

DELAWARE COMPENSATION RATING BUREAU, INC.

Review of Experience Rating Plan Parameters

Page 20.1 contains Collectible Premium Ratios.

Page 20.2 contains Expected Loss Cost Factors. They are applied to residual market rates by classification to produce Table A, Expected Loss Factors, which are the basis for the calculation of Expected Losses.

Page 20.3 contains the derivation of various factors, i.e. maximum single loss size, self-rating point, that are used to produce Table B.

## COLLECTIBLE PREMIUM RATIOS \*

Manual Years 2014 to 2016 Market Profile Report Data

Manual Year	Premium at Manual Rates	Collected Premium (Excluding Constants)	Collectible Premium Ratio (2)/(3)
(1)	(2)	(3)	(4)
ALL INDUSTRIES			
2014	258,211,562	260,286,052	0.9920
2015	247,095,158	259,025,925	0.9539
2016	286,601,879	297,368,719	0.9638
TOTAL	791,908,599	816,680,696	0.9697
MANUFACTURING AND UTILITIES			
2014	34,335,697	31,534,717	1.0888
2015	33,641,793	30,869,674	1.0898
2016	35,919,716	32,826,790	1.0942
TOTAL	103,897,207	95,231,181	1.0910
CONTRACTING AND QUARRYING			
2014	50,143,592	47,541,230	1.0547
2015	48,303,173	46,969,170	1.0284
2016	57,816,413	55,135,715	1.0486
TOTAL	156,263,179	149,646,115	1.0442
OTHER INDUSTRIES			
2014	173,732,273	181,210,105	0.9587
2015	165,150,191	181,187,081	0.9115
2016	192,865,750	209,406,215	0.9210
TOTAL	531,748,213	571,803,400	0.9299

\* Excludes classifications and coverages not subject to experience rating.

**CALCULATION OF EXPECTED LOSS RATE FACTORS**

<b>Policy Year Beginning 12/1 (1)</b>	<b>Average Law Multiplier (2)</b>	<b>Adjustment Factor (3)</b>	<b>Loss Ratio Development Factor (4)</b>	<b>Expense Allowance ** 1 / (PLR/CPR) (5)</b>	<b>Trend Factor (6)</b>	<b>Product (2) * (3) * (4) * (5) * (6) (7)</b>	<b>Expected Loss Rate Factor 1.0 / (7) (8)</b>	<b>Factor to Reflect Approved Rate Levels* (9)</b>	<b>Combined Effect (8) * (9) (10)</b>
<b><u>Manufacturing and Utilities</u></b>									
2013	0.9236	1.0000	1.6885	1.8688	1.2960	3.7771	0.2648	1.0087	0.2671
2014	0.9614	1.0000	1.7518	1.8688	1.2139	3.8206	0.2617	1.0087	0.2640
2015	0.9849	1.0000	2.5313	1.8688	1.1375	5.2997	0.1887	1.0087	0.1903
<b><u>Contracting and Quarrying</u></b>									
2013	0.9236	1.0000	1.5963	1.7886	1.2960	3.4176	0.2926	1.0087	0.2951
2014	0.9614	1.0000	1.8923	1.7886	1.2139	3.9499	0.2532	1.0087	0.2554
2015	0.9849	1.0000	2.5263	1.7886	1.1375	5.0622	0.1975	1.0087	0.1992
<b><u>Other Industries</u></b>									
2013	0.9236	1.0000	1.6005	1.5928	1.2960	3.0514	0.3277	1.0087	0.3306
2014	0.9614	1.0000	1.8439	1.5928	1.2139	3.4276	0.2917	1.0087	0.2942
2015	0.9849	1.0000	2.3951	1.5928	1.1375	4.2739	0.2340	1.0087	0.2360

\* (12/1/17 Filed Change in Manual Rate Level)/(12/1/17 Approved Change in Manual Rate Level) by Industry Group, from Exhibit 12, Page 1.

\*\* Permissible Loss Ratio = 0.5838  
 Collectible Premium Ratios  
     Manufacturing = 1.0910  
     Contracting = 1.0442  
     All Other = 0.9299

Experience Rating Plan Parameters

(1)	Eligibility Point = (3,161 = 1 yr Prem)      3 yr =	\$9,483
(2)	Permissible Loss Ratio =	0.6020 (a)
(3)	Expected Losses needed to achieve 5% credibility (1) * (2) = \$9,483 * 0.6020 =	\$5,709
(4)	Max Value : $\frac{0.25 * \$5,709}{0.05} =$	\$28,545
(5)	K-Value a) If (3) is assigned 5% credibility, then $K = \frac{E * (1 - c)}{c} = \frac{\$5,709 * (1 - .05)}{.05} =$	\$108,471
(6)	.055 Credibility Interval - the .0525 left endpoint corresponds to $E = \frac{(K * C)}{(1 - C)} = \frac{\$108,471 * .0525}{.9475} =$	\$6,010
(7)	Right endpoint for .05 credibility interval =	\$6,009
(8)	Self rating point = 25 * average serious claim  = 25 * \$304,144 =	\$7,603,600
	6% of (8) rounded to the nearest \$1,000 =	\$456,000
	Selected =	\$456,000

(a) Standard LR / CPR = Manual LR  
0.5838 / 0.9697 = 0.6020