

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 1996, 1997 and 1998 Unit Data

Manual Year (1)	Premium at Manual Rates (2)	Collected Premium (Excluding Constants) (3)	Collectible Premium Ratio (2)/(3) (4)
ALL INDUSTRIES			
1996	3,051,117,250	2,817,960,241	1.0827
1997	2,417,732,516	2,283,412,494	1.0588
1998	2,311,278,452	2,188,993,530	1.0559
TOTAL	7,780,128,218	7,290,366,265	1.0672
MANUFACTURING AND UTILITIES			
1996	911,733,922	820,414,114	1.1113
1997	702,145,376	652,751,601	1.0757
1998	630,616,988	588,197,312	1.0721
TOTAL	2,244,496,286	2,061,363,027	1.0888
CONTRACTING AND QUARRYING			
1996	493,987,330	453,651,207	1.0889
1997	390,490,250	368,039,142	1.0610
1998	383,833,587	363,906,258	1.0548
TOTAL	1,268,311,167	1,185,596,607	1.0698
OTHER INDUSTRIES			
1996	1,645,395,998	1,543,894,920	1.0657
1997	1,325,096,890	1,262,621,751	1.0495
1998	1,296,827,877	1,236,889,960	1.0485
TOTAL	4,267,320,765	4,043,406,631	1.0554

* 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>							
1998	1.0000	1.0000	1.2077	1.0888	1.1477	1.5092	0.6626
1999	1.0000	1.0000	1.3758	1.0888	1.1082	1.6601	0.6024
2000	1.0000	1.0000	1.7454	1.0888	1.0705	2.0344	0.4915
<u>Contracting and Quarrying</u>							
1998	1.0000	1.0000	1.2510	1.0698	1.1477	1.5360	0.6510
1999	1.0000	1.0000	1.4278	1.0698	1.1082	1.6927	0.5908
2000	1.0000	1.0000	1.7937	1.0698	1.0705	2.0542	0.4868
<u>Other Industries</u>							
1998	1.0000	1.0000	1.2169	1.0554	1.1477	1.4740	0.6784
1999	1.0000	1.0000	1.3893	1.0554	1.1082	1.6249	0.6154
2000	1.0000	1.0000	1.7586	1.0554	1.0705	1.9869	0.5033

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 =	223,394	
(7)	Self rating point = 25 * selected average serious claim		\$5,584,850
	6% of (7) rounded to the nearest \$1,000 =		335,000