

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 2015 to 2017 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			
2015	257,877,946	270,816,210	0.9522
2016	293,201,296	301,256,550	0.9733
2017	313,670,999	329,103,892	0.9531
TOTAL	864,750,241	901,176,651	0.9596
MANUFACTURING AND UTILITIES			
2015	35,968,946	32,877,651	1.0940
2016	35,937,227	32,692,578	1.0992
2017	38,953,163	35,365,073	1.1015
TOTAL	110,859,336	100,935,302	1.0983
CONTRACTING AND QUARRYING			
2015	49,604,268	48,128,370	1.0307
2016	61,563,634	58,417,371	1.0539
2017	61,886,594	59,290,571	1.0438
TOTAL	173,054,497	165,836,311	1.0435
OTHER INDUSTRIES			
2015	172,304,732	189,810,188	0.9078
2016	195,700,435	210,146,601	0.9313
2017	212,831,242	234,448,248	0.9078
TOTAL	580,836,409	634,405,038	0.9156

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

**EXPECTED LOSS RATE FACTORS**

**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>									
2014	0.9558	1.0000	1.5997	1.8647	1.2567	3.5830	0.2791	1.0006	0.2793
2015	0.9914	1.0000	2.0079	1.8647	1.1863	4.4035	0.2271	1.0006	0.2272
2016	1.0023	1.0000	2.5133	1.8647	1.1202	5.2619	0.1900	1.0006	0.1901
<b><u>Contracting and Quarrying</u></b>									
2014	0.9558	1.0000	1.7108	1.7716	1.2567	3.6405	0.2747	1.0006	0.2749
2015	0.9914	1.0000	1.8856	1.7716	1.1863	3.9288	0.2545	1.0006	0.2547
2016	1.0023	1.0000	2.2604	1.7716	1.1202	4.4962	0.2224	1.0006	0.2225
<b><u>Other Industries</u></b>									
2014	0.9558	1.0000	1.6580	1.5545	1.2567	3.0958	0.3230	1.0007	0.3232
2015	0.9914	1.0000	1.9050	1.5545	1.1863	3.4828	0.2871	1.0007	0.2873
2016	1.0023	1.0000	2.5715	1.5545	1.1202	4.4882	0.2228	1.0007	0.2230

\* (12/1/18 Filed Change in Manual Rate Level)/(12/1/18 Approved Change in Manual Rate Level) by Industry Group, from Exhibit 12, Page 1.

\*\* Permissible Loss Ratio = 0.5890  
 Collectible Premium Ratios  
     Manufacturing = 1.0983  
     Contracting = 1.0435  
     All Other = 0.9156

### Experience Rating Plan Parameters

(1)	Eligibility Point = (3,161 = 1 yr Prem)                      3 yr =	\$9,483
(2)	Permissible Loss Ratio =	0.6138 (a)
(3)	Expected Losses needed to achieve 5% credibility (1) * (2) = \$9,483 * 0.6138 =	\$5,821
(4)	Max Value : $\frac{0.25 * \$5,821}{0.05} =$	\$29,105
(5)	K-Value a) If (3) is assigned 5% credibility, then $K = \frac{E * (1 - c)}{c} = \frac{\$5,821 * (1 - .05)}{.05} =$	\$110,599
(6)	.055 Credibility Interval - the .0525 left endpoint corresponds to $E = \frac{(K * C)}{(1 - C)} = \frac{\$110,599 * .0525}{.9475} =$	\$6,128
(7)	Right endpoint for .05 credibility interval =	\$6,127
(8)	Self rating point = 25 * average serious claim  = 25 * \$336,437 =	\$8,410,925
	6% of (8) rounded to the nearest \$1,000 =	\$505,000
	Selected =	\$505,000

(a) Standard LR / CPR = Manual LR  
0.5890 / 0.9596 = 0.6138