

PENNSYLVANIA COMPENSATION RATING BUREAU

Review of Experience Rating Plan Parameters

Page 19.1 contains Collectible Premium Ratios.

Page 19.2 contains Expected Loss Cost Factors. They are applied to loss costs by classification to produce Table A (Expected Loss Factors) which are the basis for the calculation of Expected Losses.

Page 19.3 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 1997, 1998 and 1999 Unit Data

Manual Year	Premium at Manual Rates	Collected Premium (Excluding Constants)	Collectible Premium Ratio (2)/(3)
(1)	(2)	(3)	(4)
ALL INDUSTRIES			
1997	2,449,775,686	2,313,513,146	1.0589
1998	2,331,723,028	2,203,990,974	1.0580
1999	2,447,001,547	2,284,864,193	1.0710
TOTAL	7,228,500,261	6,802,368,313	1.0626
MANUFACTURING AND UTILITIES			
1997	711,548,028	660,544,464	1.0772
1998	639,306,200	591,580,316	1.0807
1999	647,589,670	581,531,035	1.1136
TOTAL	1,998,443,898	1,833,655,815	1.0899
CONTRACTING AND QUARRYING			
1997	392,193,280	370,761,616	1.0578
1998	385,038,067	366,820,242	1.0497
1999	427,820,701	407,395,995	1.0501
TOTAL	1,205,052,048	1,144,977,853	1.0525
OTHER INDUSTRIES			
1997	1,346,034,378	1,282,207,066	1.0498
1998	1,307,378,761	1,245,590,416	1.0496
1999	1,371,591,176	1,295,937,163	1.0584
TOTAL	4,025,004,315	3,823,734,645	1.0526

* Excludes classifications and coverages not subject to experience rating

CALCULATION OF EXPECTED LOSS COST FACTORS (a)

Policy Year Beginning 4/1 (1)	Act 57 Adjust- ment (2)	Adjust- ment Factor (3)	Loss Ratio Development Factor (4)	Collectible Premium Ratio (5)	Trend Factor (6)	Product (2) * (3) * (4) *(5) * (6) (7)	Expected Loss Cost Factor 1.0 / (7) (8)
<u>Manufacture and Utilities</u>							
1999	1.0000	1.0000	1.2352	1.0899	1.1241	1.5133	0.6608
2000	1.0000	1.0000	1.3750	1.0899	1.0915	1.6357	0.6114
2001	1.0000	1.0000	1.7509	1.0899	1.0599	2.0226	0.4944
<u>Contracting and Quarrying</u>							
1999	1.0000	1.0000	1.3094	1.0525	1.1241	1.5492	0.6455
2000	1.0000	1.0000	1.4611	1.0525	1.0915	1.6785	0.5958
2001	1.0000	1.0000	1.8058	1.0525	1.0599	2.0145	0.4964
<u>Other Industries</u>							
1999	1.0000	1.0000	1.2436	1.0526	1.1241	1.4715	0.6796
2000	1.0000	1.0000	1.4027	1.0526	1.0915	1.6116	0.6205
2001	1.0000	1.0000	1.7502	1.0526	1.0599	1.9526	0.5121

a Apply to pure Loss Costs (pre-LBA, Merit Rating Plan, PCCPAP and Certified Safety Committee adjustments).

Experience Rating Plan Parameters

(1)	Current Premium Eligibility Point = Expected Losses needed to achieve 5% credibility		\$10,000
(2)	Max Value :	$\frac{.25 * \$10,000}{0.05} =$	\$50,000
(3)	K-Value a) If (1) is assigned 5% credibility, then $K = \frac{E(1-c)}{c} = \frac{10,000 * (1-.05)}{0.05} =$		\$190,000
(4)	.055 Credibility Interval - the .0525 left endpoint corresponds to $E = \frac{(K * C)}{(1-C)} =$	$\frac{190,000 * .0525}{.9475} =$	\$10,528
(5)	Right endpoint for .05 credibility interval =		\$10,527
(6)	Average serious claim =	228,462	
(7)	Self rating point = 25 * selected average serious claim		\$5,711,550
	6% of (7) rounded to the nearest \$1,000 =		343,000