

PENNSYLVANIA COMPENSATION RATING BUREAU

Indicated Change in Loss Cost

Page 1

Page 1 presents the overall indicated change in loss costs. Derivation of the trended loss ratios on page 1 are shown on pages 2 and 3.

Page 2

Derivation of trend factors and trended loss ratios are presented on page 2 for Indemnity (top) and Medical (bottom).

Indemnity severity ratios, defined herein as loss ratios adjusted by dividing out the frequency component, have been fitted using a five point exponential regression and medical severity ratios are fitted using an eight point exponential curve.

Severity trend factors are calculated by fitting severity ratios to curves using a least squares regression analysis and comparing the fitted values at 4/1/04 to the fitted values at the midpoints of the latest three available policy years.

Frequency trend factors are derived on page 3.

The resulting severity and frequency trend factors are then applied to the three most recent available policy year loss ratios to generate projected ultimate trended loss ratios.

Page 3

As described in Exhibit 8, staff has selected an annual frequency trend of -6.3% from 1/1/01 to 4/1/04. Page 3 derives overall frequency trend factors for each of the latest three available policy years.

INDICATED CHANGE IN LOSS COSTS

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
(1) Policy Year 1998 Ratio of Loss to Expected Loss	0.4560	0.4464	0.9024
(2) Policy Year 1999 Ratio of Loss to Expected Loss	0.4775	0.4459	0.9234
(3) Policy Year 2000 Ratio of Loss to Expected Loss	0.4877	0.4609	0.9486
(4) Average (Midpoint = 1/1/2000)	0.4737	0.4511	0.9248
(5) Policy Year 1998 Ratio Trended to 4/1/2004 +	0.4846	0.4865	0.9711
(6) Policy Year 1999 Ratio Trended to 4/1/2004 +	0.4967	0.4734	0.9701
(7) Policy Year 2000 Ratio Trended to 4/1/2004 +	0.5077	0.4874	0.9951
(8) Average at 4/1/2004	0.4963	0.4824	0.9787
(9) Savings at 9/1/1993	0.9943	1.0000	
(10) Act 57 Savings	1.0000	1.0000	
(11) Combined Impact: Act 44 & Act 57 (9) * (10)	0.9943	1.0000	0.9971
(12) Indicated Change in Loss Costs (8) * (11)	0.4935	0.4824	0.9759

CHANGES IN MANUAL LOSS COST LEVEL BY INDUSTRY GROUP

	<u>Mfg.</u>	<u>Cont.</u>	<u>Other</u>	<u>Total</u>
(13) Current Collectible Premium Ratio	1.0888	1.0698	1.0554	1.0672
(14) Anticipated Collectible Premium Ratio	1.0899	1.0525	1.0526	1.0626
(15) Final Indicated Change in Manual Loss Cost Level (12T) * (14) / (13)	0.9769	0.9601	0.9733	0.9717

+ Refer to pages 12.2 and 12.3

DETERMINATION OF TREND

INDEMNITY

Policy Year	1996	1997	1998	1999	2000
Actual Loss Ratio	0.4558	0.4815	0.4560	0.4775	0.4877
Normalized Frequency	0.5444	0.5168	0.4805	0.4542	0.4201
Severity Loss Ratio	0.8373	0.9317	0.9490	1.0513	1.1609
x	1	2	3	4	5
y	0.8373	0.9317	0.9490	1.0513	1.1609

5 Point Exponential Regression: $y = 0.776793 * 1.08051 ^ x$

Policy Year	Fitted Value @ Midpoint of PY (1)	Fitted Value @ 4/1/04 (2)	Severity Trend Factor (3) = (2) / (1)	Frequency Trend Factor (4) #
1998	0.9799	1.4714	1.5016	0.7077
1999	1.0588	1.4714	1.3897	0.7486
2000	1.1441	1.4714	1.2861	0.8094

Trended Loss Ratio

Policy Year	Actual Loss Ratio (5)	Combined Trend Factor (6) = (3)*(4)	Trended Loss Ratio (7) = (5) * (6)
1998	0.4560	1.0627	0.4846
1999	0.4775	1.0403	0.4967
2000	0.4877	1.0410	0.5077

MEDICAL

Policy Year	1993	1994	1995	1996	1997	1998	1999	2000
Actual Loss Ratio	0.4589	0.4453	0.4436	0.4125	0.4469	0.4464	0.4459	0.4609
Normalized Frequency	0.7522	0.6742	0.6003	0.5444	0.5168	0.4805	0.4542	0.4201
Severity Loss Ratio	0.6101	0.6605	0.7390	0.7577	0.8647	0.9290	0.9817	1.0971
x	1	2	3	4	5	6	7	8
y	0.6101	0.6605	0.7390	0.7577	0.8647	0.9290	0.9817	1.0971

8 Point Exponential Regression: $y = 0.563125 * 1.085709 ^ x$

Policy Year	Fitted Value @ Midpoint of PY (1)	Fitted Value @ 4/1/04 (2)	Severity Trend Factor (3) = (2) / (1)	Frequency Trend Factor (4) #
1998	0.9223	1.4203	1.5400	0.7077
1999	1.0014	1.4203	1.4183	0.7486
2000	1.0872	1.4203	1.3064	0.8094

Trended Loss Ratio

Policy Year	Actual Loss Ratio (5)	Combined Trend Factor (6) = (3)*(4)	Trended Loss Ratio (7) = (5) * (6)
1998	0.4464	1.0899	0.4865
1999	0.4459	1.0617	0.4734
2000	0.4609	1.0574	0.4874

See page 12.3 for column (4).

DETERMINATION OF TREND

Claim Frequency

Policy Year Frequency per \$1 million of Expected Losses

{1 = PY 1989, 12 = PY 2000}

TREND FACTOR TO 1/1/01

Policy Year	Claim Frequency	Normalized Frequency	Trend Factor to 1/1/00
1989	46.31	1.0000	0.4201
1990	43.82	0.9462	0.4440
1991	40.47	0.8739	0.4807
1992	37.43	0.8083	0.5197
1993	34.83	0.7522	0.5585
1994	31.22	0.6742	0.6231
1995	27.80	0.6003	0.6998
1996	25.21	0.5444	0.7717
1997	23.93	0.5168	0.8129
1998	22.25	0.4805	0.8743
1999	21.03	0.4542	0.9249
2000	19.45	0.4201	1.0000

TREND FACTOR FROM 1/1/01 TO 4/1/04

(1)	Selected Annual Trend Factor from 1/1/01 to 12/31/01	0.9370
(2)	Selected Annual Trend Factor from 1/1/02 to 12/31/03	0.9370
(3)	Selected Annual Trend Factor from 1/1/03 to 4/1/04	0.9370
(4)	Selected Trend Factor from 1/1/01 to 4/1/04: (1)*(2)*(3) ^{1.25}	0.8094

TOTAL FREQUENCY TREND FACTOR TO 4/1/04

Policy Year	Trend to 1/1/01	Trend from 1/1/01 - 4/1/04	Total to 4/1/04
1998	0.8743	0.8094	0.7077
1999	0.9249	0.8094	0.7486
2000	1.0000	0.8094	0.8094