

PENNSYLVANIA COMPENSATION RATING BUREAU

Loss Elimination Ratios

The attached pages show the derivation of loss elimination ratios applicable to small deductible coverages.

The analysis incorporates revised classification hazard group assignments and expands the number of hazard groups to seven (A-G). An analysis is also presented that combined the seven hazard groups into four (1-4).

The method used is very similar to that employed in the calculation of excess loss factors and also relies solely on Pennsylvania experience. Within each hazard group, excess ratios by type of injury are weighted together to derive average excess ratios as shown on page 2.

Since the Pennsylvania loss distribution did not break at \$1,000, factors derived from the general methodology which related the excess ratio for the \$1,000 limit to those at \$5,000 and \$10,000 were used to estimate the \$1,000 figure for the Pennsylvania data. The excess factors were then adjusted to reflect the inclusion of loss based assessments in Bureau loss costs (col. (6) - (12)). Columns (13) through (19) of page 3 show the resulting excess factors.

Page 1 shows the proposed loss elimination ratios which are the complement of the excess loss factors from page 3 and compares the proposed 2010 loss elimination ratios with the current 2009 loss elimination ratios.

Page 4, 5 and 6 are comparable to pages 1, 2 and 3 although based on revised hazard groups 1, 2, 3 and 4.

PENNSYLVANIA  
SMALL DEDUCTIBLE PROGRAM  
PROPOSED EFFECTIVE DATE: 4/1/10

Deductible Level	Proposed Loss Elimination Ratios							Current Loss Elimination Ratios Based on new HG definition							Percentage Change						
	Hazard Group							Hazard Group							Hazard Group						
	A	B	C	D	E	F	G	A	B	C	D	E	F	G	A	B	C	D	E	F	G
\$ 1,000	5.5%	4.9%	4.6%	4.0%	3.1%	2.8%	2.5%	6.3%	5.5%	5.3%	4.6%	3.6%	3.1%	3.0%	-12.7%	-10.9%	-13.2%	-13.0%	-13.9%	-9.7%	-16.7%
\$ 5,000	21.8%	18.9%	17.6%	15.6%	11.8%	10.2%	8.6%	23.4%	20.2%	18.9%	16.5%	12.8%	10.6%	9.8%	-6.8%	-6.4%	-6.9%	-5.5%	-7.8%	-3.8%	-12.2%
\$ 10,000	28.1%	24.5%	22.6%	20.6%	16.2%	14.0%	11.6%	29.8%	26.1%	24.0%	21.4%	17.3%	14.4%	12.7%	-5.7%	-6.1%	-5.8%	-3.7%	-6.4%	-2.8%	-8.7%

SMALL DEDUCTIBLE CREDIT FACTORS  
PENNSYLVANIA Effective:4/1/10  
Excess Loss Factors Calculation

LOSS LIMIT	DEATH				PT				PP				TT				AVE. EX. RAT.
	RATIO TO AVE.	INJ. WGT.	EXCESS RATIO	EXCESS RATIO X INJ. WT.	RATIO TO AVE.	INJ. WGT.	EXCESS RATIO	EXCESS RATIO X INJ. WT.	RATIO TO AVE.	INJ. WGT.	EXCESS RATIO	EXCESS RATIO X INJ. WT.	RATIO TO AVE.	INJ. WGT.	EXCESS RATIO	EXCESS RATIO X INJ. WT.	
Hazard Group A																	
\$1,000	0.00	0.011	0.9976	0.0110	0.00	0.025	0.9994	0.0250	0.01	0.536	0.9941	0.5328	0.06	0.309	0.9417	0.2910	0.8598
\$2,000	0.00		0.9957	0.0110	0.00		0.9988	0.0250	0.01		0.9882	0.5297	0.12		0.8868	0.2740	0.8397
\$5,000	0.01		0.9903	0.0109	0.00		0.9970	0.0249	0.03		0.9710	0.5204	0.30		0.7508	0.2320	0.7882
\$10,000	0.02		0.9814	0.0108	0.01		0.9940	0.0249	0.06		0.9434	0.5057	0.60		0.5920	0.1829	0.7243
Hazard Group B																	
\$1,000	0.00	0.010	0.9977	0.0100	0.00	0.029	0.9995	0.0290	0.01	0.597	0.9946	0.5938	0.06	0.260	0.9436	0.2453	0.8781
\$2,000	0.00		0.9960	0.0100	0.00		0.9990	0.0290	0.01		0.9892	0.5906	0.12		0.8902	0.2314	0.8610
\$5,000	0.01		0.9909	0.0099	0.00		0.9975	0.0289	0.03		0.9735	0.5812	0.29		0.7572	0.1969	0.8169
\$10,000	0.02		0.9825	0.0098	0.01		0.9949	0.0289	0.05		0.9482	0.5661	0.58		0.6004	0.1561	0.7609
Hazard Group C																	
\$1,000	0.00	0.010	0.9978	0.0100	0.00	0.029	0.9996	0.0290	0.00	0.628	0.9950	0.6249	0.06	0.235	0.9454	0.2222	0.8861
\$2,000	0.00		0.9962	0.0100	0.00		0.9991	0.0290	0.01		0.9902	0.6218	0.11		0.8935	0.2100	0.8708
\$5,000	0.01		0.9914	0.0099	0.00		0.9978	0.0289	0.02		0.9758	0.6128	0.28		0.7634	0.1794	0.8310
\$10,000	0.02		0.9836	0.0098	0.00		0.9957	0.0289	0.05		0.9526	0.5982	0.56		0.6087	0.1430	0.7799
Hazard Group D																	
\$1,000	0.00	0.018	0.9979	0.0180	0.00	0.045	0.9996	0.0450	0.00	0.614	0.9955	0.6112	0.05	0.244	0.9472	0.2311	0.9053
\$2,000	0.00		0.9964	0.0179	0.00		0.9993	0.0450	0.01		0.9910	0.6085	0.11		0.8967	0.2188	0.8902
\$5,000	0.01		0.9919	0.0179	0.00		0.9982	0.0449	0.02		0.9779	0.6004	0.27		0.7696	0.1878	0.8510
\$10,000	0.02		0.9846	0.0177	0.00		0.9963	0.0448	0.04		0.9566	0.5873	0.54		0.6169	0.1505	0.8003
Hazard Group E																	
\$1,000	0.00	0.023	0.9980	0.0230	0.00	0.052	0.9997	0.0520	0.00	0.668	0.9959	0.6652	0.05	0.206	0.9489	0.1955	0.9357
\$2,000	0.00		0.9966	0.0229	0.00		0.9994	0.0520	0.01		0.9918	0.6625	0.10		0.8998	0.1854	0.9228
\$5,000	0.01		0.9924	0.0228	0.00		0.9984	0.0519	0.02		0.9798	0.6545	0.26		0.7756	0.1598	0.8890
\$10,000	0.02		0.9855	0.0227	0.00		0.9969	0.0518	0.04		0.9603	0.6415	0.52		0.6251	0.1288	0.8448
Hazard Group F																	
\$1,000	0.00	0.026	0.9981	0.0260	0.00	0.073	0.9997	0.0730	0.00	0.683	0.9962	0.6804	0.05	0.175	0.9505	0.1663	0.9457
\$2,000	0.00		0.9968	0.0259	0.00		0.9995	0.0730	0.01		0.9925	0.6779	0.10		0.9029	0.1580	0.9348
\$5,000	0.01		0.9928	0.0258	0.00		0.9987	0.0729	0.02		0.9815	0.6704	0.25		0.7815	0.1368	0.9059
\$10,000	0.02		0.9864	0.0256	0.00		0.9973	0.0728	0.04		0.9637	0.6582	0.51		0.6332	0.1108	0.8674
Hazard Group G																	
\$1,000	0.00	0.045	0.9982	0.0449	0.00	0.100	0.9998	0.1000	0.00	0.685	0.9966	0.6827	0.05	0.132	0.9521	0.1257	0.9533
\$2,000	0.00		0.9969	0.0449	0.00		0.9996	0.1000	0.01		0.9932	0.6803	0.10		0.9058	0.1196	0.9448
\$5,000	0.01		0.9932	0.0447	0.00		0.9989	0.0999	0.02		0.9831	0.6734	0.25		0.7873	0.1039	0.9219
\$10,000	0.02		0.9872	0.0444	0.00		0.9977	0.0998	0.03		0.9668	0.6623	0.49		0.6412	0.0846	0.8911

Pennsylvania  
Loss Elimination Ratio Study

Loss Limitation	Pennsylvania Excess Ratio (1)
	Implied @1,000
\$1,000	0.9700 (a)
\$2,000	0.8965 (b)
\$5,000	0.8601 (b)
\$10,000	0.8126 (b)

Loss Limitation	Pennsylvania Hazard Group Per - Claim Factors							LBA Factor = 0.9860							ELF adjusted for LBA's & Risk Load						
	HG A	HG B	HG C	HG D	HG E	HG F	HG G	HG A	HG B	HG C	HG D	HG E	HG F	HG G	HG A	HG B	HG C	HG D	HG E	HG F	HG G
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
								(2)*LBA	(3)*LBA	(4)*LBA	(5)*LBA	(6)*LBA	(7)*LBA	(8)*LBA	Columns (2)-(5) + 0.005 (Max Adj = 1/2 ELF)						
\$1,000	0.9535	0.9597	0.9626	0.9682	0.9776	0.9811	0.9840	0.9402	0.9463	0.9491	0.9546	0.9639	0.9674	0.9702	0.945	0.951	0.954	0.960	0.969	0.972	0.975
\$5,000	0.7882	0.8169	0.8310	0.8510	0.8890	0.9059	0.9219	0.7772	0.8055	0.8194	0.8391	0.8766	0.8932	0.9090	0.782	0.811	0.824	0.844	0.882	0.898	0.914
\$10,000	0.7243	0.7609	0.7799	0.8003	0.8448	0.8674	0.8911	0.7142	0.7502	0.7690	0.7891	0.8330	0.8553	0.8786	0.719	0.755	0.774	0.794	0.838	0.860	0.884

- (a) Selected
- (b) From the Pennsylvania Empirical Loss Distribution

PENNSYLVANIA  
 SMALL DEDUCTIBLE PROGRAM  
 PROPOSED EFFECTIVE DATE: 4/1/10

Deductible Level	Proposed Loss Elimination Ratios				Current Loss Elimination Ratios				Percentage Change			
	Hazard Group				Hazard Group				Hazard Group			
	1	2	3	4	1	2	3	4	1	2	3	4
\$ 1,000	5.0%	4.4%	3.0%	2.5%	5.7%	5.1%	3.4%	3.0%	-12.3%	-13.7%	-11.8%	-16.7%
\$ 5,000	19.4%	17.0%	11.2%	8.6%	20.7%	18.1%	12.1%	9.8%	-6.3%	-6.1%	-7.4%	-12.2%
\$ 10,000	25.0%	22.0%	15.4%	11.6%	26.6%	23.2%	16.3%	12.7%	-6.0%	-5.2%	-5.5%	-8.7%

SMALL DEDUCTIBLE CREDIT FACTORS

PENNSYLVANIA Effective:4/1/10

Excess Loss Factors Calculation

LOSS LIMIT	DEATH				PT				PP				TT				AVE. EX. RAT.
	RATIO TO AVE.	INJ. WGT.	EXCESS RATIO	EXCESS RATIO X INJ. WT.	RATIO TO AVE.	INJ. WGT.	EXCESS RATIO	EXCESS RATIO X INJ. WT.	RATIO TO AVE.	INJ. WGT.	EXCESS RATIO	EXCESS RATIO X INJ. WT.	RATIO TO AVE.	INJ. WGT.	EXCESS RATIO	EXCESS RATIO X INJ. WT.	
	Hazard Group 1																
\$1,000	0.00	0.010	0.9977	0.0100	0.00	0.028	0.9995	0.0280	0.01	0.588	0.9945	0.5848	0.06	0.268	0.9432	0.2528	0.8756
\$2,000	0.00		0.9959	0.0100	0.00		0.9989	0.0280	0.01		0.9891	0.5816	0.12		0.8895	0.2384	0.8580
\$5,000	0.01		0.9907	0.0099	0.00		0.9973	0.0279	0.03		0.9732	0.5722	0.29		0.7558	0.2026	0.8126
\$10,000	0.02		0.9823	0.0098	0.01		0.9946	0.0278	0.05		0.9476	0.5572	0.58		0.5985	0.1604	0.7552
	Hazard Group 2																
\$1,000	0.00	0.012	0.9979	0.0120	0.00	0.034	0.9996	0.0340	0.00	0.624	0.9952	0.6210	0.06	0.238	0.9459	0.2251	0.8921
\$2,000	0.00		0.9963	0.0120	0.00		0.9992	0.0340	0.01		0.9904	0.6180	0.11		0.8944	0.2129	0.8769
\$5,000	0.01		0.9916	0.0119	0.00		0.9980	0.0339	0.02		0.9763	0.6092	0.28		0.7652	0.1821	0.8371
\$10,000	0.02		0.9840	0.0118	0.00		0.9959	0.0339	0.05		0.9537	0.5951	0.55		0.6110	0.1454	0.7862
	Hazard Group 3																
\$1,000	0.00	0.024	0.9980	0.0240	0.00	0.060	0.9997	0.0600	0.00	0.673	0.9960	0.6703	0.05	0.195	0.9494	0.1851	0.9394
\$2,000	0.00		0.9967	0.0239	0.00		0.9994	0.0600	0.01		0.9921	0.6677	0.10		0.9008	0.1757	0.9273
\$5,000	0.01		0.9926	0.0238	0.00		0.9985	0.0599	0.02		0.9804	0.6598	0.26		0.7775	0.1516	0.8951
\$10,000	0.02		0.9858	0.0237	0.00		0.9971	0.0598	0.04		0.9615	0.6471	0.52		0.6277	0.1224	0.8530
	Hazard Group 4																
\$1,000	0.00	0.045	0.9982	0.0449	0.00	0.100	0.9998	0.1000	0.00	0.685	0.9966	0.6827	0.05	0.132	0.9521	0.1257	0.9533
\$2,000	0.00		0.9969	0.0449	0.00		0.9996	0.1000	0.01		0.9932	0.6803	0.10		0.9058	0.1196	0.9448
\$5,000	0.01		0.9932	0.0447	0.00		0.9989	0.0999	0.02		0.9831	0.6734	0.25		0.7873	0.1039	0.9219
\$10,000	0.02		0.9872	0.0444	0.00		0.9977	0.0998	0.03		0.9668	0.6623	0.49		0.6412	0.0846	0.8911

Pennsylvania  
Loss Elimination Ratio Study

Loss Limitation	Pennsylvania Excess Ratio (1)
	Implied @ 1,000
\$1,000	0.9700 (a)
\$2,000	0.8965 (b)
\$5,000	0.8601 (b)
\$10,000	0.8126 (b)

Loss Limitation	Pennsylvania Hazard Group Per - Claim Factors				ELF adjusted for LBA's LBA Factor = 0.9860				ELF adjusted for LBA's & Risk Load			
	HG 1 (2)	HG 2 (3)	HG 3 (4)	HG 4 (5)	HG 1 (6) (2)*LBA	HG 2 (7) (3)*LBA	HG 3 (8) (4)*LBA	HG 4 (9) (5)*LBA	HG 1 (10)	HG 2 (11)	HG 3 (12)	HG 4 (13)
\$1,000	0.9588	0.9643	0.9789	0.9840	0.9454	0.9508	0.9652	0.9702	0.950	0.956	0.970	0.975
\$5,000	0.8126	0.8371	0.8951	0.9219	0.8012	0.8254	0.8826	0.9090	0.806	0.830	0.888	0.914
\$10,000	0.7552	0.7862	0.8530	0.8911	0.7446	0.7752	0.8411	0.8786	0.750	0.780	0.846	0.884

(a) Selected  
(b) From the Pennsylvania Empirical Loss Distribution