

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.

Page 3 provides the calculation of Statewide Average Weekly Wage (SAWW) trends. The selection of the 7-point exponential trend fit for Policy Years 2018-2024 was used in the calculation of the indemnity and medical severity trends on Page 2.

Page 4 shows the derivation of overall frequency trend factors for each of the latest three policy years.

EXHIBIT I

INDICATED CHANGE IN LOSS COSTS

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
(1) Policy Year 2021 Ratio of Loss to Expected Loss	0.5610	0.5788	1.1398
(2) Policy Year 2022 Ratio of Loss to Expected Loss	0.5844	0.5761	1.1605
(3) Policy Year 2023 Ratio of Loss to Expected Loss	0.5692	0.5881	1.1573
(4) Weighted Average (2021 - 33%; 2022 - 33%; 2023 - 33%)	0.5715	0.5810	1.1525
(5) Policy Year 2021 Ratio Trended to 4/1/2027 +	0.4685	0.4728	0.9413
(6) Policy Year 2022 Ratio Trended to 4/1/2027 +	0.5050	0.4891	0.9941
(7) Policy Year 2023 Ratio Trended to 4/1/2027 +	0.5091	0.5189	1.0280
(8) Weighted Average (2021 - 33%; 2022 - 33%; 2023 - 33%)	0.4942	0.4936	0.9878
(9) Indicated Change in Loss Costs	0.4942	0.4936	0.9878 -1.22%

CHANGES IN MANUAL LOSS COST LEVEL BY INDUSTRY GROUP

	<u>Mfg.</u>	<u>Cont.</u>	<u>Office.</u>	<u>Goods.</u>	<u>Other</u>	<u>Total</u>
(10) Current Collectible Premium Ratio	1.0562	1.1725	1.0237	0.9861	1.0344	
(11) Anticipated Collectible Premium Ratio	1.0337	1.1529	1.0193	0.9657	1.0182	
(12) Final Indicated Change in Manual Loss Cost Level (9T) * (11) / (10)	0.9668	0.9713	0.9836	0.9674	0.9723	0.9707

DETERMINATION OF TREND

INDEMNITY										
Policy Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Actual Loss Ratio	0.8913	0.8106	0.7365	0.7210	0.7176	0.6436	0.5844	0.5610	0.5844	0.5692
Normalized Frequency	1.0000	0.9217	0.8625	0.8165	0.7850	0.7168	0.6942	0.6669	0.5843	0.5450
Severity Loss Ratio	0.8913	0.8795	0.8539	0.8830	0.9142	0.8979	0.8418	0.8412	1.0001	1.0444
x	1	2	3	4	5	6	7	8	9	10
y	0.8913	0.8795	0.8539	0.8830	0.9142	0.8979	0.8418	0.8412	1.0001	1.0444

Trend Selection	Severity Loss Ratio Trend	SAWW Trend
3 pt	11.4%	2.5%
4 pt	8.5%	2.9%
5 pt	4.9%	3.5%
6 pt	2.9%	4.1%
7 pt	2.2%	4.4%
8 pt	2.1%	4.4%
9 pt	1.7%	4.3%
10 pt	1.3%	4.1%

7 Point Exponential Regression = 2.2% (y = 0.783831 * 1.022317 ^ x)
 SAWW 7 Point Exponential Regression = 4.4% *
Selected Annual Trend Factor = 3.3%

Policy Year	Annual Severity Trend Factor (1)	Trend Period # of Years to 4/1/2025 (2)	Severity Trend Factor (3) = (1) ^ (2)	Frequency Trend Factor (4) **
2021	1.0332	5.2500	1.1869	0.7036
2022	1.0332	4.2500	1.1488	0.7523
2023	1.0332	3.2500	1.1119	0.8044

Trended Loss Ratio

Policy Year	Actual Loss Ratio (5)	Combined Trend Factor (6) = (3) * (4)	Trended Loss Ratio (7) = (5) * (6)
2021	0.5610	0.8351	0.4685
2022	0.5844	0.8642	0.5050
2023	0.5692	0.8944	0.5091

MEDICAL

Policy Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Actual Loss Ratio	0.9088	0.7869	0.7642	0.7491	0.7839	0.6755	0.6083	0.5788	0.5761	0.5881
Normalized Frequency	1.0000	0.9217	0.8625	0.8165	0.7850	0.7168	0.6942	0.6669	0.5843	0.5450
Severity Loss Ratio	0.9088	0.8537	0.8860	0.9174	0.9986	0.9424	0.8763	0.8679	0.9859	1.0791
x	1	2	3	4	5	6	7	8	9	10
y	0.9088	0.8537	0.8860	0.9174	0.9986	0.9424	0.8763	0.8679	0.9859	1.0791

Trend Selection	Severity Loss Ratio Trend	SAWW Trend
3 pt	11.5%	2.5%
4 pt	7.8%	2.9%
5 pt	4.0%	3.5%
6 pt	1.5%	4.1%
7 pt	1.4%	4.4%
8 pt	1.5%	4.4%
9 pt	1.7%	4.3%
10 pt	1.4%	4.1%

7 Point Exponential Regression = 1.4% (y = 0.864145 * 1.013630 ^ x)
 SAWW 7 Point Exponential Regression = 4.4% *
Selected Annual Trend Factor = 2.9%

Policy Year	Annual Severity Trend Factor (1)	Trend Period # of Years to 4/1/2025 (2)	Severity Trend Factor (3) = (1) ^ (2)	Frequency Trend Factor (4) **
2021	1.0288	5.2500	1.1610	0.7036
2022	1.0288	4.2500	1.1284	0.7523
2023	1.0288	3.2500	1.0968	0.8044

Trended Loss Ratio

Policy Year	Actual Loss Ratio (5)	Combined Trend Factor (6) = (3) * (4)	Trended Loss Ratio (7) = (5) * (6)
2021	0.5788	0.8169	0.4728
2022	0.5761	0.8489	0.4891
2023	0.5881	0.8823	0.5189

* See page 3
 ** See page 4

SAWW Trend Calculation

Policy Year	Official SAWW	Annual Percent Change	Period	SAWW Exp Fit Trend
2000	662.00		2014-2024	3.9% 11 pt
2001	675.00	2.0%	2015-2024	4.1% 10 pt
2002	690.00	2.2%	2016-2024	4.3% 9 pt
2003	716.00	3.8%	2017-2024	4.4% 8 pt
2004	745.00	4.1%	2018-2024	4.4% 7 pt
2005	779.00	4.6%	2019-2024	4.1% 6 pt
2006	807.00	3.6%	2020-2024	3.5% 5 pt
2007	836.00	3.6%	2021-2024	2.9% 4 pt
2008	845.00	1.1%	2022-2024	2.5% 3 pt
2009	858.00	1.5%		
2010	888.00	3.5%		
2011	917.00	3.3%	2009-2019	2.6% 11 pt
2012	932.00	1.6%	2010-2019	2.5% 10 pt
2013	951.00	2.0%	2011-2019	2.6% 9 pt
2014	978.00	2.8%	2012-2019	2.7% 8 pt
2015	995.00	1.7%	2013-2019	2.8% 7 pt
2016	1025.00	3.0%	2014-2019	2.9% 6 pt
2017	1049.00	2.3%	2015-2019	3.1% 5 pt
2018	1081.00	3.1%	2016-2019	3.3% 4 pt
2019	1130.00	4.5%	2017-2019	3.8% 3 pt
2020	1205.00	6.6%		
2021	1273.00	5.6%		
2022	1325.00	4.1%		
2023	1347.00	1.7%		
2024*	1393.00	3.4%		

* Estimated

DETERMINATION OF TREND

CLAIM FREQUENCY

Policy Year Frequency per \$1 million of Expected Losses

Policy Year	Claim Frequency	Normalized Frequency
2013	28.07	1.0000
2014	25.67	0.9145
2015	23.66	0.8429
2016	22.14	0.7887
2017	20.96	0.7467
2018	20.15	0.7178
2019	18.40	0.6555
2020	17.82	0.6348
2021	17.12	0.6099
2022	15.00	0.5344
2023	13.99	0.4984

Policy Year	2013	2015	2016	2017	2018	2019	2020	2021	2022	2023
x	1	2	3	4	5	6	7	8	9	10
y	0.9145	0.8429	0.7887	0.7467	0.7178	0.6555	0.6348	0.6099	0.5344	0.4984

Trend Seletion	Frequency Trend
3 pt	-9.6%
4 pt	-8.2%
5 pt	-6.9%
6 pt	-6.8%
7 pt	-6.5%
8 pt	-6.2%
9 pt	-6.1%
10 pt	-6.2%

Selected Annual Frequency Trend Factor:

7 Point Exponential Regression = -6.5% (y = 0.813770 * 0.935221 ^ x)

Policy Year	Annual Frequency Trend Factor (1)	Trend Period # of Years to 4/1/2025 (2)	Frequency Trend Factor (3) = (1) ^ (2)
2021	0.9352	5.2500	0.7036
2022	0.9352	4.2500	0.7523
2023	0.9352	3.2500	0.8044