

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.

**INDICATED CHANGE IN RATE LEVEL**

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
(1a) Policy Year 2016 Loss and Loss Adjustment Expense Ratio	0.3392	0.3778	0.7170
(1b) Policy Year 2017 Loss and Loss Adjustment Expense Ratio	0.3064	0.3415	0.6479
(1c) Policy Year 2018 Loss and Loss Adjustment Expense Ratio	0.2740	0.2927	0.5667
(1d) Policy Year 2019 Loss and Loss Adjustment Expense Ratio	0.3171	0.3065	0.6236
(1e) Average (Midpoint = 7/1/2018)	0.3092	0.3296	0.6388
(2a) Policy Year 2016 Loss and LAE Ratio Trended to 12/1/2022	0.2343	0.3015	
(2b) Policy Year 2017 Loss and LAE Ratio Trended to 12/1/2022	0.2253	0.2879	
(2c) Policy Year 2018 Loss and LAE Ratio Trended to 12/1/2022	0.2145	0.2558	
(2d) Policy Year 2019 Loss and LAE Ratio Trended to 12/1/2022	0.2642	0.2773	
(2e) Average at 12/1/2022	0.2346	0.2806	0.5152
(3a) Excess Loss Factor at \$1,732,150 (Post-Legislative Basis)			0.0702
(3b) Provision for Excess Loss (4a) - (2e)			0.0389
(4a) Total Trended Loss and LAE Ratio (2e) / (1.0 - (3a))	0.2383	0.3158	0.5541
(4b) Percentage of Total	43.01%	56.99%	
(5) Permissible Loss and Loss Adjustment Ratio			0.6812
(6) Indicated Change in Rates (4a) / (5)			0.8134
(7) Estimated Effect of the 7/1/22 Benefit Change			1.0036
(8) Indicated Change in Residual Market Rate Level (6) * (7)			0.8163
(8a) Factor to Adjust for Compromise With Insurance Department			0.97991
(8b) Change in Residual Market Rate Level to Reflect Compromise (8) * (8a)			0.7999
			<b>-20.01%</b>
(9) Indicated Change in Voluntary Market Loss Costs			0.8060
(9a) Factor to Adjust for Compromise With Insurance Department			0.97991
(9b) Change in Voluntary Market Loss Cost Level to Reflect Compromise (9) * (9a)			0.7898
(8b) / Change in Average LCMs [1.4094 / 1.3916]			<b>-21.02%</b>
LCM = (1 / Loss, LAE and Administrative Assessment Ratio)			
	<b>Mfg.</b>	<b>Cont.</b>	<b>Other</b>
	<b>Total</b>		
(10) Current Collectible Premium Ratio	1.0913	1.0498	0.9260
(11) Proposed Collectible Premium Ratio	1.0621	1.0579	0.9069
(12) Change in Collectible Premium Ratio (11) / (10)	0.9732	1.0077	0.9794
			0.9841
(13) Change in Residual Market Manual Rate Level (8b) * (12)	0.7785	0.8061	0.7834
			0.7872
(14) Change in Voluntary Market Manual Loss Cost Level (9b) * (12)	0.7686	0.7959	0.7735
			0.7772
(15) Current Offset for Residual Market Surcharge			0.9957
(16) Proposed Offset for Residual Market Surcharge			0.9965
(17) Adjusted Change in Voluntary Market Manual Loss Cost Level	0.7692	0.7965	0.7741
(14) * (16) / (15)			0.7778

**DETERMINATION OF TREND**

**INDEMNITY**

Policy Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Actual Loss Ratio	0.4125	0.4125	0.4049	0.4394	0.3702	0.3637	0.3392	0.3064	0.2740	0.3171
Normalized Frequency	0.9640	0.8895	0.8008	0.8259	0.7238	0.7473	0.6427	0.6594	0.5908	0.6176
Severity Loss Ratio	0.4279	0.4637	0.5056	0.5320	0.5114	0.4867	0.5278	0.4647	0.4638	0.5135
<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>8</b>	<b>9</b>	<b>10</b>
<b>y</b>	0.4279	0.4637	0.5056	0.5320	0.5114	0.4867	0.5278	0.4647	0.4638	0.5135

**7 Point Exponential Regression:  $y = 0.524723 * 0.987654 ^ x$**

**Selected Annual Trend =**

Policy Year	Annual Trend Factor (1)	Trend Period # Years to 12/1/22 (2)	Severity Trend Factor (3) = (1)^(2)	Frequency Trend Factor (4) #
2016	0.9877	5.9167	0.9291	0.7434
2017	0.9877	4.9167	0.9407	0.7816
2018	0.9877	3.9167	0.9525	0.8217
2019	0.9877	2.9167	0.9644	0.8640

**Trended Loss Ratio**

Policy Year	Actual Loss Ratio (5)	Combined Trend Factor (6) = (3)*(4)	Trended Loss Ratio (7) = (5)*(6)
2016	0.3392	0.6907	0.2343
2017	0.3064	0.7353	0.2253
2018	0.2740	0.7827	0.2145
2019	0.3171	0.8332	0.2642
Average			0.2346

# See Page 12.4 for column (4).

**DETERMINATION OF TREND**

**MEDICAL**

Policy Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Actual Loss Ratio	0.4407	0.3891	0.3695	0.4269	0.3625	0.3827	0.3778	0.3415	0.2927	0.3065
Normalized Frequency	0.9640	0.8895	0.8008	0.8259	0.7238	0.7473	0.6427	0.6594	0.5908	0.6176
Severity Loss Ratio	0.4571	0.4374	0.4614	0.5169	0.5008	0.5121	0.5879	0.5179	0.4954	0.4963
<b>x</b>	1	2	3	4	5	6	7	8	9	10
<b>y</b>	0.4571	0.4374	0.4614	0.5169	0.5008	0.5121	0.5879	0.5179	0.4954	0.4963

**7 Point Exponential Regression:  $y = 0.534797 * 0.995282 ^ x$**

**Selected Annual Trend Factor to 1/31/2018 =**

**10 Point Exponential Regression:  $y = 0.455567 * 1.015871 ^ x$**

**Selected Annual Trend Factor from 1/31/2018 and later =**

Policy Year	Annual Trend Factor to 1/31/18 (1)	Trend Period # Years to 1/31/18 (2)	Severity Trend Factor to 1/31/18 (3) = (1) ^ (2)	Annual Severity Trend Factor from 1/31/18 to 12/1/22 (4)	# of Years Trend Period from 1/31/18 to 12/1/22 (5)	Severity Trend Factor (6) = (4)^(5)	Frequency Trend Factor (7) #
2016	0.9953	1.0833	0.9949	1.0159	4.8334	1.0791	0.7434
2017	0.9953	0.0833	0.9996	1.0159	4.8334	1.0791	0.7816
2018	0.9953	0.0000	1.0000	1.0159	3.9167	1.0636	0.8217
2019	0.9953	0.0000	1.0000	1.0159	2.9167	1.0470	0.8640

**Trended Loss Ratio**

Policy Year	Actual Loss Ratio (8)	Combined Trend Factor (9) = (3)*(6)*(7)	Trended Loss Ratio (10) = (8)*(9)
2016	0.3778	0.7981	0.3015
2017	0.3415	0.8431	0.2879
2018	0.2927	0.8740	0.2558
2019	0.3065	0.9046	0.2773
Average			0.2806

# 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
2009	11.95	1.0000
2010	11.52	0.9640
2011	10.63	0.8895
2012	9.57	0.8008
2013	9.87	0.8259
2014	8.65	0.7238
2015	8.93	0.7473
2016	7.68	0.6427
2017	7.88	0.6594
2018	7.06	0.5908
2019	7.38	0.6176

Policy Year	2013	2014	2015	2016	2017	2018	2019
<b>x</b>	1	2	3	4	5	6	7
<b>y</b>	0.8259	0.7238	0.7473	0.6427	0.6594	0.5908	0.6176

**7 Point (2013 - 2019) Exponential Regression:  $y = 0.834199 * 0.951111 ^ x$**

**Selected Annual Trend = -4.9%**

Policy Year	Annual Trend Factor (1)	# of Years to 12/1/22 (2)	Frequency Trend Factor (3) = (1)^(2)
2016	0.9511	5.9167	0.7434
2017	0.9511	4.9167	0.7816
2018	0.9511	3.9167	0.8217
2019	0.9511	2.9167	0.8640