

DELAWARE COMPENSATION RATING BUREAU, INC.

Indicated Residual Market Rate Change

Page 1 presents the overall indicated changes in rates and loss costs.

Derivation of the indemnity and medical trend factors and trended loss ratios shown on page 1 is presented on pages 2 and 3.

Page 4 shows the derivation of overall frequency trend factors for each of the latest four policy years.

Due to the impact of Senate Bill 1 and consistent with an adjustment to medical severity trend that was a part of the compromise reached with the Insurance Department for the 2009 Filing, medical severity trend is separated between pre-Senate Bill 1 and post-Senate Bill 1 trends. The difference between the two trend rates is a reduction of 1.5 points in medical trend attributed in the resolution of the 2009 filing to effects of the implementation of a medical fee schedule which was substantially operational beginning 9/1/2008. The original adjustment to medical trend was a reduction of 1.8 points; however, certain provisions of Senate Bill 1 were not able to be implemented as initially intended, reducing the estimated impact to 1.5 points as noted above. Senate Bill 238 corrected for those unimplemented provisions of Senate Bill 1 and restored the adjustment to medical trend to a 1.8 point reduction effective January 31, 2013.

In addition, staff is also taking into account the impact of direct savings attributable to Senate Bill 238, House Bill 175 and House Bill 373.

## INDICATED CHANGE IN RATE LEVEL

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
(1a) Policy Year 2011 Loss and Loss Adjustment Expense Ratio	0.2585	0.5742	0.8327
(1b) Policy Year 2012 Loss and Loss Adjustment Expense Ratio	0.2515	0.5592	0.8107
(1c) Policy Year 2013 Loss and Loss Adjustment Expense Ratio	0.2993	0.6383	0.9376
(1d) Policy Year 2014 Loss and Loss Adjustment Expense Ratio	0.2571	0.6031	0.8602
(1e) Average (Midpoint = 7/1/2013)	0.2666	0.5937	0.8603
(2a) Policy Year 2011 Loss and LAE Ratio Trended to 12/1/2017	0.2652	0.6596	
(2b) Policy Year 2012 Loss and LAE Ratio Trended to 12/1/2017	0.2569	0.6261	
(2c) Policy Year 2013 Loss and LAE Ratio Trended to 12/1/2017	0.3044	0.6983	
(2d) Policy Year 2014 Loss and LAE Ratio Trended to 12/1/2017	0.2604	0.6448	
(2e) Average at 12/1/2017	0.2717	0.6572	0.9289
(3ai) Senate Bill 1 Adjustment	1.0000	0.8260	
(3aii) Senate Bill 238 Adjustment	1.0000	0.9958	
(3aiii) House Bill 175 Adjustment	1.0000	0.9397	
(3aiv) House Bill 373 Adjustment	1.0000	0.6826	
(3a) Combined Legislative Adjustment	1.0000	0.5276	
(3b) Average Trended Loss and LAE Ratio Post-Legislation (2e) * (3a)	0.2717	0.3467	0.6184
(4a) Excess Loss Factor at \$1,799,204 (Post-Legislative Basis) *			0.1136
(4b) Provision for Excess Loss (5a) - (3b)			0.0793
(5a) Total Trended Loss and LAE Ratio (3b) / (1.0 - (4a))	0.2807	0.4170	0.6977
(5b) Percentage of Total	40.23%	59.77%	
(6) Permissible Loss and Loss Adjustment Ratio			0.6809
(7) Indicated Change in Rates (5a) / (6)			1.0247
(8) Estimated Effect of the 7/1/17 Benefit Change			1.0069
(9) Indicated Change in Residual Market Rate Level (7) * (8)			1.0318
(10) Indicated Change in Voluntary Market Loss Costs (9) * [0.6999 / 0.7102]			1.0168

## CHANGES IN MANUAL PREMIUM LEVEL BY INDUSTRY GROUP

	<u>Mfg.</u>	<u>Cont.</u>	<u>Other</u>	<u>Total</u>
(11) Current Collectible Premium Ratio	1.0186	1.0230	0.8965	
(12) Proposed Collectible Premium Ratio	1.0282	1.0294	0.9197	
(13) Change in Collectible Premium Ratio (12) / (11)	1.0094	1.0063	1.0259	1.0201
(14) Change in Residual Market Manual Rate Level (9) * (13)	1.0415	1.0383	1.0585	1.0525
(15) Change in Voluntary Market Manual Loss Cost Level (10) * (13)	1.0264	1.0232	1.0431	1.0372
(16) Current Offset for Residual Market Surcharge				0.9883
(17) Proposed Offset for Residual Market Surcharge				0.9905
(18) Adjusted Change in Voluntary Market Manual Loss Cost Level (15) * (17) / (16)	1.0287	1.0255	1.0454	1.0395

\* \$3,550,000 on a Pre-Legislative basis.

# **DETERMINATION OF TREND**

## **INDEMNITY**

Policy Year	2008	2009	2010	2011	2012	2013	2014
Actual Loss Ratio	0.2361	0.2612	0.2537	0.2585	0.2515	0.2993	0.2571
Normalized Frequency	0.5857	0.5841	0.5849	0.5488	0.4927	0.5175	0.4182
Severity Loss Ratio	0.4031	0.4472	0.4337	0.4710	0.5105	0.5784	0.6148
<b>x</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>y</b>	0.4031	0.4472	0.4337	0.4710	0.5105	0.5784	0.6148

**7 Point Exponential Regression:  $y = 0.370420 * 1.071891 ^ x$**

**Selected Annual Trend Factor to 12/1/17 =** 7.2%

Policy Year	Annual Trend Factor (1)	Trend Period # Years to 12/1/17 (2)	Severity Trend Factor (3) = (1)^(2)	Frequency Trend Factor (4) #
2011	1.0719	5.9167	1.5080	0.6804
2012	1.0719	4.9167	1.4068	0.7262
2013	1.0719	3.9167	1.3125	0.7750
2014	1.0719	2.9167	1.2244	0.8271

## **Trended Loss Ratio**

Policy Year	Actual Loss Ratio (5)	Combined Trend Factor (6) = (3)*(4)	Trended Loss Ratio (7) = (5)*(6)
2011	0.2585	1.0260	0.2652
2012	0.2515	1.0216	0.2569
2013	0.2993	1.0172	0.3044
2014	0.2571	1.0127	0.2604
Average			0.2717

# See Page 12.4 for column (4).

# **DETERMINATION OF TREND**

## **MEDICAL**

Policy Year	2008	2009	2010	2011	2012	2013	2014
Actual Loss Ratio	0.4274	0.4915	0.5925	0.5742	0.5592	0.6383	0.6031
Normalized Frequency	0.5857	0.5841	0.5849	0.5488	0.4927	0.5175	0.4182
Severity Loss Ratio	0.7297	0.8415	1.0130	1.0463	1.1350	1.2334	1.4421

x	1	2	3	4	5	6	7
y	0.7297	0.8415	1.0130	1.0463	1.1350	1.2334	1.4421

**7 Point Exponential Regression:  $y = 0.684929 * 1.110000 ^ x$**

**Selected Annual Trend Factor to 9/1/08 =**

**11.0%**

### **Legislative Adjustments to Annual Severity Trend**

**From 9/1/08 to 1/31/13 (SB1) =**

**-1.5%**

**From 1/31/13 and later (SB1, SB238) =**

**-1.8%**

### **Selected Annual Trend Factor**

**From 9/1/08 to 1/31/13 (SB1) =**

**9.5%**

**From 1/31/13 and later (SB1, SB238) =**

**9.2%**

Policy Year	Annual Trend Factor to 1/31/13 (1)	Trend Period # Years to 1/31/13 (2)	Severity Trend Factor to 1/31/13 (3) = (1)^(2)	Annual Trend Factor from 1/31/13 to 12/1/17 (4)	Trend Period # Years to 12/1/17 (5)	Severity Trend Factor from 1/31/13 to 12/1/17 (6) = (4)^(5)	Frequency Trend Factor (7) #
2011	1.095	1.0833	1.1033	1.092	4.8334	1.5302	0.6804
2012	1.095	0.0833	1.0076	1.092	4.8334	1.5302	0.7262
2013	1.095	0.0000	1.0000	1.092	3.9167	1.4116	0.7750
2014	1.095	0.0000	1.0000	1.092	2.9167	1.2927	0.8271

### **Trended Loss Ratio**

Policy Year	Actual Loss Ratio (8)	Combined Trend Factor (9) = (3)*(6)*(7)	Trended Loss Ratio (10) = (8)*(9)
2011	0.5742	1.1487	0.6596
2012	0.5592	1.1197	0.6261
2013	0.6383	1.0940	0.6983
2014	0.6031	1.0692	0.6448
Average			0.6572

# See Page 12.4 for column (7).

## DETERMINATION OF TREND

### CLAIM FREQUENCY

Policy Year Frequency per \$1 million of Expected Losses

Policy Year	Claim Frequency	Normalized Frequency
2002	12.48	1.0000
2003	11.93	0.9559
2004	10.51	0.8421
2005	9.41	0.7540
2006	8.85	0.7091
2007	8.23	0.6594
2008	7.31	0.5857
2009	7.29	0.5841
2010	7.30	0.5849
2011	6.85	0.5488
2012	6.15	0.4927
2013	6.46	0.5175
2014	5.22	0.4182

Policy Year	2008	2009	2010	2011	2012	2013	2014
<b>x</b>	1	2	3	4	5	6	7
<b>y</b>	0.5857	0.5841	0.5849	0.5488	0.4927	0.5175	0.4182

7 Point (2008 - 2014) Exponential Regression:  $y = 0.649288 * 0.950407^x$

Annual Trend Factor = **-5.0%**

Policy Year	2006	2007	2008	2011	2012	2013	2014
<b>x</b>	1	2	3	4	5	6	7
<b>y</b>	0.7091	0.6594	0.5857	0.5488	0.4927	0.5175	0.4182

7 Point (2006 - 2008, 2011 - 2014) Exponential Regression:  $y = 0.763173 * 0.923062^x$

Annual Trend Factor = **-7.7%**

**Selected Annual Trend Factor to 12/1/17 (Average of -5.0% and -7.7%) =**

**-6.3%**

Policy Year	Annual Trend Factor (1)	# of Years to 12/1/17 (2)	Frequency Trend Factor (3) = (1)^(2)
2011	0.9370	5.9167	0.6804
2012	0.9370	4.9167	0.7262
2013	0.9370	3.9167	0.7750
2014	0.9370	2.9167	0.8271