

PENNSYLVANIA COMPENSATION RATING BUREAU

Indicated Change in Loss Costs

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 4/1/09 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 -6.4%. 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 2003 Ratio of Loss to Expected Loss	0.4644	0.4716	0.9360
(2) Policy Year 2004 Ratio of Loss to Expected Loss	0.4813	0.5193	1.0006
(3) Policy Year 2005 Ratio of Loss to Expected Loss	0.4341	0.4901	0.9242
(4) Average (Midpoint = 1/1/2005)	0.4599	0.4937	0.9536
(5) Policy Year 2003 Ratio Trended to 4/1/2009 +	0.3892	0.4783	0.8675
(6) Policy Year 2004 Ratio Trended to 4/1/2009 +	0.4171	0.5253	0.9424
(7) Policy Year 2005 Ratio Trended to 4/1/2009 +	0.3891	0.4944	0.8835
(8) Average at 4/1/2009	0.3985	0.4993	0.8978
(9) Indicated Change in Loss Costs	0.3985	0.4993	0.8978

CHANGES IN MANUAL LOSS COST LEVEL BY INDUSTRY GROUP

	<u>Mfg.</u>	<u>Cont.</u>	<u>Other</u>	<u>Total</u>
(10) Current Collectible Premium Ratio	1.0767	1.1133	1.0648	
(11) Anticipated Collectible Premium Ratio	1.0562	1.1063	1.0544	
(12) Final Indicated Change in Manual Loss Cost Level (9T) * (11) / (10)	0.8807	0.8922	0.8890	0.8877

+ Refer to pages 12.2 and 12.3

DETERMINATION OF TREND

INDEMNITY

Policy Year	1999	2000	2001	2002	2003	2004	2005
Actual Loss Ratio	0.5284	0.5463	0.5094	0.4968	0.4644	0.4813	0.4341
Normalized Frequency	0.6763	0.6343	0.5853	0.5614	0.5157	0.4909	0.4525
Severity Loss Ratio	0.7813	0.8613	0.8703	0.8849	0.9005	0.9804	0.9593
x	1	2	3	4	5	6	7
y	0.7813	0.8613	0.8703	0.8849	0.9005	0.9804	0.9593

7 Point Exponential Regression: $y = 0.780768 * 1.03299 ^ x$

Policy Year	Fitted Value @ Midpoint of PY (1)	Fitted Value @ 4/1/08 (2)	Severity Trend Factor (3) = (2) / (1)	Frequency Trend Factor (4) #
2003	0.8890	1.0542	1.1858	0.7067
2004	0.9183	1.0542	1.1480	0.7550
2005	0.9486	1.0542	1.1113	0.8066

Trended Loss Ratio

Policy Year	Actual Loss Ratio (5)	Combined Trend Factor (6) = (3)*(4)	Trended Loss Ratio (7) = (5) * (6)
2003	0.4644	0.8380	0.3892
2004	0.4813	0.8667	0.4171
2005	0.4341	0.8964	0.3891

MEDICAL

Policy Year	1999	2000	2001	2002	2003	2004	2005
Actual Loss Ratio	0.4918	0.5004	0.4630	0.4758	0.4716	0.5193	0.4901
Normalized Frequency	0.6763	0.6343	0.5853	0.5614	0.5157	0.4909	0.4525
Severity Loss Ratio	0.7272	0.7889	0.7910	0.8475	0.9145	1.0579	1.0831
x	1	2	3	4	5	6	7
y	0.7272	0.7889	0.7910	0.8475	0.9145	1.0579	1.0831

7 Point Exponential Regression: $y = 0.66689 * 1.07125 ^ x$

Policy Year	Fitted Value @ Midpoint of PY (1)	Fitted Value @ 4/1/08 (2)	Severity Trend Factor (3) = (2) / (1)	Frequency Trend Factor (4) #
2003	0.8782	1.2605	1.4353	0.7067
2004	0.9408	1.2605	1.3398	0.7550
2005	1.0078	1.2605	1.2507	0.8066

Trended Loss Ratio

Policy Year	Actual Loss Ratio (5)	Combined Trend Factor (6) = (3)*(4)	Trended Loss Ratio (7) = (5) * (6)
2003	0.4716	1.0143	0.4783
2004	0.5193	1.0115	0.5253
2005	0.4901	1.0088	0.4944

See page 12.3 for column (4).

DETERMINATION OF TREND

Claim Frequency

Policy Year Frequency per \$1 million of Expected Losses
{1 = PY 1994, 12 = PY 2005}

Policy Year	Claim Frequency	Normalized Frequency
1994	33.06	1.0000
1995	29.46	0.8911
1996	26.79	0.8103
1997	25.36	0.7670
1998	23.63	0.7147
1999	22.36	0.6763
2000	20.97	0.6343
2001	19.35	0.5853
2002	18.56	0.5614
2003	17.05	0.5157
2004	16.23	0.4909
2005	14.96	0.4525

Policy Year	1999	2000	2001	2002	2003	2004	2005
x	1	2	3	4	5	6	7
y	0.6763	0.6343	0.5853	0.5614	0.5157	0.4909	0.4525

7 Point Exponential Regression: $y = 0.72188 * 0.93624 ^ x$

SELECTED FREQUENCY TREND FACTOR

-6.4%

Policy Year	Frequency Trend Factor (1)	# of years to 4/1/08 (2)	Frequency Trend to 4/1/08 (3) = (1)^(2)
2003	0.9360	5.2500	0.7067
2004	0.9360	4.2500	0.7550
2005	0.9360	3.2500	0.8066