

PENNSYLVANIA COMPENSATION RATING BUREAU

Indicated Change in Loss Cost

Page 1 presents the overall indicated change in loss costs.

Derivation of the indemnity and medical trend factors and trended loss ratios shown on page 1 is presented on page 2. Severity ratios, defined herein as loss ratios adjusted by dividing out the frequency component, for both indemnity and medical, have been fitted using a seven 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 4/1/06 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 latest three available policy year loss ratios to generate projected ultimate trended loss ratios.

As described in Exhibit 8, staff has selected an annual frequency trend of -6.2%. Page 3 shows the derivation of 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 2000 Ratio of Loss to Expected Loss	0.5061	0.4606	0.9667
(2)	Policy Year 2001 Ratio of Loss to Expected Loss	0.4893	0.4310	0.9203
(3)	Policy Year 2002 Ratio of Loss to Expected Loss	0.4756	0.4406	0.9162
(4)	Average (Midpoint = 1/1/2002)	0.4903	0.4441	0.9344
(5)	Policy Year 2000 Ratio Trended to 4/1/2006 +	0.5436	0.4738	1.0174
(6)	Policy Year 2001 Ratio Trended to 4/1/2006 +	0.5184	0.4409	0.9593
(7)	Policy Year 2002 Ratio Trended to 4/1/2006 +	0.4970	0.4484	0.9454
(8)	Average at 4/1/2006	0.5197	0.4544	0.9741
(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	0.9969
(12)	Indicated Change in Loss Costs (8) * (11)	0.5167	0.4544	0.9711

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	1.0835	1.0805	1.0530	
(14)	Anticipated Collectible Premium Ratio	1.1115	1.1044	1.0717	
(15)	Final Indicated Change in Manual Loss Cost Level (12T) * (14) / (13)	0.9962	0.9926	0.9883	0.9910

+ Refer to pages 12.2 and 12.3

DETERMINATION OF TREND

INDEMNITY

Policy Year	1996	1997	1998	1999	2000	2001	2002
Actual Loss Ratio	0.4466	0.4725	0.4516	0.4863	0.5061	0.4893	0.4756
Normalized Frequency	0.6250	0.5909	0.5501	0.5150	0.4819	0.4516	0.4288
Severity Loss Ratio	0.7146	0.7996	0.8209	0.9443	1.0502	1.0835	1.1091

x	1	2	3	4	5	6	7
y	0.7146	0.7996	0.8209	0.9443	1.0502	1.0835	1.1091

7 Point Exponential Regression: $y = 0.674703 * 1.08069 ^ x$

Policy Year	Fitted Value @ Midpoint of PY (1)	Fitted Value @ 4/1/05 (2)	Severity Trend Factor (3) = (2) / (1)	Frequency Trend Factor (4) #
2000	0.9203	1.3831	1.5029	0.7146
2001	0.9945	1.3831	1.3907	0.7618
2002	1.0748	1.3831	1.2868	0.8122

Trended Loss Ratio

Policy Year	Actual Loss Ratio (5)	Combined Trend Factor (6) = (3)*(4)	Trended Loss Ratio (7) = (5) * (6)
2000	0.5061	1.0740	0.5436
2001	0.4893	1.0594	0.5184
2002	0.4756	1.0451	0.4970

MEDICAL

Policy Year	1996	1997	1998	1999	2000	2001	2002
Actual Loss Ratio	0.4136	0.4479	0.4471	0.4541	0.4606	0.4310	0.4406
Normalized Frequency	0.6250	0.5909	0.5501	0.5150	0.4819	0.4516	0.4288
Severity Loss Ratio	0.6618	0.7580	0.8128	0.8817	0.9558	0.9544	1.0275

x	1	2	3	4	5	6	7
y	0.6618	0.7580	0.8128	0.8817	0.9558	0.9544	1.0275

7 Point Exponential Regression: $y = 0.64861 * 1.071843 ^ x$

Policy Year	Fitted Value @ Midpoint of PY (1)	Fitted Value @ 4/1/05 (2)	Severity Trend Factor (3) = (2) / (1)	Frequency Trend Factor (4) #
2000	0.8561	1.2323	1.4394	0.7146
2001	0.9176	1.2323	1.3430	0.7618
2002	0.9835	1.2323	1.2530	0.8122

Trended Loss Ratio

Policy Year	Actual Loss Ratio (5)	Combined Trend Factor (6) = (3)*(4)	Trended Loss Ratio (7) = (5) * (6)
2000	0.4606	1.0286	0.4738
2001	0.4310	1.0231	0.4409
2002	0.4406	1.0177	0.4484

See page 12.3 for column (4).

DETERMINATION OF TREND

Claim Frequency

Policy Year Frequency per \$1 million of Expected Losses
{1 = PY 1991, 12 = PY 2002}

Policy Year	Claim Frequency	Normalized Frequency
1991	39.91	1.0000
1992	36.94	0.9256
1993	34.34	0.8605
1994	30.70	0.7693
1995	27.35	0.6854
1996	24.94	0.6250
1997	23.58	0.5909
1998	21.95	0.5501
1999	20.55	0.5150
2000	19.23	0.4819
2001	18.02	0.4516
2002	17.11	0.4288

Policy Year	1996	1997	1998	1999	2000	2001	2002
x	1	2	3	4	5	6	7
y	0.6250	0.5909	0.5501	0.5150	0.4819	0.4516	0.4288

7 Point Exponential Regression: $y = 0.66757 * 0.937725 ^ x$

SELECTED FREQUENCY TREND FACTOR

-6.2%

Policy Year	Frequency Trend Factor (1)	# of years to 4/1/05 (2)	Frequency Trend to 4/1/05 (3) = (1)^(2)
2000	0.9380	5.2500	0.7146
2001	0.9380	4.2500	0.7618
2002	0.9380	3.2500	0.8122