903,177	26,563,238	1.067	12,828,935	12,728,009	0.992
2008	34,243,400	37,073,292	1.083	13,992,966	14,349,163	1.025
2007	46,816,243	52,806,238	1.128	17,518,329	17,625,433	1.006
2006	57,902,858	65,260,305	1.127	31,775,698	33,949,677	1.068
Weighted Average			1.097			1.030
	54	66		54	66	
2009	28,125,466	27,947,734	0.994	13,492,389	14,572,121	1.080
2008	38,280,253	39,574,493	1.034	14,818,151	14,481,027	0.977
2007	53,781,573	55,627,219	1.034	18,107,012	18,185,729	1.004
2006	65,593,571	67,460,124	1.028	33,401,845	33,594,571	1.006
2005	73,862,240	78,214,112	1.059	32,322,665	36,482,080	1.129
Weighted Average			1.035			1.046
	66	78		66	78	
2008	41,083,915	41,496,522	1.010	14,771,159	14,856,286	1.006
2007	56,620,596	57,962,086	1.024	18,551,879	18,707,337	1.008
2006	68,408,466	69,727,497	1.019	33,691,464	33,814,317	1.004
2005	77,071,584	77,594,191	1.007	36,224,197	34,997,684	0.966
2004	71,063,961	73,715,041	1.037	37,684,726	37,386,901	0.992
Weighted Average			1.020			0.992
	78	90		78	90	
2007	57,962,086	58,081,456	1.002	18,707,337	17,882,641	0.956
2006	71,451,291	71,089,422	0.995	35,055,303	34,871,857	0.995
2005	79,009,734	78,754,628	0.997	38,087,642	37,566,583	0.986
2004	73,514,923	73,945,057	1.006	37,414,850	35,448,011	0.947
2003	64,080,397	63,949,632	0.998	28,101,527	26,028,151	0.926
Weighted Average			0.999			0.965
	90	102		90	102	
2006	71,104,829	71,574,598	1.007	34,894,961	42,151,973	1.208
2005	79,558,167	80,568,925	1.013	38,070,562	38,897,879	1.022
2004	73,705,769	75,161,243	1.020	35,426,519	37,204,331	1.050
2003	63,671,888	63,509,066	0.997	25,936,014	23,728,677	0.915
2002	42,520,824	42,915,662	1.009	17,514,058	18,721,030	1.069
Weighted Average			1.010			1.058
	102	114		102	114	
2005	81,889,519	82,005,312	1.001	39,467,706	37,300,669	0.945
2004	77,999,342	78,512,434	1.007	38,293,202	38,019,290	0.993
2003	63,137,675	63,032,039	0.998	23,577,444	23,679,737	1.004
2002	42,751,729	43,047,874	1.007	18,803,315	18,047,859	0.960
2001	29,529,731	29,307,080	0.992	10,470,156	10,675,353	1.020
Weighted Average			1.002			0.978
	114	126		114	126	
2004	78,512,434	79,613,128	1.014	38,019,290	37,931,577	0.998
2003	63,613,511	63,738,773	1.002	23,863,252	24,036,357	1.007
2002	43,693,717	43,746,989	1.001	18,147,059	17,703,010	0.976
2001	27,737,646	27,877,488	1.005	10,273,199	10,876,309	1.059
2000	20,874,548	21,506,668	1.030	7,786,195	7,723,066	0.992
Weighted Average			1.009			1.002

Note:  
 Unit Statistical Plan Data, Excluding Large Deductible Policies.



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Section X - Experience Rating  
 Subsection A - Expected Loss Rates  
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Section X - A  
 Exhibit 5  
 Page 10

## Calculation of Not-Likely to Develop Development Factors AIG

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	
2012	15,631,934	23,550,450	1.507	13,839,617	14,828,127	1.071
2011	21,667,673	32,574,890	1.503	19,733,936	21,354,957	1.082
2010	24,337,100	38,360,821	1.576	22,387,324	24,116,954	1.077
2009	21,260,206	30,895,324	1.453	20,307,061	21,471,240	1.057
2008	29,530,441	43,096,320	1.459	26,431,763	29,215,231	1.105
Weighted Average			1.499			1.081
	30	42		30	42	
2011	32,030,461	37,317,607	1.165	21,197,578	21,641,303	1.021
2010	37,895,585	43,188,018	1.140	24,083,641	24,959,993	1.036
2009	30,629,108	37,286,323	1.217	21,413,696	21,760,619	1.016
2008	42,004,530	49,477,486	1.178	29,146,765	28,495,109	0.978
2007	39,413,551	45,494,234	1.154	30,118,573	31,099,714	1.033
Weighted Average			1.169			1.016
	42	54		42	54	
2010	42,583,581	44,676,497	1.049	24,907,444	24,886,270	0.999
2009	36,557,484	37,386,041	1.023	21,468,134	22,270,628	1.037
2008	49,171,419	52,451,238	1.067	28,312,144	27,840,699	0.983
2007	44,059,364	48,834,047	1.108	30,921,866	30,747,453	0.994
2006	42,618,878	48,264,706	1.132	30,218,570	31,265,676	1.035
Weighted Average			1.077			1.009
	54	66		54	66	
2009	35,823,813	36,624,843	1.022	21,506,248	20,881,570	0.971
2008	51,244,277	52,426,680	1.023	27,371,711	27,198,046	0.994
2007	47,858,712	50,145,467	1.048	30,265,874	30,062,012	0.993
2006	47,931,440	48,501,232	1.012	31,813,508	31,473,365	0.989
2005	51,285,433	55,445,972	1.081	36,199,827	36,173,492	0.999
Weighted Average			1.038			0.991
	66	78		66	78	
2008	50,917,258	51,260,330	1.007	26,907,914	26,862,882	0.998
2007	49,152,090	49,059,200	0.998	29,695,862	29,461,926	0.992
2006	47,552,890	47,704,170	1.003	31,376,472	30,968,073	0.987
2005	56,588,500	56,422,248	0.997	36,431,375	35,784,610	0.982
2004	47,647,590	48,695,980	1.022	30,222,549	30,093,416	0.996
Weighted Average			1.005			0.991
	78	90		78	90	
2007	49,059,200	49,046,109	1.000	29,461,926	29,331,886	0.996
2006	45,980,376	45,955,784	0.999	29,727,087	29,622,040	0.996
2005	55,006,705	54,591,423	0.992	32,694,652	32,966,640	1.008
2004	48,896,098	49,107,899	1.004	30,065,467	29,499,810	0.981
2003	36,006,876	36,755,127	1.021	21,390,941	21,514,014	1.006
Weighted Average			1.002			0.997
	90	102		90	102	
2006	45,940,377	46,126,493	1.004	29,598,936	29,342,802	0.991
2005	53,787,884	53,803,611	1.000	32,462,661	32,243,768	0.993
2004	49,347,187	50,065,661	1.015	29,521,302	29,722,208	1.007
2003	37,032,871	37,902,364	1.023	21,606,151	21,329,896	0.987
2002	32,011,222	32,664,678	1.020	17,834,803	17,428,871	0.977
Weighted Average			1.011			0.993
	102	114		102	114	
2005	52,483,017	52,425,207	0.999	31,673,941	31,739,957	1.002
2004	47,227,562	47,442,232	1.005	28,633,337	28,820,474	1.007
2003	38,273,755	37,703,446	0.985	21,481,129	21,564,692	1.004
2002	32,828,611	33,146,591	1.010	17,346,586	17,074,243	0.984
2001	22,215,947	21,913,185	0.986	10,574,849	10,332,466	0.977
Weighted Average			0.998			0.998
	114	126		114	126	
2004	47,442,232	47,628,451	1.004	28,820,474	28,702,755	0.996
2003	37,121,974	37,191,827	1.002	21,381,177	21,285,684	0.996
2002	32,500,748	32,240,915	0.992	16,975,043	17,069,364	1.006
2001	23,482,619	23,442,211	0.998	10,734,620	10,770,305	1.003
2000	21,258,325	21,520,779	1.012	8,858,206	8,658,611	0.977
Weighted Average			1.001			0.997

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	2013	1.008
	2012	1.008
	2011	1.008
Paid	2013	1.042
	2012	1.042
	2011	1.042
Average of Paid and Paid Plus Case	2013	1.025
	2012	1.025
	2011	1.025

Notes:

(3): Section II-D, Exhibit 1, Page 1 and Exhibit 2, Page 1.

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Section X - Experience Rating  
 Subsection A - Expected Loss Rates  
 7/1/2016

Section X - A  
 Exhibit 6

## Investment Income Offset

Hazard Code (1)	Injury Type (2)	Indemnity		Medical		Total Investment Income Offset (7)
		Developed Losses at Ultimate (3)	Investment Income Offset (4)	Developed Losses at Ultimate (5)	Investment Income Offset (6)	
A	Fatal	521,580	0.869	61,718	1.000	
A	Permanent Total	524,123	0.833	482,603	0.833	
A	Permanent Partial	20,990,264	1.020	8,930,153	1.020	
A	Temporary Total	22,458,499	1.026	14,653,093	1.025	
A	Medical Only	0		6,743,763	1.000	
A	TOTAL	44,494,466	1.019	30,871,332	1.015	1.018
B	Fatal	4,494,519	0.869	187,914	1.000	
B	Permanent Total	5,072,513	0.833	1,744,267	0.833	
B	Permanent Partial	90,012,246	1.020	34,379,450	1.020	
B	Temporary Total	73,477,927	1.026	43,079,535	1.025	
B	Medical Only	0		18,035,340	1.000	
B	TOTAL	173,057,205	1.013	97,426,507	1.015	1.014
C	Fatal	7,501,854	0.869	147,137	1.000	
C	Permanent Total	12,856,402	0.833	4,123,056	0.833	
C	Permanent Partial	178,135,104	1.020	61,183,961	1.020	
C	Temporary Total	148,352,274	1.026	78,097,054	1.025	
C	Medical Only	0		27,547,589	1.000	
C	TOTAL	346,845,635	1.013	171,098,796	1.015	1.013
D	Fatal	3,549,539	0.869	121,204	1.000	
D	Permanent Total	5,641,833	0.833	1,241,384	0.833	
D	Permanent Partial	93,898,409	1.020	38,450,621	1.020	
D	Temporary Total	61,745,154	1.026	33,131,235	1.025	
D	Medical Only	0		8,569,258	1.000	
D	TOTAL	164,834,935	1.013	81,513,702	1.017	1.014
E	Fatal	7,435,899	0.869	90,187	1.000	
E	Permanent Total	17,966,757	0.833	36,997,943	0.833	
E	Permanent Partial	131,561,522	1.020	49,230,326	1.020	
E	Temporary Total	93,388,937	1.026	40,674,468	1.025	
E	Medical Only	0		10,615,249	1.000	
E	TOTAL	250,353,116	1.005	137,608,173	0.970	0.992
F	Fatal	8,676,181	0.869	490,887	1.000	
F	Permanent Total	18,764,751	0.833	23,563,451	0.833	
F	Permanent Partial	166,932,166	1.020	67,419,812	1.020	
F	Temporary Total	103,515,655	1.026	47,961,503	1.025	
F	Medical Only	0		7,281,630	1.000	
F	TOTAL	297,888,753	1.006	146,717,283	0.990	1.001
G	Fatal	3,443,788	0.869	132,847	1.000	
G	Permanent Total	5,212,483	0.833	14,956,065	0.833	
G	Permanent Partial	24,526,086	1.020	6,435,152	1.020	
G	Temporary Total	15,277,403	1.026	7,206,192	1.025	
G	Medical Only	0		881,950	1.000	
G	TOTAL	48,459,759	0.991	29,612,206	0.926	0.967

**Notes:**

(3),(5): From Exhibit 4, Pages 3-5, Developed to Ultimate.

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

(7) = Average of (4) and (6) weighted by (3) and (5).

Calculation of Statewide Partial "D" Ratios by Benefit Type

Benefit Type (1)	Adjusted Primary Losses (2)	Adjusted Total Losses (3)	Partial D-Ratio = (2) / (3) (4)
Indemnity	86,748,129	779,900,245	0.111
Medical	145,060,931	526,044,427	0.276

Notes:

Data at the individual claim level for PYs 2011 - 2013 have been adjusted by the factors shown on Page 2. The Adjusted Primary Losses are capped at \$5,000 per claim. The Adjusted Total Losses are capped at \$210,000 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

2011	1.039	1.039	1.039	1.039	1.046	1.046	1.046	1.046	1.046
2012	1.039	1.039	1.039	1.039	1.046	1.046	1.046	1.046	1.046
2013	1.039	1.039	1.039	1.039	1.046	1.046	1.046	1.046	1.046

(2) State Benefit Level Adjustment Factors

2011	1.006	1.009	1.015	1.004	1.000	1.000	1.000	1.000	1.000
2012	1.004	1.004	1.008	1.003	1.000	1.000	1.000	1.000	1.000
2013	1.012	1.007	1.012	1.004	1.000	1.000	1.000	1.000	1.000

(3) Combined Severity Trend and State Benefit Level Adjustment Factors

2011	1.045	1.048	1.054	1.044	1.046	1.046	1.046	1.046	1.046
2012	1.043	1.044	1.047	1.042	1.046	1.046	1.046	1.046	1.046
2013	1.051	1.046	1.051	1.043	1.046	1.046	1.046	1.046	1.046

Notes:

(1): Exhibit 2.

(2): Section IV-A, Exhibit 1. PY 2011 to CPY 2012\_07. PY 2012 to CPY 2013\_07. PY 2013 to CPY 2014\_07.

(3) = (1) x (2)

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Severity Trend Factors

Schedule Z Policy Year (1)			Policy Effective Period (2)		
01/01/2013	-	12/31/2013	07/01/2014	-	06/30/2015
01/01/2012	-	12/31/2012	07/01/2013	-	06/30/2014
01/01/2011	-	12/31/2011	07/01/2012	-	06/30/2013

Avg Acc Date	Avg Acc Date
12/30/2012	06/30/2014

(3) Indemnity Severity Trend	2.6%
(4) Medical Severity Trend	3.1%
(5) Trend Period Length = Years between (1) and (2)	1.497
(6) Indemnity Trend Factor = [ 1.000 + (3) ] ^ (5)	1.039
(7) Medical Trend Factor = [ 1.000 + (4) ] ^ (5)	1.046

Notes:

(3),(4): Section V-A Exhibit 1.

Medical Severity Trend is a weighted average using Injury Type Weights at Ultimate from Section IV.

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	0.642	0.061	0.082	1.004	0.963	1.767	1.013	0.321
7/1/2014	E	0.642	0.061	0.229	1.004	0.963	1.779	0.992	0.273
to	F	0.642	0.061	0.224	1.004	0.963	1.776	1.001	0.273
6/30/2015	G	0.642	0.061	0.348	1.004	0.963	1.772	0.967	0.238
2nd Report	C	0.642	0.061	0.097	1.006	0.945	1.295	1.013	0.438
7/1/2013	E	0.642	0.061	0.270	1.006	0.945	1.299	0.992	0.360
to	F	0.642	0.061	0.264	1.006	0.945	1.298	1.001	0.360
6/30/2014	G	0.642	0.061	0.410	1.006	0.945	1.297	0.967	0.299
3rd Report	C	0.642	0.061	0.103	1.008	0.927	1.180	1.013	0.486
7/1/2012	E	0.642	0.061	0.287	1.008	0.927	1.183	0.992	0.393
to	F	0.642	0.061	0.280	1.008	0.927	1.182	1.001	0.394
6/30/2013	G	0.642	0.061	0.435	1.008	0.927	1.181	0.967	0.320
1st - 3rd Report Average	C E F G								0.415 0.342 0.342 0.286

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.
- (8): Exhibit 2.
- (10) =  $[(3) / \{ 1.0 + (4) \}] \times [ 1.0 - (5) ] / [ (6) \times (7) \times (8) \times (9) ]$

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# X 000031 STIP

Section X - Experience Rating  
 Subsection C - Expected Loss Rates for F-Class  
 7/1/2016

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	111,613,561	0.992	0.992	1.767
1st	E	90,658,710	1.007	1.007	1.779
1st	F	97,298,887	1.003	1.003	1.776
1st	G	11,359,742	0.999	0.999	1.772
1st	Total	310,930,900	1.000	1.000	1.773
2nd	C	128,865,777	0.992	0.992	1.295
2nd	E	86,155,193	1.007	1.007	1.299
2nd	F	121,836,531	1.003	1.004	1.298
2nd	G	29,646,812	0.999	0.999	1.297
2nd	Total	366,504,313	1.000	1.000	1.297
3rd	C	148,195,032	0.992	0.992	1.180
3rd	E	107,784,931	1.007	1.008	1.183
3rd	F	108,694,596	1.003	1.004	1.182
3rd	G	19,088,004	0.999	0.999	1.181
3rd	Total	383,762,563	1.000	1.000	1.181

**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	2.454	2.773	2.773	32.0%	11.5%	
1st	Indemnity	Not Likely to Develop	1.731	1.760	1.760	32.7%	18.6%	
1st	Medical	Likely to Develop	1.371	1.758	1.758	14.5%	8.3%	
1st	Medical	Not Likely to Develop	1.072	1.152	1.152	20.7%	18.0%	
1st	Total					100.0%	56.4%	1.773
2nd	Indemnity	Likely to Develop	1.658	1.521	1.521	32.0%	21.0%	
2nd	Indemnity	Not Likely to Develop	1.292	1.234	1.234	32.7%	26.5%	
2nd	Medical	Likely to Develop	1.124	1.435	1.435	14.5%	10.1%	
2nd	Medical	Not Likely to Develop	1.028	1.069	1.069	20.7%	19.4%	
2nd	Total					100.0%	77.1%	1.297
3rd	Indemnity	Likely to Develop	1.393	1.270	1.270	32.0%	25.2%	
3rd	Indemnity	Not Likely to Develop	1.142	1.119	1.119	32.7%	29.2%	
3rd	Medical	Likely to Develop	1.041	1.346	1.346	14.5%	10.8%	
3rd	Medical	Not Likely to Develop	1.009	1.068	1.068	20.7%	19.4%	
3rd	Total					100.0%	84.7%	1.181

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, Pages 1 and 2.

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# X 000033 STIP

Section X - Experience Rating  
 Subsection D - State Reference Point  
 7/1/2016

Section X - D  
 Exhibit 1

## State Reference Point

Report (1)	Policy Year (2)	Reported Claims (3)	Reported Losses (4)	Average Claim Cost = (4) / (3) (5)
1st	2013	43,313	441,690,369	10,198
2nd	2012	43,950	515,265,926	11,724
3rd	2011	46,200	554,859,434	12,010
Total		133,463	1,511,815,729	11,328
(6)	Indicated State Reference Point = [ Total (5) ] x 250			2,831,900
(7)	Average Annual Severity Trend			2.76%
(8)	Length of Trending Period in Years			1.497
(9)	Trend Factor = [ 1.000 + (7) ] ^ (8)			1.042
(10)	Trended State Reference Point = (6) x (9)			2,949,718
(11)	Selected State Reference Point			2,100,000
(12)	G = (11) / 250,000			8.40
(13)	State Per Claim Accident Limitation = (11) x 0.1			210,000
(14)	Multiple State Claim Accident Limitation = (13) x 2			420,000

**Notes:**

- (3), (4): Unit Statistical Plan Data, Excluding Large Deductible Policies.
- (7): Credibility Weighted Severity Trends from Section V-A, Exhibit 1 weighted by Injury Type Weights at Ultimate from Section IV-E, Exhibit 2.
- (8): Section X-B, Exhibit 2.

# X 000034 STIP

**EXPERIENCE RATING PLAN MANUAL**

**MASSACHUSETTS**

*Proposed Effective July 1, 2016*

**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	1.16	.17	2089	1.20	.17	2802	2.00	.17	3365	2.88	.16	4239	0.99	.17
0008	1.09	.18	2095	1.64	.17	2835	1.00	.17	3372	1.08	.18	4243	1.68	.17
0016	1.68	.18	2101	1.25	.17	2836	1.27	.17	3373	1.68	.17	4244	1.37	.17
0034	2.05	.18	2105	(a)	(a)	2841	1.84	.16	3381	1.21	.17	4250	1.03	.18
0035	1.13	.18	2111	1.07	.17	2883	1.47	.17	3383	0.70	.17	4251	0.95	.16
0036	2.05	.18	2114	1.25	.17	2923	0.76	.17	3385	0.38	.17	4273	1.11	.17
0037	1.09	.18	2115	1.49	.18	2942	0.93	.18	3400	1.46	.18	4279	1.31	.17
0042	1.85	.18	2121	0.76	.18	3018	1.32	.16	3507	1.32	.17	4282	0.37	.17
0046	1.05	.18	2130	0.95	.17	3022	1.72	.17	3515	1.23	.18	4283	1.06	.17
0050	2.97	.16	2131	1.11	.17	3027	1.82	.19	3548	0.78	.17	4299	0.92	.17
0059D	.	.	2143	1.13	.18	3028	1.53	.17	3558	0.37	.19	4301	2.60	.17
0065D	.	.	2150	2.40	.17	3030	2.39	.17	3559	0.78	.17	4304	1.81	.19
0066D	.	.	2156	2.78	.17	3040	2.32	.17	3571	0.46	.17	4307	0.87	.18
0067D	.	.	2157	2.02	.17	3041	2.25	.18	3574	0.82	.17	4308	0.60	.13
0079	1.17	.19	2172	0.94	.15	3042	2.64	.16	3612	0.86	.18	4350	0.27	.16
0083	2.08	.18	2174	1.67	.17	3064	1.35	.18	3620	2.08	.19	4351	0.39	.17
0106	5.31	.19	2211	2.46	.17	3066	1.35	.18	3629	0.82	.17	4352	0.56	.16
0113	2.05	.18	2220	1.32	.18	3076	1.14	.18	3632	0.75	.17	4360	0.49	.17
0170	2.05	.18	2260	2.62	.16	3081D	2.37	.17	3634	0.80	.17	4361	0.31	.18
0251	1.50	.17	2286	1.37	.18	3082D	2.37	.17	3635	1.38	.18	4362	0.29	.17
0771	.	.	2288	1.33	.17	3085D	1.71	.17	3638	0.82	.17	4410	1.63	.17
0908	40.71	.16	2302	1.32	.18	3110	3.90	.18	3642	0.51	.16	4417	2.15	.17
0909	78.51	.20	2305	1.14	.17	3111	1.02	.18	3643	0.75	.17	4432	0.55	.17
0912	157.03	.20	2362	0.84	.18	3113	0.77	.17	3647	0.95	.17	4439	1.21	.17
0913	81.41	.16	2380	1.14	.17	3114	1.28	.18	3648	0.66	.18	4452	1.60	.17
0917	1.61	.18	2402	0.88	.17	3118	0.81	.16	3681	0.40	.17	4459	1.30	.17
0918	0.27	.16	2413	1.68	.18	3119	0.43	.18	3685	0.32	.17	4470	1.03	.17
1430	3.38	.16	2416	1.20	.17	3120	0.78	.16	3724	1.86	.17	4484	0.99	.17
1438	1.26	.17	2417	1.70	.16	3122	0.96	.18	3726	3.91	.15	4493	1.19	.17
1463	3.50	.17	2501	0.96	.17	3127	0.43	.18	3807	1.59	.18	4511	0.13	.18
1624D	1.81	.17	2503	0.54	.17	3131	0.75	.18	3808	1.32	.17	4512	0.06	.18
1655	1.83	.17	2534	1.01	.17	3132	1.60	.18	3821	1.82	.17	4557	0.93	.17
1701	1.40	.16	2570	2.44	.18	3145	0.74	.17	3826	1.46	.18	4558	0.64	.17
1710D	1.80	.17	2576	1.19	.17	3146	0.84	.17	3830	0.75	.17	4561	1.48	.17
1747	1.17	.17	2578	1.14	.17	3169	1.53	.18	3841	0.65	.18	4583	1.31	.16
1748	1.24	.18	2585	1.60	.17	3179	0.62	.17	4000	1.68	.17	4611	0.59	.17
1852	1.91	.15	2586	0.78	.17	3180	1.31	.17	4021	1.50	.18	4635	1.27	.18
1853	0.72	.16	2587	1.57	.18	3188	1.26	.17	4024	1.13	.17	4653	1.17	.17
1860	0.97	.17	2623	1.97	.17	3200	1.12	.17	4034	2.30	.18	4665	2.50	.17
1924	0.97	.17	2640	0.82	.17	3220	1.20	.16	4036	0.87	.16	4692	0.31	.16
1925	1.99	.23	2651	0.90	.17	3223	(a)	(a)	4038	1.30	.17	4693	0.44	.17
2001	1.69	.17	2660	0.86	.18	3227	1.59	.18	4053	0.85	.18	4720	0.88	.18
2002	1.37	.18	2683	0.82	.17	3241	0.93	.17	4061	1.12	.17	4740	0.44	.17
2003	1.63	.17	2688	1.18	.17	3255	1.37	.17	4062	1.07	.17	4741	1.20	.16
2014	1.35	.17	2702	5.13	.17	3257	1.23	.17	4112	0.30	.17	4771	2.85	.13
2021	1.26	.17	2710	2.69	.18	3270	0.97	.18	4113	0.85	.18	4777	1.11	.16
2039	1.39	.17	2731	1.35	.17	3300	2.51	.18	4114	1.00	.17	4825	0.26	.17
2041	1.27	.17	2741	3.23	.17	3305	(a)	(a)	4130	1.80	.17	4828	0.44	.17
2070	1.93	.17	2747	3.06	.17	3315	1.65	.17	4133	0.84	.17	4829	0.38	.17
2081	1.87	.19	2790	0.85	.17	3336	1.41	.16	4150	0.40	.17	4902	0.87	.18

(a) Expected Loss Rates and Discount Ratios for each individual risk must be obtained by Home Office from the WCRIBMA  
 D Supplement Disease Loading

# X 000035 STIP

Section X - Experience Rating  
 Subsection E - Manual Pages  
 7/1/2016

Section X - E  
 Exhibit 2

**MASSACHUSETTS**  
**Page 2**

**EXPERIENCE RATING PLAN MANUAL**

*Proposed Effective July 1, 2016*

**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
4923	0.47	.17	6204	2.91	.16	7360	2.17	.17	8106	2.43	.18	8832	0.13	.17
5020	1.86	.16	6217	1.69	.17	7370	1.92	.18	8107	1.20	.17	8833	0.63	.17
5022	3.62	.16	6229	1.70	.17	7380	2.75	.17	8111	1.26	.17	8835	0.96	.17
5037	7.17	.16	6233	1.58	.15	7382	1.77	.18	8116	1.47	.17	8837	(a)	(a)
5040	18.68	.16	6251D	2.37	.14	7394M	5.80	.84	8203	3.03	.18	8868	0.39	.18
5057	8.36	.16	6252D	2.96	.17	7395M	7.41	.84	8204	1.64	.17	8901	0.03	.18
5059	8.36	.16	6306	3.40	.16	7398M	9.29	.74	8215	1.46	.18	9014	1.37	.17
5069	8.36	.16	6319	1.67	.17	7403	2.04	.18	8227	1.49	.17	9015	1.51	.17
5102	2.29	.16	6325	1.79	.17	7405	0.58	.17	8232	2.14	.18	9016	0.96	.20
5146	2.37	.17	6400	2.60	.17	7420	2.47	.14	8233	2.64	.18	9019	1.09	.15
5160	1.26	.16	6504	1.25	.17	7421	0.69	.15	8235	2.05	.17	9033	1.72	.17
5183	1.28	.16	6702M	(a)	(a)	7422	0.59	.15	8263	2.45	.18	9040	1.51	.17
5188	1.84	.16	6703M	(a)	(a)	7425	1.01	.14	8264	2.23	.17	9044	0.80	.15
5190	0.97	.17	6704M	(a)	(a)	7431	0.59	.15	8265	2.66	.18	9052	0.89	.17
5191	0.44	.17	6801F	3.23	.19	7445	.	.	8279	2.16	.19	9058	0.80	.18
5192	1.49	.17	6811	2.75	.19	7453	.	.	8291	1.88	.17	9060	0.48	.18
5213	5.78	.16	6824F	3.69	.19	7502	1.15	.17	8292	1.42	.17	9061	0.50	.18
5215	2.45	.17	6826F	3.54	.17	7515	0.72	.20	8293	3.66	.18	9062	0.50	.18
5221	2.52	.17	6834	1.12	.17	7520	1.50	.17	8350	2.22	.17	9063	0.39	.19
5222	3.89	.16	6836	1.20	.18	7538	1.90	.16	8380	1.39	.17	9077F	2.08	.21
5223	1.60	.17	6843F	4.30	.16	7539	0.50	.16	8381	0.88	.19	9079	0.58	.18
5348	1.90	.16	6854	3.66	.16	7580	1.22	.18	8385	1.03	.17	9089	0.53	.18
5402	4.37	.17	6872F	6.58	.18	7590	2.22	.17	8392	0.75	.17	9093	0.60	.19
5403	4.11	.16	6874F	5.86	.17	7600	1.54	.16	8393	1.04	.17	9101	1.44	.18
5437	2.05	.17	6882	5.60	.18	7601	2.01	.17	8500	2.64	.18	9102	1.26	.18
5443	1.92	.17	6884	4.99	.17	7610	0.11	.16	8601	0.12	.18	9154	0.73	.18
5445	2.58	.16	7016M	1.12	.79	7704	0.90	.18	8709F	1.55	.18	9156	0.64	.19
5462	2.86	.16	7024M	1.40	.79	7720	0.66	.17	8710	1.08	.17	9178	7.30	.21
5472	2.93	.16	7038M	2.12	.76	7855	1.92	.16	8719	0.92	.17	9179	13.41	.17
5473	3.24	.17	7046M	3.02	.58	8001	0.92	.18	8720	0.35	.17	9180	1.59	.19
5474	2.11	.17	7047M	1.76	.69	8002	0.84	.18	8721	0.08	.21	9182	1.63	.20
5478	2.08	.16	7050M	3.32	.67	8006	0.68	.18	8726F	2.09	.19	9186	1.60	.19
5479	3.86	.17	7090M	2.65	.76	8008	0.40	.17	8734M	0.21	.54	9220	1.44	.17
5480	1.73	.16	7098M	3.55	.58	8010	0.70	.18	8737M	0.17	.54	9402	1.86	.17
5506	2.17	.17	7099M	4.45	.51	8013	0.20	.18	8738M	0.26	.53	9403	3.82	.17
5507	2.86	.17	7133	(a)	(a)	8017	0.53	.18	8742	0.06	.18	9410	1.18	.19
5508D	2.42	.16	7151M	3.96	.52	8018	1.49	.17	8745	1.90	.18	9501	1.07	.18
5509	1.39	.17	7152M	6.22	.52	8021	1.41	.17	8747	0.47	.17	9505	1.07	.18
5538	1.70	.17	7153M	4.96	.52	8031	1.01	.17	8748	0.26	.18	9519	1.25	.17
5545	11.71	.17	7219	3.81	.16	8032	0.76	.17	8800	0.52	.17	9521	1.32	.17
5547	4.33	.18	7230	3.61	.17	8033	0.92	.18	8803	0.02	.18	9522	0.86	.17
5606	0.70	.17	7231	3.66	.16	8034	1.54	.17	8805M	0.09	.60	9533	6.27	.16
5610	2.95	.16	7309F	6.35	.17	8039	0.62	.18	8814M	0.07	.60	9534	2.50	.17
5645	3.03	.17	7313F	4.60	.14	8044	1.79	.19	8815M	0.11	.59	9545	1.59	.17
5651	3.03	.17	7317F	4.39	.16	8046	0.97	.18	8810	0.03	.18	9549	1.83	.16
5701	8.03	.18	7327F	10.05	.17	8048	1.34	.17	8820	0.04	.17	9552	2.69	.16
5703	7.96	.16	7333M	4.51	.70	8050	0.72	.18	8824	0.89	.17	9553	2.71	.16
5705	4.48	.16	7335M	5.30	.70	8058	1.16	.19	8826	0.89	.17	9586	0.20	.17
6003	3.89	.16	7337M	6.65	.61	8103	1.22	.17	8829	0.98	.17	9620	0.33	.18
6005	2.42	.16	7350F	6.22	.17	8105	2.57	.17	8831	0.46	.20			

- (a) Expected Loss Rates and Discount Ratios for each individual risk must be obtained by Home Office from the WCRIBMA
- F Expected Loss Rates and Discount Ratios for risks covered under the United States Longshore and Harbor Workers' Compensation Act.
- D Supplement Disease Loading



# X 000036 STIP

**EXPERIENCE RATING PLAN MANUAL**

*Proposed Effective July 1, 2016*

**TABLE OF WEIGHTING VALUES**

Expected Losses	Weighting Values	Expected Losses	Weighting Values	Expected Losses	Weighting Values
0 - 1,759	0.04	497,645 - 536,929	0.24	2,051,397 - 2,217,863	0.44
1,760 - 7,111	0.05	536,930 - 578,301	0.25	2,217,864 - 2,403,506	0.45
7,112 - 12,577	0.06	578,302 - 621,935	0.26	2,403,507 - 2,611,844	0.46
12,578 - 51,611	0.07	621,936 - 668,025	0.27	2,611,845 - 2,847,310	0.47
51,612 - 75,129	0.08	668,026 - 716,787	0.28	2,847,311 - 3,115,573	0.48
75,130 - 97,557	0.09	716,788 - 768,462	0.29	3,115,574 - 3,423,999	0.49
97,558 - 120,036	0.10	768,463 - 823,321	0.30	3,424,000 - 3,782,339	0.50
120,037 - 142,957	0.11	823,322 - 881,671	0.31	3,782,340 - 4,203,779	0.51
142,958 - 166,519	0.12	881,672 - 943,856	0.32	4,203,780 - 4,706,596	0.52
166,520 - 190,855	0.13	943,857 - 1,010,271	0.33	4,706,597 - 5,316,880	0.53
190,856 - 246,070	0.14	1,010,272 - 1,081,363	0.34	5,316,881 - 6,073,210	0.54
246,071 - 242,254	0.15	1,081,364 - 1,157,646	0.35	6,073,211 - 7,035,138	0.55
242,255 - 269,494	0.16	1,157,647 - 1,239,711	0.36	7,035,139 - 8,299,690	0.56
269,495 - 297,877	0.17	1,239,712 - 1,328,243	0.37	8,299,691 - 10,036,335	0.57
297,878 - 327,494	0.18	1,328,244 - 1,424,039	0.38	10,036,336 - 12,570,121	0.58
327,495 - 358,437	0.19	1,424,040 - 1,528,032	0.39	12,570,122 - 16,613,386	0.59
358,438 - 390,810	0.20	1,528,033 - 1,641,323	0.40	16,613,387 - 24,087,288	0.60
390,811 - 424,721	0.21	1,641,324 - 1,765,218	0.41	24,087,289 - 42,575,339	0.61
424,722 - 460,289	0.22	1,765,219 - 1,901,280	0.42	42,575,340 - 164,596,405	0.62
460,290 - 497,644	0.23	1,901,281 - 2,051,396	0.43	164,596,406 - 999,999,999	0.63

- |  |           |
|--|-----------|
| (a) State Per Claim Accident Limitation  | \$210,000 |
| (b) State Multiple Claim Accident Limitation   | \$420,000 |
| (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  | 17.5%     |
| (g) Cap on Modifications = 1 + (0.00005) [(Expected Losses) + (2) (Expected Losses) / (8.4)] |           |

# X 000037 STIP

*Proposed Effective July 1, 2016*

**TABLE OF BALLAST VALUES**

Expected Losses	Ballast Values	Expected Losses	Ballast Values	Expected Losses	Ballast Values
0 - 45,182	21,000	1,449,849 - 1,491,824	168,000	2,919,423 - 2,961,416	315,000
45,183 - 77,762	25,200	1,491,825 - 1,533,801	172,200	2,961,417 - 3,003,410	319,200
77,763 - 115,198	29,400	1,533,802 - 1,575,780	176,400	3,003,411 - 3,045,404	323,400
115,199 - 154,690	33,600	1,575,781 - 1,617,760	180,600	3,045,405 - 3,087,399	327,600
154,691 - 195,142	37,800	1,617,761 - 1,659,741	184,800	3,087,400 - 3,129,393	331,800
195,143 - 236,102	42,000	1,659,742 - 1,701,723	189,000	3,129,394 - 3,171,388	336,000
236,103 - 277,359	46,200	1,701,724 - 1,743,705	193,200	3,171,389 - 3,213,383	340,200
277,360 - 318,803	50,400	1,743,706 - 1,785,689	197,400	3,213,384 - 3,255,378	344,400
318,804 - 360,371	54,600	1,785,690 - 1,827,673	201,600	3,255,379 - 3,297,373	348,600
360,372 - 402,027	58,800	1,827,674 - 1,869,658	205,800	3,297,374 - 3,339,369	352,800
402,028 - 443,746	63,000	1,869,659 - 1,911,643	210,000	3,339,370 - 3,381,364	357,000
443,747 - 485,512	67,200	1,911,644 - 1,953,630	214,200	3,381,365 - 3,423,360	361,200
485,513 - 527,315	71,400	1,953,631 - 1,995,616	218,400	3,423,361 - 3,465,355	365,400
527,316 - 569,147	75,600	1,995,617 - 2,037,604	222,600	3,465,356 - 3,507,351	369,600
569,148 - 611,001	79,800	2,037,605 - 2,079,592	226,800	3,507,352 - 3,549,347	373,800
611,002 - 652,874	84,000	2,079,593 - 2,121,580	231,000	3,549,348 - 3,591,343	378,000
652,875 - 694,762	88,200	2,121,581 - 2,163,569	235,200	3,591,344 - 3,633,339	382,200
694,763 - 736,662	92,400	2,163,570 - 2,205,558	239,400	3,633,340 - 3,675,335	386,400
736,663 - 778,574	96,600	2,205,559 - 2,247,547	243,600	3,675,336 - 3,717,331	390,600
778,575 - 820,494	100,800	2,247,548 - 2,289,537	247,800	3,717,332 - 3,759,327	394,800
820,495 - 862,422	105,000	2,289,538 - 2,331,528	252,000	3,759,328 - 3,801,324	399,000
862,423 - 904,356	109,200	2,331,529 - 2,373,518	256,200	3,801,325 - 3,843,320	403,200
904,357 - 946,296	113,400	2,373,519 - 2,415,509	260,400	3,843,321 - 3,885,317	407,400
946,297 - 988,242	117,600	2,415,510 - 2,457,501	264,600	3,885,318 - 3,927,313	411,600
988,243 - 1,030,191	121,800	2,457,502 - 2,499,492	268,800	3,927,314 - 3,969,310	415,800
1,030,192 - 1,072,145	126,000	2,499,493 - 2,541,484	273,000	3,969,311 - 4,011,307	420,000
1,072,146 - 1,114,102	130,200	2,541,485 - 2,583,476	277,200		
1,114,103 - 1,156,062	134,400	2,583,477 - 2,625,469	281,400		
1,156,063 - 1,198,025	138,600	2,625,470 - 2,667,461	285,600		
1,198,026 - 1,239,991	142,800	2,667,462 - 2,709,454	289,800		
1,239,992 - 1,281,958	147,000	2,709,455 - 2,751,447	294,000		
1,281,959 - 1,323,928	151,200	2,751,448 - 2,793,441	298,200		
1,323,929 - 1,365,900	155,400	2,793,442 - 2,835,434	302,400		
1,365,901 - 1,407,873	159,600	2,835,435 - 2,877,428	306,600		
1,407,874 - 1,449,848	163,800	2,877,429 - 2,919,422	310,800		

Note: For Expected Losses (E) greater than \$4,011,307, the Ballast Value is calculated using the formula:

$$\text{Ballast} = (0.1E + 2,500GE / (E + 700G))$$

Round to the nearest whole dollar. G is equal to the Statewide Average Cost Per Case / 1,000.  
 In Massachusetts G = 8,400 / 1,000 = 8.4

# XI 000004 STIP

Section XI - Miscellaneous Rating Values  
Subsection B - Massachusetts Benefits Deductible Program Credits  
7/1/2016

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	2.7%	0.642	0.90	0.180	0.000	1.9%
1,000	4.4%	0.642	0.90	0.180	0.000	3.1%
2,000	6.7%	0.642	0.90	0.180	0.000	4.7%
2,500	7.7%	0.642	0.90	0.180	0.000	5.4%
5,000	11.3%	0.642	0.90	0.180	0.000	7.9%

Notes:

(2): Based on Unit Statistical Data

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

(4) = 0.9 from 9/1/2007 Stipulation.

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

(6): Section VII-B, 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  
 7/1/2016

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) / \$23,772 (2)	Aggregate Limit (3)	Selected Adjustment Factor for Aggregate Limit (4)	Premium Credit = (4) x 5.4% (5)
0 - 75,000	1.6	\$10,000	0.98	5.3%
75,000 - 100,000	3.7	\$10,000	0.96	5.2%
100,000 - 125,000	4.7	\$10,000	0.94	5.1%
125,000 - 150,000	5.8	\$10,000	0.92	5.0%
150,000 - 200,000	7.4	\$10,000	0.89	4.8%
Over 200,000	8 or more	5% of the 'Basis for the Aggregate Limit at Policy Inception'	0.84	4.5%

Notes:

- (2): Based on \$23,772 in standard premium (no ARAP) per expected claim.
- (4): Selected based on the simulation results shown in Exhibit 2.
- (5): The 5.4% is based on the \$2,500 per claim deductible without any aggregate limit, from Section XI-B, Exhibit 1.

# XI 00008 STIP

Section XI - Miscellaneous Rating Values  
 Subsection C - Massachusetts Benefits Claim and Aggregate Deductible Program Credits  
 7/1/2016

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	7.65%	7.65%	3.66%	1.00	0.48
2	1,000,000	7.70%	7.68%	4.89%	1.00	0.64
3	1,000,000	7.68%	7.61%	5.37%	0.99	0.70
4	1,000,000	7.68%	7.48%	5.65%	0.97	0.74
5	1,000,000	7.63%	7.25%	5.82%	0.95	0.76
6	1,000,000	7.63%	6.99%	5.96%	0.92	0.78
7	1,000,000	7.64%	6.70%	6.08%	0.88	0.80
8	1,000,000	7.66%	6.38%	6.20%	0.83	0.81
9	1,000,000	7.67%	6.02%	6.28%	0.78	0.82
10	1,000,000	7.65%	5.64%	6.33%	0.74	0.83
12	1,000,000	7.64%	4.95%	6.42%	0.65	0.84
14	1,000,000	7.65%	4.36%	6.51%	0.57	0.85
16	1,000,000	7.64%	3.86%	6.57%	0.51	0.86
18	1,000,000	7.65%	3.45%	6.63%	0.45	0.87
20	1,000,000	7.66%	3.11%	6.68%	0.41	0.87
25	1,000,000	7.66%	2.49%	6.77%	0.33	0.88
30	1,000,000	7.66%	2.08%	6.84%	0.27	0.89
40	1,000,000	7.65%	1.56%	6.92%	0.20	0.90
50	1,000,000	7.65%	1.25%	6.99%	0.16	0.91
75	1,000,000	7.65%	0.83%	7.08%	0.11	0.93
100	1,000,000	7.65%	0.62%	7.13%	0.08	0.93
150	1,000,000	7.65%	0.42%	7.21%	0.05	0.94
200	1,000,000	7.65%	0.31%	7.24%	0.04	0.95
300	1,000,000	7.65%	0.21%	7.29%	0.03	0.95
400	1,000,000	7.65%	0.16%	7.32%	0.02	0.96
500	1,000,000	7.65%	0.12%	7.34%	0.02	0.96

**Notes:**

(5): The Aggregate Limit is based on the average claim severity of the simulated losses, \$16,054 and the permissible loss ratio of 0.642. One claim is assumed to be expected for each \$23,772 of standard premium.

# XI 000009 STIP

Section XI - Miscellaneous Rating Values  
 Subsection C - Massachusetts Benefits Claim and Aggregate Deductible Program Credits  
 7/1/2016

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 2005	1.052	1.059	1.106	1.032	1.032
PY 2006	1.047	1.051	1.090	1.028	1.032
PY 2007	1.041	1.042	1.074	1.023	1.032
PY 2008	1.035	1.034	1.059	1.018	1.024
PY 2009	1.033	1.031	1.054	1.016	1.002

(2) Loss Development Factors - Fifth Report to Ultimate

Loss Development Category	Indemnity	Medical
Likely to Develop	1.140	1.115
Not Likely to Develop	1.031	1.018

(3) Severity Trend Factors

We apply three distinct trend factors.

Trend to PY 2009 is based on empirical USR data at 5th report.

Trend from PY 2009 to PY 2013 is based on severities from Section V-A.

Trend from PY 2013 to the Prospective Effective Period is based on the projected severity trends from Section V-A.

Trend Period		Indemnity	Lost Time Medical	Medical Only
From	To			
PY 2005	PY 2009	1.137	1.190	1.094
PY 2006	PY 2009	1.111	1.129	1.030
PY 2007	PY 2009	1.110	1.129	0.987
PY 2008	PY 2009	1.040	1.155	0.972
PY 2009	PY 2013	1.136	1.171	1.137
PY 2013	Prosp. Eff. Period	1.079	1.096	1.089

Notes:

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

(2): Section IV-E, Exhibit 1, Pages 1 and 2.

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

# XI 000010 STIP

<b>MASSACHUSETTS WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE MANUAL</b>	<b>RATES</b> Page RA-5
<i>Proposed Effective July 1, 2016</i>	

### MISCELLANEOUS VALUES

**Basis of Premium** applicable in accordance with the footnote instructions for Code 7370 - "Taxicab Co.":

Employee operated vehicles.....	\$98,000.00
Leased or rented vehicles.....	\$65,300.00

**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.....

Companies or Partners of Limited Liability Partnerships in accordance with Rule IX-B-3-a.....	\$45,700.00
Minimum individual payroll for an executive officer per week.....	\$200.00
Maximum individual payroll for an executive officer per week.....	\$1,000.00

**Terrorism Insurance Program**—Certified Loss: ..... 0.03

### BENEFITS DEDUCTIBLE COVERAGE PROGRAM

Medical and Indemnity Deductible Amount	Premium Reduction Percentage
\$500	1.9%
\$1,000	3.1%
\$2,000	4.7%
\$2,500	5.4%
\$5,000	7.9%

### 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	5.3%
\$75,001 to \$100,000	\$2,500	\$10,000	5.2%
\$100,001 to \$125,000	\$2,500	\$10,000	5.1%
\$125,001 to \$150,000	\$2,500	\$10,000	5.0%
\$150,001 to \$200,000	\$2,500	\$10,000	4.8%
over \$200,000	\$2,500	5% of Basis for the Aggregate Limit	4.5%

**Expense Constant** applicable in accordance with Basic Manual Rule VI-E-2:

Policies which develop earned Standard Premium of less than \$200.....	\$159
Policies which develop earned Standard Premium of at least \$200 and less than \$1,000.....	\$250
Policies which develop earned Standard Premium of \$1,000 or more.....	\$338

The expense constant for private residence per capita classifications is \$64, up to a maximum of 4.

**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. "U.S. Longshore and Harbor Workers' Compensation Act" of the Basic Manual..... 23.1%  
 (Multiply a Non-F classification rate by a factor of 1.231)

### 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:**

- 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.
- USL&H factor - Section VIII-J, Exhibit 1.

# XII 000004 STIP

**RETROSPECTIVE RATING PLAN MANUAL  
 STATE SPECIAL RATING VALUES**

**MASSACHUSETTS  
 RR1**

*Proposed Effective July 1, 2016*

**1. Hazard Group Differentials**

A	B	C	D	E	F	G
1.87	1.49	1.32	1.10	0.90	0.73	0.59

**2. Tax Multipliers**

- a. State (non-F Classes) 1.032\*
- b. Federal Classes, or non-F classes 1.076\*

where rate is increased by the  
 USL&HW Act Percentage

\* Includes 0.69% residual market subsidy provision  
 and -0.23% insolvency fund assessment provision

**3. Expected Loss Ratio**

0.637

**Expected Loss and Allocated  
 Loss Adjustment Expense  
 Ratio (ALAE Option)**

0.702

**4. Loss Conversion Factor**

1.200

**Loss Conversion Factor  
 for Allocated Loss Adjustment  
 Expense Option (ALAE Option)**

1.089

**5. Table of Expense Ratios Excluding Taxes and Including Profit**

**Type A Company**

Massachusetts  
 Effective July 1, 2016

**Type B Company**

Massachusetts  
 Effective July 1, 2016

**Table of Expense Ratios Excluding Allocated Loss Adjustment Expense and Taxes and Including Profit (ALAE Option)**

**Type A Company**

Massachusetts  
 Effective July 1, 2016

**Type B Company**

Massachusetts  
 Effective July 1, 2016

**6. 2013—Table of Expected Loss Ranges**

April 1, 2014

**7a.**

**Excess Loss Factors**

(Applicable to New and Renewal Policies)

Per Accident Limitation	Hazard Groups						
	A	B	C	D	E	F	G
\$25,000	0.403	0.429	0.453	0.474	0.494	0.524	0.556
30,000	0.385	0.412	0.437	0.460	0.480	0.511	0.546
35,000	0.369	0.396	0.422	0.447	0.468	0.499	0.538
40,000	0.354	0.382	0.409	0.435	0.456	0.488	0.530
50,000	0.329	0.357	0.385	0.413	0.435	0.469	0.515
75,000	0.278	0.307	0.337	0.370	0.393	0.427	0.482
100,000	0.241	0.269	0.300	0.335	0.358	0.392	0.454
125,000	0.212	0.238	0.269	0.305	0.329	0.362	0.429
150,000	0.188	0.212	0.242	0.280	0.302	0.335	0.406
175,000	0.169	0.190	0.220	0.258	0.279	0.310	0.385
200,000	0.152	0.172	0.200	0.238	0.258	0.288	0.366
250,000	0.126	0.142	0.169	0.206	0.223	0.251	0.331
300,000	0.107	0.121	0.145	0.180	0.195	0.221	0.302
500,000	0.063	0.072	0.088	0.115	0.126	0.145	0.217
1,000,000	0.029	0.033	0.042	0.057	0.063	0.073	0.121
2,000,000	0.013	0.015	0.019	0.026	0.029	0.034	0.061
3,000,000	0.008	0.009	0.012	0.016	0.018	0.021	0.039
4,000,000	0.005	0.006	0.008	0.011	0.013	0.015	0.028
5,000,000	0.004	0.005	0.006	0.009	0.010	0.011	0.021



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**MASSACHUSETTS  
 RR2**

**RETROSPECTIVE RATING PLAN MANUAL  
 STATE SPECIAL RATING VALUES**

*Proposed Effective July 1, 2016*

**7b. ALAE Option Excess Loss and Allocated Loss Adjustment Expense Factors  
 (Applicable to New and Renewal Policies)**

Per Accident Limitation	Hazard Groups						
	A	B	C	D	E	F	G
\$25,000	0.455	0.482	0.508	0.531	0.553	0.584	0.618
30,000	0.435	0.464	0.491	0.515	0.538	0.571	0.608
35,000	0.418	0.447	0.475	0.501	0.524	0.559	0.599
40,000	0.402	0.432	0.461	0.489	0.512	0.547	0.590
50,000	0.375	0.406	0.436	0.466	0.490	0.526	0.575
75,000	0.320	0.352	0.386	0.420	0.445	0.483	0.541
100,000	0.279	0.311	0.345	0.383	0.408	0.446	0.512
125,000	0.247	0.277	0.311	0.351	0.377	0.414	0.485
150,000	0.221	0.249	0.283	0.324	0.349	0.385	0.461
175,000	0.200	0.225	0.258	0.300	0.324	0.359	0.440
200,000	0.181	0.204	0.236	0.279	0.301	0.335	0.419
250,000	0.152	0.171	0.201	0.242	0.263	0.294	0.382
300,000	0.129	0.146	0.173	0.213	0.232	0.261	0.350
500,000	0.077	0.088	0.107	0.139	0.152	0.174	0.257
1,000,000	0.036	0.041	0.051	0.070	0.076	0.089	0.146
2,000,000	0.016	0.018	0.023	0.033	0.036	0.042	0.074
3,000,000	0.010	0.011	0.014	0.020	0.022	0.026	0.048
4,000,000	0.007	0.008	0.010	0.014	0.016	0.019	0.035
5,000,000	0.005	0.006	0.008	0.011	0.012	0.014	0.027

**8. Retrospective Development Factors**

With Loss Limit				Without Loss Limit			
1st	2nd	3rd	4th & Subsequent	1st	2nd	3rd	4th & Subsequent
<u>Adj.</u>	<u>Adj.</u>	<u>Adj.</u>	<u>Adj.</u>	<u>Adj.</u>	<u>Adj.</u>	<u>Adj.</u>	<u>Adj.</u>
0.11	0.07	0.05	0.00	0.14	0.09	0.06	0.00

**9. State Special Classifications by Hazard Group**

All Massachusetts Hazard Group assignments can be found in Appendix G of the 2008 Edition of the Massachusetts Workers' Compensation & Employers Liability Insurance Manual.

# XII 000006 STIP

Section XII - Retrospective Rating  
Subsection A - Expenses  
7/1/2016

Section XII - A  
Exhibit 3

## Expense Provisions Underlying the Proposed Retrospective Rating Plans

### Total Expenses:

(1) Commission and Other Acquisition Expenses	10.9%
(2) Fixed Expenses	4.6%
(3) Premium Discount	5.0%
(4) Underwriting Profit Provision	<u>0.0%</u>
(5) Total Expenses Excluding Taxes and Assessments ( = (1) + (2) + (3) + (4) )	20.4%
(6) Current Premium Tax Rate	2.28%
(7) Miscellaneous Taxes	0.40%
(8) Retro Provision for the Residual Market Subsidy	0.69%
(9) Insolvency Fund Assessment	<u>-0.23%</u>
(10) Tax Multiplier ( = 1.0 / { 1.0 - [ (6) + (7) + (8) + (9) ] } )	1.032
(11) Expected Loss and LAE Ratio (adjusted for Residual Market Subsidy) ( = [ 1.0 / (10) ] - (5) )	76.4%
(12) Loss Adjustment Expense (as percentage of losses)	20.0%
(13) Loss Conversion Factor ( = 1.0 + (12) )	1.200
(14) Expected Loss without LAE ( = (11) / (13) )	63.7%
(15) Expenses excluding Premium Taxes but including LAE ( = (5) + [ (12) x (14) ] )	33.2%

### Notes:

- (1): Section VI-A, 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-J, 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 000007 STIP

Section XII - Retrospective Rating  
Subsection A - Expenses  
7/1/2016

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)	63.7%
(2) Provision for ALAE Expenses (as percentage of losses)	10.1%
(3) Expected Loss plus ALAE Ratio ( = (1) x [ 1.0 + (2) ] )	70.2%
(4) Loss Adjustment Expense (as percentage of losses)	20.0%
(5) Loss Conversion Factor ( = [ 1.0 + (4) ] / [ 1.0 + (2) ] )	1.089
(6) Tax Multiplier	1.032
(7) Expenses excluding Premium Taxes but including LAE (as percentage of Standard Premium plus ARAP)	33.2%
(8) Expenses including all AO Expenses but excluding ALAE Expenses and Premium Taxes ( = (7) - [ (1) x (2) ] )	26.7%

### Notes:

(1): Exhibit 3, line (14)

(2): Section VI-H, Exhibit 1, line (5), DCC assumed a proxy for ALAE.

(4), (6), (7): Exhibit 3, lines (12), (10) and (15) respectively.

# XII 000008 STIP

Section XII - Retrospective Rating  
Subsection B - Residual Market Subsidy  
7/1/2016

Section XII - B  
Exhibit 1

## Calculation of the Provision for the Residual Market Subsidy

(1) Voluntary Market Implied Rate Factor Equivalent	0.991
(2) Factor to Take into Account Basic Premium	0.800
(3) Retro Provision for the Residual Market Subsidy	0.69%

### Notes:

(1): Section I-D, 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  
 STATE SPECIAL RATING VALUES**

**MASSACHUSETTS  
 RR5**

*Proposed Effective July 1, 2016*

**TABLE OF EXPENSE RATIOS—EXCLUDING TAXES AND INCLUDING PROFIT**

**TYPE A COMPANY—MASSACHUSETTS**

Standard Premium From	To	Expense Ratio	Standard Premium From	To	Expense Ratio	Standard Premium From	To	Expense Ratio
0	10,057	0.332	18,115	18,494	0.292	101,609	114,841	0.252
10,058	10,173	0.331	18,495	18,891	0.291	114,842	132,037	0.251
10,174	10,292	0.330	18,892	19,304	0.290	132,038	155,290	0.250
10,293	10,413	0.329	19,305	19,736	0.289	155,291	188,484	0.249
10,414	10,538	0.328	19,737	20,188	0.288	188,485	205,846	0.248
10,539	10,665	0.327	20,189	20,661	0.287	205,847	214,424	0.247
10,666	10,796	0.326	20,662	21,157	0.286	214,425	223,749	0.246
10,797	10,930	0.325	21,158	21,677	0.285	223,750	233,921	0.245
10,931	11,067	0.324	21,678	22,223	0.284	233,922	245,062	0.244
11,068	11,207	0.323	22,224	22,798	0.283	245,063	257,317	0.243
11,208	11,352	0.322	22,799	23,403	0.282	257,318	270,863	0.242
11,353	11,500	0.321	23,404	24,041	0.281	270,864	285,914	0.241
11,501	11,652	0.320	24,042	24,715	0.280	285,915	302,737	0.240
11,653	11,808	0.319	24,716	25,428	0.279	302,738	321,662	0.239
11,809	11,968	0.318	25,429	26,183	0.278	321,663	343,112	0.238
11,969	12,133	0.317	26,184	26,984	0.277	343,113	367,627	0.237
12,134	12,302	0.316	26,985	27,836	0.276	367,628	395,914	0.236
12,303	12,476	0.315	27,837	28,743	0.275	395,915	428,918	0.235
12,477	12,655	0.314	28,744	29,711	0.274	428,919	467,924	0.234
12,656	12,839	0.313	29,712	30,747	0.273	467,925	514,734	0.233
12,840	13,029	0.312	30,748	31,858	0.272	514,735	571,952	0.232
13,030	13,224	0.311	31,859	33,052	0.271	571,953	643,480	0.231
13,225	13,426	0.310	33,053	34,340	0.270	643,481	735,457	0.230
13,427	13,633	0.309	34,341	35,731	0.269	735,458	858,112	0.229
13,634	13,847	0.308	35,732	37,240	0.268	858,113	1,029,868	0.228
13,848	14,068	0.307	37,241	38,882	0.267	1,029,869	1,287,585	0.227
14,069	14,296	0.306	38,883	40,676	0.266	1,287,586	1,717,335	0.226
14,297	14,532	0.305	40,677	42,643	0.265	1,717,336	1,891,376	0.225
14,533	14,776	0.304	42,644	44,810	0.264	1,891,377	2,068,371	0.224
14,777	15,027	0.303	44,811	47,209	0.263	2,068,372	2,281,913	0.223
15,028	15,288	0.302	47,210	49,879	0.262	2,281,914	2,544,623	0.222
15,289	15,558	0.301	49,880	52,870	0.261	2,544,624	2,875,693	0.221
15,559	15,837	0.300	52,871	56,242	0.260	2,875,694	3,305,797	0.220
15,838	16,127	0.299	56,243	60,074	0.259	3,305,798	3,887,185	0.219
16,128	16,427	0.298	60,075	64,466	0.258	3,887,186	4,716,708	0.218
16,428	16,739	0.297	64,467	69,551	0.257	4,716,709	5,996,320	0.217
16,740	17,063	0.296	69,552	75,506	0.256	5,996,321	8,228,716	0.216
17,064	17,400	0.295	75,507	82,577	0.255	8,228,717	13,109,195	0.215
17,401	17,750	0.294	82,578	91,109	0.254	13,109,196	32,217,514	0.214
17,751	18,114	0.293	91,110	101,608	0.253	32,217,515	OVER	0.213

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

0.637

Tax Multiplier

1.032

**MASSACHUSETTS  
 RR6**

**RETROSPECTIVE RATING PLAN MANUAL  
 STATE SPECIAL RATING VALUES**

*Proposed Effective July 1, 2016*

**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	10,102	0.332	19,833	20,661	0.307	237,857	256,908	0.282
10,103	10,313	0.331	20,662	21,563	0.306	256,909	279,278	0.281
10,314	10,533	0.330	21,564	22,546	0.305	279,279	305,915	0.280
10,534	10,762	0.329	22,547	23,624	0.304	305,916	338,169	0.279
10,763	11,002	0.328	23,625	24,810	0.303	338,170	378,026	0.278
11,003	11,252	0.327	24,811	26,122	0.302	378,027	428,534	0.277
11,253	11,514	0.326	26,123	27,579	0.301	428,535	494,620	0.276
11,515	11,789	0.325	27,580	29,210	0.300	494,621	584,806	0.275
11,790	12,077	0.324	29,211	31,045	0.299	584,807	715,212	0.274
12,078	12,380	0.323	31,046	33,125	0.298	715,213	920,467	0.273
12,381	12,698	0.322	33,126	35,505	0.297	920,468	1,290,952	0.272
12,699	13,033	0.321	35,506	38,254	0.296	1,290,953	1,804,544	0.271
13,034	13,386	0.320	38,255	41,463	0.295	1,804,545	1,981,905	0.270
13,387	13,758	0.319	41,464	45,261	0.294	1,981,906	2,197,930	0.269
13,759	14,153	0.318	45,262	49,824	0.293	2,197,931	2,466,809	0.268
14,154	14,570	0.317	49,825	55,411	0.292	2,466,810	2,810,643	0.267
14,571	15,012	0.316	55,412	62,408	0.291	2,810,644	3,265,851	0.266
15,013	15,483	0.315	62,409	71,429	0.290	3,265,852	3,897,004	0.265
15,484	15,983	0.314	71,430	83,497	0.289	3,897,005	4,830,548	0.264
15,984	16,518	0.313	83,498	100,473	0.288	4,830,549	6,352,259	0.263
16,519	17,089	0.312	100,474	126,113	0.287	6,352,260	9,273,619	0.262
17,090	17,701	0.311	126,114	169,323	0.286	9,273,620	17,169,967	0.261
17,702	18,359	0.310	169,324	207,134	0.285	17,169,968	OVER	0.260
18,360	19,067	0.309	207,135	221,434	0.284			
19,068	19,832	0.308	221,435	237,856	0.283			

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

0.637

Tax Multiplier

1.032

**RETROSPECTIVE RATING PLAN MANUAL  
 STATE SPECIAL RATING VALUES**

**MASSACHUSETTS  
 RR7**

*Proposed Effective July 1, 2016*

**TABLE OF EXPENSE RATIOS—EXCLUDING ALLOCATED LOSS ADJUSTMENT EXPENSE  
 AND TAXES AND INCLUDING PROFIT**

**TYPE A COMPANY—MASSACHUSETTS**

Standard Premium		Expense Ratio	Standard Premium		Expense Ratio	Standard Premium		Expense Ratio
From	To		From	To		From	To	
0	- 10,057	0.267	18,115	- 18,494	0.227	101,609	- 114,841	0.187
10,058	- 10,173	0.266	18,495	- 18,891	0.226	114,842	- 132,037	0.186
10,174	- 10,292	0.265	18,892	- 19,304	0.225	132,038	- 155,290	0.185
10,293	- 10,413	0.264	19,305	- 19,736	0.224	155,291	- 188,484	0.184
10,414	- 10,538	0.263	19,737	- 20,188	0.223	188,485	- 205,846	0.183
10,539	- 10,665	0.262	20,189	- 20,661	0.222	205,847	- 214,424	0.182
10,666	- 10,796	0.261	20,662	- 21,157	0.221	214,425	- 223,749	0.181
10,797	- 10,930	0.260	21,158	- 21,677	0.220	223,750	- 233,921	0.180
10,931	- 11,067	0.259	21,678	- 22,223	0.219	233,922	- 245,062	0.179
11,068	- 11,207	0.258	22,224	- 22,798	0.218	245,063	- 257,317	0.178
11,208	- 11,352	0.257	22,799	- 23,403	0.217	257,318	- 270,863	0.177
11,353	- 11,500	0.256	23,404	- 24,041	0.216	270,864	- 285,914	0.176
11,501	- 11,652	0.255	24,042	- 24,715	0.215	285,915	- 302,737	0.175
11,653	- 11,808	0.254	24,716	- 25,428	0.214	302,738	- 321,662	0.174
11,809	- 11,968	0.253	25,429	- 26,183	0.213	321,663	- 343,112	0.173
11,969	- 12,133	0.252	26,184	- 26,984	0.212	343,113	- 367,627	0.172
12,134	- 12,302	0.251	26,985	- 27,836	0.211	367,628	- 395,914	0.171
12,303	- 12,476	0.250	27,837	- 28,743	0.210	395,915	- 428,918	0.170
12,477	- 12,655	0.249	28,744	- 29,711	0.209	428,919	- 467,924	0.169
12,656	- 12,839	0.248	29,712	- 30,747	0.208	467,925	- 514,734	0.168
12,840	- 13,029	0.247	30,748	- 31,858	0.207	514,735	- 571,952	0.167
13,030	- 13,224	0.246	31,859	- 33,052	0.206	571,953	- 643,480	0.166
13,225	- 13,426	0.245	33,053	- 34,340	0.205	643,481	- 735,457	0.165
13,427	- 13,633	0.244	34,341	- 35,731	0.204	735,458	- 858,112	0.164
13,634	- 13,847	0.243	35,732	- 37,240	0.203	858,113	- 1,029,868	0.163
13,848	- 14,068	0.242	37,241	- 38,882	0.202	1,029,869	- 1,287,585	0.162
14,069	- 14,296	0.241	38,883	- 40,676	0.201	1,287,586	- 1,717,335	0.161
14,297	- 14,532	0.240	40,677	- 42,643	0.200	1,717,336	- 1,891,376	0.160
14,533	- 14,776	0.239	42,644	- 44,810	0.199	1,891,377	- 2,068,371	0.159
14,777	- 15,027	0.238	44,811	- 47,209	0.198	2,068,372	- 2,281,913	0.158
15,028	- 15,288	0.237	47,210	- 49,879	0.197	2,281,914	- 2,544,623	0.157
15,289	- 15,558	0.236	49,880	- 52,870	0.196	2,544,624	- 2,875,693	0.156
15,559	- 15,837	0.235	52,871	- 56,242	0.195	2,875,694	- 3,305,797	0.155
15,838	- 16,127	0.234	56,243	- 60,074	0.194	3,305,798	- 3,887,185	0.154
16,128	- 16,427	0.233	60,075	- 64,466	0.193	3,887,186	- 4,716,708	0.153
16,428	- 16,739	0.232	64,467	- 69,551	0.192	4,716,709	- 5,996,320	0.152
16,740	- 17,063	0.231	69,552	- 75,506	0.191	5,996,321	- 8,228,716	0.151
17,064	- 17,400	0.230	75,507	- 82,577	0.190	8,228,717	- 13,109,195	0.150
17,401	- 17,750	0.229	82,578	- 91,109	0.189	13,109,196	- 32,217,514	0.149
17,751	- 18,114	0.228	91,110	- 101,608	0.188	32,217,515	- OVER	0.148

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)

0.702

Tax Multiplier

1.032

# XII 000012 STIP

Section XII - Retrospective Rating  
 Subsection C - Expense Ratios  
 7/1/2016

Section XII - C  
 Exhibit 2  
 Page 2

<b>MASSACHUSETTS</b>	<b>RETROSPECTIVE RATING PLAN MANUAL</b>
<b>RR8</b>	<b>STATE SPECIAL RATING VALUES</b>
<i>Proposed Effective July 1, 2016</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	- 10,102	0.267	19,833	- 20,661	0.242	237,857	- 256,908	0.217
10,103	- 10,313	0.266	20,662	- 21,563	0.241	256,909	- 279,278	0.216
10,314	- 10,533	0.265	21,564	- 22,546	0.240	279,279	- 305,915	0.215
10,534	- 10,762	0.264	22,547	- 23,624	0.239	305,916	- 338,169	0.214
10,763	- 11,002	0.263	23,625	- 24,810	0.238	338,170	- 378,026	0.213
11,003	- 11,252	0.262	24,811	- 26,122	0.237	378,027	- 428,534	0.212
11,253	- 11,514	0.261	26,123	- 27,579	0.236	428,535	- 494,620	0.211
11,515	- 11,789	0.260	27,580	- 29,210	0.235	494,621	- 584,806	0.210
11,790	- 12,077	0.259	29,211	- 31,045	0.234	584,807	- 715,212	0.209
12,078	- 12,380	0.258	31,046	- 33,125	0.233	715,213	- 920,467	0.208
12,381	- 12,698	0.257	33,126	- 35,505	0.232	920,468	- 1,290,952	0.207
12,699	- 13,033	0.256	35,506	- 38,254	0.231	1,290,953	- 1,804,544	0.206
13,034	- 13,386	0.255	38,255	- 41,463	0.230	1,804,545	- 1,981,905	0.205
13,387	- 13,758	0.254	41,464	- 45,261	0.229	1,981,906	- 2,197,930	0.204
13,759	- 14,153	0.253	45,262	- 49,824	0.228	2,197,931	- 2,466,809	0.203
14,154	- 14,570	0.252	49,825	- 55,411	0.227	2,466,810	- 2,810,643	0.202
14,571	- 15,012	0.251	55,412	- 62,408	0.226	2,810,644	- 3,265,851	0.201
15,013	- 15,483	0.250	62,409	- 71,429	0.225	3,265,852	- 3,897,004	0.200
15,484	- 15,983	0.249	71,430	- 83,497	0.224	3,897,005	- 4,830,548	0.199
15,984	- 16,518	0.248	83,498	- 100,473	0.223	4,830,549	- 6,352,259	0.198
16,519	- 17,089	0.247	100,474	- 126,113	0.222	6,352,260	- 9,273,619	0.197
17,090	- 17,701	0.246	126,114	- 169,323	0.221	9,273,620	- 17,169,967	0.196
17,702	- 18,359	0.245	169,324	- 207,134	0.220	17,169,968	- OVER	0.195
18,360	- 19,067	0.244	207,135	- 221,434	0.219			
19,068	- 19,832	0.243	221,435	- 237,856	0.218			

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)

0.702

Tax Multiplier

1.032



# XII 000013 STIP

Section XII - Retrospective Rating  
 Subsection D - NCCI's Item R-1411  
 7/1/2016

Section XII - D  
 Exhibit 1  
 Page 1

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

R-1411  
 PAGE 27

**ITEM R-1411—2015 UPDATE TO THE RETROSPECTIVE RATING PLAN HAZARD GROUP DIFFERENTIALS AND MANUAL RULES**

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**EXHIBIT 2  
 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.
- 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.

<u>Step 1</u>	<u>Hazard Group</u>	<u>Michigan</u>	<u>Countrywide</u>
Severities	A	30,107	37,531
	B	38,183	46,430
	C	40,959	51,328
	D	48,634	60,901
	E	56,197	71,019
	F	66,667	86,222
	G	76,865	99,379
 <u>Step 2</u>	Claim Count =	85,363	
	Credibility =	$(85,363 / 155,000)^{0.5} = 0.742$	
 <u>Step 3</u>	<u>Hazard Group</u>	<u>Michigan</u>	
Credibility	A	32,022	= $(0.742)(30,107) + (0.258)(37,531)$
Weighted	B	40,317	
Severities	C	43,633	
	D	51,798	
	E	60,019	
	F	71,710	
	G	82,671	
	Countrywide Overall:	60,093	
 <u>Step 4</u>	<u>Hazard Group</u>	<u>Differentials</u>	
Differentials	A	1.88	= $60,093 / 32,022$
	B	1.49	
	C	1.38	
	D	1.16	
	E	1.00	
	F	0.84	
	G	0.73	

**Note:** The underlying data source for the above calculations is NCCI's *Statistical Plan for Workers Compensation and Employers Liability Insurance (Statistical Plan)*, excluding medical-only claims. The *Statistical Plan* data for each state is adjusted accordingly, as reflected in the data underlying the Excess Loss Factor (ELF) calculation.

# XII 000014 STIP

Section XII - Retrospective Rating  
 Subsection E - State Hazard Group Relativities  
 7/1/2016

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	25,625	37,531	32,972
B	34,251	46,430	40,790
C	41,807	51,328	45,093
D	51,923	60,901	53,504
E	73,778	71,019	62,393
F	91,090	86,222	75,749
G	146,030	99,379	87,308
Overall	52,794	60,093	52,794

Step 2, Credibility:

(5) Massachusetts Claim Count =	43,669
(6) Requirement for Full Credibility =	155,000
(7) Massachusetts Credibility = = [ (5) / (6) ] <sup>0.5</sup>	0.53

Step 3, Credibility Weighted Severities:

Hazard Group (8)	Massachusetts Credibility Weighted Severities (9)
A	31,211
B	39,966
C	46,274
D	56,136
E	72,483
F	88,806
G	124,141

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	1.93	1.82	1.87	1.87
B	1.50	1.47	1.49	1.49
C	1.30	1.33	1.32	1.32
D	1.07	1.12	1.10	1.10
E	0.83	0.96	0.90	0.90
F	0.68	0.79	0.73	0.73
G	0.48	0.69	0.59	0.59

**Notes:**

(2), (5): Lost Time Claim Data for Policy Years 2013 at 1st report, 2012  
 at 2nd report, 2011 at 3rd report, adjusted for trend, law amendments and development factors.  
 Factors are shown on Section XI-A, Exhibit 2.

(3), (6): Section XII - D, Exhibit 1 (NCCI's Item R-1411, Page 27.)

(9) = [ (2) x (7) ] + { (3) x [ 1.0 - (7) ] }

## XII 000023 STIP

Section XII - Retrospective Rating  
 Subsection F - Excess Loss Factors  
 7/1/2016

Section XII - F  
 Exhibit 1  
 Page 1

Excess Loss Factors Proposed to be Effective 07/01/2016

Accident Limit	Hazard Group						
	A	B	C	D	E	F	G
\$25,000	0.403	0.429	0.453	0.474	0.494	0.524	0.556
\$30,000	0.385	0.412	0.437	0.460	0.480	0.511	0.546
\$35,000	0.369	0.396	0.422	0.447	0.468	0.499	0.538
\$40,000	0.354	0.382	0.409	0.435	0.456	0.488	0.530
\$50,000	0.329	0.357	0.385	0.413	0.435	0.469	0.515
\$75,000	0.278	0.307	0.337	0.370	0.393	0.427	0.482
\$100,000	0.241	0.269	0.300	0.335	0.358	0.392	0.454
\$125,000	0.212	0.238	0.269	0.305	0.329	0.362	0.429
\$150,000	0.188	0.212	0.242	0.280	0.302	0.335	0.406
\$175,000	0.169	0.190	0.220	0.258	0.279	0.310	0.385
\$200,000	0.152	0.172	0.200	0.238	0.258	0.288	0.366
\$250,000	0.126	0.142	0.169	0.206	0.223	0.251	0.331
\$300,000	0.107	0.121	0.145	0.180	0.195	0.221	0.302
\$500,000	0.063	0.072	0.088	0.115	0.126	0.145	0.217
\$1,000,000	0.029	0.033	0.042	0.057	0.063	0.073	0.121
\$2,000,000	0.013	0.015	0.019	0.026	0.029	0.034	0.061
\$3,000,000	0.008	0.009	0.012	0.016	0.018	0.021	0.039
\$4,000,000	0.005	0.006	0.008	0.011	0.013	0.015	0.028
\$5,000,000	0.004	0.005	0.006	0.009	0.010	0.011	0.021

**Notes:**

Exhibit 3, page 1 times the Expected Loss Ratio without LAE of 63.7% from Section XII-A, Exhibit 3.

## XII 000024 STIP

Section XII - Retrospective Rating  
 Subsection F - Excess Loss Factors  
 7/1/2016

Section XII - F  
 Exhibit 1  
 Page 2

Excess Loss and ALAE Factors Proposed to be Effective 07/01/2016

Accident Limit	Hazard Group						
	A	B	C	D	E	F	G
\$25,000	0.455	0.482	0.508	0.531	0.553	0.584	0.618
\$30,000	0.435	0.464	0.491	0.515	0.538	0.571	0.608
\$35,000	0.418	0.447	0.475	0.501	0.524	0.559	0.599
\$40,000	0.402	0.432	0.461	0.489	0.512	0.547	0.590
\$50,000	0.375	0.406	0.436	0.466	0.490	0.526	0.575
\$75,000	0.320	0.352	0.385	0.420	0.445	0.483	0.541
\$100,000	0.279	0.311	0.345	0.383	0.408	0.446	0.512
\$125,000	0.247	0.277	0.311	0.351	0.377	0.414	0.485
\$150,000	0.221	0.249	0.283	0.324	0.349	0.385	0.461
\$175,000	0.200	0.225	0.258	0.300	0.324	0.359	0.440
\$200,000	0.181	0.204	0.236	0.279	0.301	0.335	0.419
\$250,000	0.152	0.171	0.201	0.242	0.263	0.294	0.382
\$300,000	0.129	0.146	0.173	0.213	0.232	0.261	0.350
\$500,000	0.077	0.088	0.107	0.139	0.152	0.174	0.257
\$1,000,000	0.036	0.041	0.051	0.070	0.076	0.089	0.146
\$2,000,000	0.016	0.018	0.023	0.033	0.036	0.042	0.074
\$3,000,000	0.010	0.011	0.014	0.020	0.022	0.026	0.048
\$4,000,000	0.007	0.008	0.010	0.014	0.016	0.019	0.035
\$5,000,000	0.005	0.006	0.008	0.011	0.012	0.014	0.027

Excess Loss Factors Effective 9/1/2008

Accident Limit	Hazard Group						
	A	B	C	D	E	F	G
\$25,000	0.382	0.409	0.436	0.460	0.482	0.514	0.552
\$30,000	0.362	0.390	0.417	0.444	0.466	0.499	0.541
\$35,000	0.344	0.373	0.401	0.429	0.451	0.485	0.531
\$40,000	0.328	0.357	0.386	0.415	0.438	0.472	0.521
\$50,000	0.299	0.329	0.359	0.391	0.414	0.449	0.503
\$75,000	0.246	0.275	0.306	0.342	0.366	0.401	0.464
\$100,000	0.208	0.233	0.265	0.303	0.326	0.360	0.430
\$125,000	0.179	0.201	0.232	0.271	0.292	0.325	0.400
\$150,000	0.156	0.176	0.205	0.244	0.264	0.294	0.374
\$175,000	0.137	0.155	0.183	0.221	0.239	0.266	0.350
\$200,000	0.122	0.138	0.164	0.201	0.217	0.243	0.329
\$250,000	0.098	0.112	0.135	0.169	0.183	0.205	0.291
\$300,000	0.081	0.092	0.113	0.144	0.156	0.176	0.260
\$500,000	0.046	0.053	0.066	0.088	0.095	0.108	0.177
\$1,000,000	0.020	0.024	0.030	0.042	0.045	0.051	0.093
\$2,000,000	0.009	0.010	0.013	0.019	0.020	0.023	0.045
\$3,000,000	0.005	0.006	0.008	0.011	0.012	0.014	0.028
\$4,000,000	0.004	0.004	0.006	0.008	0.009	0.010	0.020
\$5,000,000	0.003	0.003	0.004	0.006	0.006	0.007	0.015

Note:  
 9/1/2008 Stipulation. Section XII-F, Exhibit 1, Page 1.

XII 000025 STIP

# XII 000026 STIP

Section XII - Retrospective Rating  
 Subsection F - Excess Loss Factors  
 7/1/2016

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	0.633	0.673	0.711	0.745	0.776	0.822	0.873
\$30,000	0.605	0.646	0.686	0.722	0.754	0.802	0.858
\$35,000	0.579	0.622	0.663	0.701	0.734	0.784	0.844
\$40,000	0.556	0.600	0.642	0.682	0.716	0.767	0.832
\$50,000	0.516	0.560	0.604	0.649	0.683	0.736	0.808
\$75,000	0.437	0.482	0.529	0.581	0.617	0.671	0.757
\$100,000	0.378	0.422	0.470	0.526	0.563	0.616	0.713
\$125,000	0.333	0.373	0.422	0.480	0.516	0.568	0.673
\$150,000	0.296	0.333	0.380	0.440	0.475	0.525	0.638
\$175,000	0.265	0.299	0.345	0.405	0.438	0.487	0.604
\$200,000	0.239	0.270	0.314	0.374	0.405	0.452	0.574
\$250,000	0.198	0.224	0.265	0.323	0.350	0.394	0.520
\$300,000	0.167	0.189	0.227	0.282	0.307	0.347	0.473
\$500,000	0.099	0.112	0.139	0.181	0.198	0.228	0.341
\$1,000,000	0.046	0.052	0.066	0.089	0.098	0.115	0.190
\$2,000,000	0.020	0.023	0.030	0.041	0.046	0.054	0.095
\$3,000,000	0.012	0.014	0.018	0.026	0.028	0.034	0.061
\$4,000,000	0.009	0.010	0.013	0.018	0.020	0.024	0.044
\$5,000,000	0.006	0.007	0.010	0.014	0.015	0.018	0.034

**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	0.112	0.897	0.111	0.898	0.100	0.907	0.084	0.921	0.082	0.922	0.077	0.927	0.054	0.948
\$200,000	0.224	0.809	0.221	0.811	0.200	0.827	0.168	0.851	0.165	0.854	0.155	0.861	0.107	0.900
\$250,000	0.447	0.670	0.443	0.672	0.399	0.696	0.336	0.734	0.329	0.738	0.310	0.751	0.215	0.816
\$300,000	0.671	0.566	0.664	0.569	0.599	0.596	0.504	0.641	0.493	0.646	0.464	0.661	0.322	0.743
\$500,000	1.565	0.335	1.550	0.338	1.398	0.364	1.176	0.411	1.151	0.417	1.083	0.433	0.751	0.535
\$1,000,000	3.801	0.155	3.764	0.157	3.395	0.173	2.855	0.203	2.796	0.207	2.631	0.219	1.824	0.298
\$2,000,000	8.273	0.069	8.192	0.070	7.389	0.078	6.214	0.094	6.085	0.096	5.726	0.103	3.971	0.149
\$3,000,000	12.745	0.042	12.620	0.042	11.383	0.048	9.573	0.058	9.375	0.060	8.822	0.064	6.117	0.096
\$4,000,000	17.217	0.029	17.048	0.029	15.376	0.033	12.932	0.041	12.664	0.042	11.917	0.045	8.264	0.069
\$5,000,000	21.689	0.022	21.476	0.022	19.370	0.025	16.291	0.031	15.953	0.032	15.012	0.034	10.410	0.053

XII 000027 STIP

Notes:

Entry Ratio = ( [ Limit ] - [ \$150,000 Truncation Point ] ) / [ Average Size of Data Truncated and Shifted to \$150,000 ]

For the seven Hazard Groups, the detrended average sizes are \$167,938 for HGA, \$169,601 for HGB, \$188,043 for HGC, \$223,581 for HGD, \$228,322 for HGE, \$242,636 for HGF and \$349,897 for HGG.

Excess Ratio is computed for a Mixed Pareto - Exponential distribution with parameters: 0.7344, 2.3285, 1.4950, 0.6270 (weight to Pareto, Pareto Shape, Pareto Scale, Exponential Scale).

## XII 000028 STIP

Section XII - Retrospective Rating  
 Subsection F - Excess Loss Factors  
 7/1/2016

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	0.633	0.673	0.711	0.745	0.776	0.822	0.873
\$30,000	0.605	0.646	0.686	0.722	0.754	0.802	0.858
\$35,000	0.579	0.622	0.663	0.701	0.734	0.784	0.844
\$40,000	0.556	0.600	0.642	0.682	0.716	0.767	0.832
\$50,000	0.516	0.560	0.604	0.649	0.683	0.736	0.808
\$75,000	0.437	0.482	0.529	0.581	0.617	0.671	0.757
\$100,000	0.378	0.422	0.470	0.526	0.563	0.616	0.713
\$125,000	0.333	0.373	0.422	0.480	0.516	0.568	0.673
\$150,000	0.296	0.333	0.380	0.440	0.475	0.525	0.638
\$175,000	0.266	0.299	0.346	0.405	0.438	0.487	0.605
\$200,000	0.240	0.271	0.316	0.375	0.405	0.451	0.575
\$250,000	0.198	0.226	0.267	0.325	0.349	0.391	0.523
\$300,000	0.168	0.193	0.231	0.287	0.304	0.341	0.479
\$500,000	0.100	0.116	0.145	0.194	0.190	0.212	0.357
\$1,000,000	0.047	0.048	0.077	0.122	0.092	0.103	0.229
\$2,000,000	0.017	0.021	0.043	0.087	0.042	0.048	0.127
\$3,000,000	0.006	0.015	0.033	0.077	0.028	0.029	0.079
\$4,000,000	0.001	0.013	0.027	0.072	0.023	0.019	0.054
\$5,000,000	0.000	0.012	0.024	0.068	0.020	0.014	0.035

**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 Section XI-C, Exhibit 1.



## XII 000029 STIP

Section XII - Retrospective Rating  
 Subsection F - Excess Loss Factors  
 7/1/2016

Section XII - F  
 Exhibit 4

### Mixed Pareto-Exponential Distribution

Parameters:

Pareto shape = s	2.3285
Pareto scale = b	1.4950
Exponential scale = $\theta$	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 = $\theta$	0.6270

Entry Ratio	Excess Ratio	Entry Ratio	Excess Ratio
0.1	0.9067	11	0.0496
0.2	0.8263	12	0.0448
0.3	0.7567	13	0.0407
0.4	0.6960	14	0.0372
0.5	0.6428	15	0.0343
0.6	0.5960	20	0.0241
0.7	0.5546	25	0.0183
0.8	0.5178	30	0.0145
0.9	0.4849	35	0.0119
1.0	0.4555	40	0.0101
1.25	0.3941	45	0.0087
1.5	0.3460	50	0.0076
1.75	0.3075	55	0.0067
2.0	0.2763	60	0.0060
2.50	0.2286	65	0.0054
3.0	0.1942	70	0.0049
3.5	0.1682	75	0.0045
4.0	0.1479	80	0.0041
4.5	0.1316	85	0.0038
5.0	0.1183	90	0.0035
6.0	0.0978	95	0.0033
7.0	0.0828	100	0.0031
8.0	0.0714		
9.0	0.0625		
10.0	0.0554		

Notes:  
 See the Appendix for a sample calculation of an excess ratio.

# XII 000030 STIP

Section XII - Retrospective Rating  
 Subsection F - Excess Loss Factors  
 7/1/2016

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	25,795	12,260	798	
(2) PY 2013 Average Severity	29,747	15,098	898	
(3) Annual Severity Trend - From PY 2013 to Prospective Effective Period	2.6%	3.1%	2.9%	
(4) Trend Factor from PY 9/1/2008 to Prospective Effective Period = $[(2)/(1)] \times [1.000 + (3)]^{3.5}$	1.261	1.371	1.242	
(5) Injury Type Weight at Ultimate	64.74%	30.50%	4.77%	
(6) Total Severity Trend Factor from PY 9/1/2008 to Prospective Effective Period = (4) Weighted by (5)				1.294
(7) Total Benefit Level Change Factor from PY 9/1/2008 to Prospective Effective Period				1.029
(8) Combined Trend and Benefit Factor from PY 9/1/2008 to Prospective Effective Period = (6) x (7)				1.332

**Notes:**

- (1),(2) : From Section V-A, Exhibit 2. PY9/1/2008 is a weighted average of PY2008 and PY2009. = (1/3) x PY2008 + (2/3) x PY2009
- (3): From Section V-A, Exhibit 1.
- (5): From Section IV-E, Exhibit 2.
- (7): From Section IV-A, Exhibit 1.