

PENNSYLVANIA COMPENSATION RATING BUREAU

Empirical Pennsylvania Loss Distribution

Pages 1 through 4 of the attached exhibit present a distribution of Pennsylvania losses by size of claim. The losses used to produce this distribution include three years of experience. Losses have been trended to the midpoint of the experience period for the proposed loss costs and adjusted to reflect current benefit levels. Additionally, losses were brought to an ultimate level by applying development factors to open claims.

Page 5 of the exhibit shows a summary and includes loss ranges consistent with those published with the excess loss factors. In certain instances it was necessary to interpolate between loss size ranges in the empirical distribution in deriving excess loss factors for specified limits.

The PCRb's analysis considered loss distributions by type of injury based solely on Pennsylvania experience. Pages 6 through 9 of this exhibit show excess loss ratios by loss limitation separately for death, permanent total, permanent partial, temporary total and medical- only claims. The columns labeled "Actual" represent excess losses based entirely on actual losses. For each type of injury except medical only, losses of \$500,000 and higher were fitted to a loss distribution curve and actual losses and claim counts were replaced by the fitted values. Cumulative losses and claim counts were then recalculated using fitted values above \$500,000 and actual values for loss limitations below \$500,000. The resulting excess loss ratios are shown in the column labeled "Fitted". Please Note: The term "Pareto" refers to "Single Parameter Pareto Distribution".

Page 10 is a graph showing the cumulative loss distribution for the above mentioned types of injury, along with the total for all injuries. The y-axis represents the cumulative percentage of total incurred losses.

PENNSYLVANIA  
DISTRIBUTION OF LOSSES

LIMITS		ACCUMULATED CLAIMS (ADDED UP)	NUMBER OF CLAIMS		ACCUMULATED LOSSES (ADDED DOWN)		INDEMNITY AND MEDICAL	EXCESS RATIO		AVERAGE	
-		999	476,236		252,929	\$	103,526,412		\$	1.0000	\$ 409
1,000		1,999	223,307		64,461	\$	194,932,191		\$	0.9863	\$ 1,418
2,000	-	2,999	158,846		27,994	\$	263,404,729		\$	0.9322	\$ 2,446
3,000	-	3,999	130,852		16,521	\$	320,595,524		\$	0.9132	\$ 3,462
4,000	-	4,999	114,331		11,225	\$	370,798,541		\$	0.8970	\$ 4,472
5,000	-	5,999	103,106		8,361	\$	416,596,536		\$	0.8827	\$ 5,478
6,000	-	6,999	94,745		6,899	\$	461,301,003		\$	0.8696	\$ 6,480
7,000	-	7,999	87,846		5,403	\$	501,718,127		\$	0.8576	\$ 7,480
8,000	-	8,999	82,443		4,604	\$	540,773,063		\$	0.8463	\$ 8,483
9,000	-	9,999	77,839		3,918	\$	577,948,938		\$	0.8357	\$ 9,488
10,000	-	10,999	73,921		3,374	\$	613,339,317		\$	0.8257	\$ 10,489
11,000	-	11,999	70,547		3,027	\$	648,124,001		\$	0.8161	\$ 11,491
12,000	-	12,999	67,520		2,650	\$	681,219,077		\$	0.8070	\$ 12,489
13,000	-	13,999	64,870		2,454	\$	714,331,870		\$	0.7982	\$ 13,493
14,000	-	14,999	62,416		2,204	\$	746,260,387		\$	0.7898	\$ 14,487
15,000	-	15,999	60,212		2,012	\$	777,428,519		\$	0.7817	\$ 15,491
16,000	-	16,999	58,200		1,901	\$	808,770,015		\$	0.7739	\$ 16,487
17,000	-	17,999	56,299		1,750	\$	839,385,268		\$	0.7663	\$ 17,494
18,000	-	18,999	54,549		1,638	\$	869,685,545		\$	0.7590	\$ 18,498
19,000	-	19,999	52,911		1,541	\$	899,714,015		\$	0.7518	\$ 19,486
20,000	-	20,999	51,370		1,322	\$	926,817,069		\$	0.7449	\$ 20,502
21,000	-	21,999	50,048		1,247	\$	953,612,719		\$	0.7382	\$ 21,488
22,000	-	22,999	48,801		1,220	\$	981,057,007		\$	0.7317	\$ 22,495
23,000	-	23,999	47,581		1,120	\$	1,007,402,818		\$	0.7253	\$ 23,523
24,000	-	24,999	46,461		1,107	\$	1,034,508,380		\$	0.7191	\$ 24,486
25,000	-	25,999	45,354		1,080	\$	1,062,031,785		\$	0.7130	\$ 25,485
26,000	-	26,999	44,274		958	\$	1,087,411,096		\$	0.7071	\$ 26,492
27,000	-	27,999	43,316		961	\$	1,113,832,283		\$	0.7013	\$ 27,493
28,000	-	28,999	42,355		905	\$	1,139,617,051		\$	0.6956	\$ 28,491
29,000	-	29,999	41,450		887	\$	1,165,784,203		\$	0.6901	\$ 29,501
30,000	-	30,999	40,563		893	\$	1,193,024,396		\$	0.6847	\$ 30,504
31,000	-	31,999	39,670		806	\$	1,218,406,997		\$	0.6793	\$ 31,492
32,000	-	32,999	38,864		789	\$	1,244,041,323		\$	0.6742	\$ 32,490
33,000	-	33,999	38,075		722	\$	1,268,220,290		\$	0.6691	\$ 33,489
34,000	-	34,999	37,353		657	\$	1,290,885,002		\$	0.6641	\$ 34,497
35,000	-	35,999	36,696		675	\$	1,314,849,763		\$	0.6592	\$ 35,503
36,000	-	36,999	36,021		676	\$	1,339,525,061		\$	0.6544	\$ 36,502
37,000	-	37,999	35,345		654	\$	1,364,033,818		\$	0.6496	\$ 37,475
38,000	-	38,999	34,691		604	\$	1,387,292,273		\$	0.6450	\$ 38,507
39,000	-	39,999	34,087		596	\$	1,410,829,663		\$	0.6405	\$ 39,492
40,000	-	40,999	33,491		543	\$	1,432,828,305		\$	0.6360	\$ 40,513
41,000	-	41,999	32,948		572	\$	1,456,552,977		\$	0.6316	\$ 41,477
42,000	-	42,999	32,376		602	\$	1,482,142,548		\$	0.6273	\$ 42,508
43,000	-	43,999	31,774		469	\$	1,502,548,569		\$	0.6230	\$ 43,510
44,000	-	44,999	31,305		502	\$	1,524,887,021		\$	0.6188	\$ 44,499

PENNSYLVANIA  
DISTRIBUTION OF LOSSES

LIMITS	ACCUMULATED CLAIMS (ADDED UP)	NUMBER OF CLAIMS	ACCUMULATED LOSSES (ADDED DOWN)	INDEMNITY AND MEDICAL	EXCESS RATIO	AVERAGE	
45,000 -	45,999	30,803	500	\$ 1,547,633,582	\$ 22,746,561	0.6147	\$ 45,493
46,000 -	46,999	30,303	464	\$ 1,569,218,820	\$ 21,585,238	0.6107	\$ 46,520
47,000 -	47,999	29,839	445	\$ 1,590,347,732	\$ 21,128,912	0.6067	\$ 47,481
48,000 -	48,999	29,394	443	\$ 1,611,837,681	\$ 21,489,949	0.6028	\$ 48,510
49,000 -	49,999	28,951	432	\$ 1,633,214,266	\$ 21,376,585	0.5989	\$ 49,483
50,000 -	50,999	28,519	382	\$ 1,652,520,687	\$ 19,306,421	0.5951	\$ 50,540
51,000 -	51,999	28,137	398	\$ 1,673,014,248	\$ 20,493,561	0.5914	\$ 51,491
52,000 -	52,999	27,739	391	\$ 1,693,540,068	\$ 20,525,820	0.5877	\$ 52,496
53,000 -	53,999	27,348	393	\$ 1,714,562,535	\$ 21,022,467	0.5840	\$ 53,492
54,000 -	54,999	26,955	360	\$ 1,734,188,351	\$ 19,625,816	0.5804	\$ 54,516
55,000 -	55,999	26,595	383	\$ 1,755,445,609	\$ 21,257,258	0.5769	\$ 55,502
56,000 -	56,999	26,212	337	\$ 1,774,492,038	\$ 19,046,429	0.5734	\$ 56,518
57,000 -	57,999	25,875	353	\$ 1,794,781,504	\$ 20,289,466	0.5700	\$ 57,477
58,000 -	58,999	25,522	319	\$ 1,813,443,486	\$ 18,661,982	0.5666	\$ 58,502
59,000 -	59,999	25,203	341	\$ 1,833,729,460	\$ 20,285,974	0.5632	\$ 59,490
60,000 -	60,999	24,862	284	\$ 1,850,910,349	\$ 17,180,889	0.5599	\$ 60,496
61,000 -	61,999	24,578	290	\$ 1,868,741,546	\$ 17,831,197	0.5566	\$ 61,487
62,000 -	62,999	24,288	282	\$ 1,886,371,971	\$ 17,630,425	0.5534	\$ 62,519
63,000 -	63,999	24,006	273	\$ 1,903,713,270	\$ 17,341,299	0.5502	\$ 63,521
64,000 -	64,999	23,733	304	\$ 1,923,322,328	\$ 19,609,058	0.5470	\$ 64,503
65,000 -	65,999	23,429	263	\$ 1,940,546,137	\$ 17,223,809	0.5439	\$ 65,490
66,000 -	66,999	23,166	306	\$ 1,960,883,008	\$ 20,336,871	0.5408	\$ 66,460
67,000 -	67,999	22,860	269	\$ 1,979,041,083	\$ 18,158,075	0.5378	\$ 67,502
68,000 -	68,999	22,591	245	\$ 1,995,831,053	\$ 16,789,970	0.5348	\$ 68,530
69,000 -	69,999	22,346	233	\$ 2,012,014,679	\$ 16,183,626	0.5318	\$ 69,458
70,000 -	70,999	22,113	220	\$ 2,027,521,132	\$ 15,506,453	0.5289	\$ 70,484
71,000 -	71,999	21,893	227	\$ 2,043,749,896	\$ 16,228,764	0.5259	\$ 71,492
72,000 -	72,999	21,666	226	\$ 2,060,135,747	\$ 16,385,851	0.5231	\$ 72,504
73,000 -	73,999	21,440	216	\$ 2,076,013,415	\$ 15,877,668	0.5202	\$ 73,508
74,000 -	74,999	21,224	232	\$ 2,093,294,167	\$ 17,280,752	0.5174	\$ 74,486
75,000 -	75,999	20,992	229	\$ 2,110,582,716	\$ 17,288,549	0.5146	\$ 75,496
76,000 -	76,999	20,763	192	\$ 2,125,266,644	\$ 14,683,928	0.5118	\$ 76,479
77,000 -	77,999	20,571	207	\$ 2,141,302,406	\$ 16,035,762	0.5091	\$ 77,467
78,000 -	78,999	20,364	181	\$ 2,155,509,654	\$ 14,207,248	0.5064	\$ 78,493
79,000 -	79,999	20,183	198	\$ 2,171,258,179	\$ 15,748,525	0.5037	\$ 79,538
80,000 -	80,999	19,985	210	\$ 2,188,166,586	\$ 16,908,407	0.5010	\$ 80,516
81,000 -	81,999	19,775	185	\$ 2,203,255,882	\$ 15,089,296	0.4984	\$ 81,564
82,000 -	82,999	19,590	191	\$ 2,219,010,100	\$ 15,754,218	0.4958	\$ 82,483
83,000 -	83,999	19,399	173	\$ 2,233,457,614	\$ 14,447,514	0.4932	\$ 83,512
84,000 -	84,999	19,226	177	\$ 2,248,413,783	\$ 14,956,169	0.4907	\$ 84,498
85,000 -	85,999	19,049	185	\$ 2,264,223,070	\$ 15,809,287	0.4881	\$ 85,456
86,000 -	86,999	18,864	171	\$ 2,279,019,921	\$ 14,796,851	0.4856	\$ 86,531
87,000 -	87,999	18,693	171	\$ 2,293,986,141	\$ 14,966,220	0.4831	\$ 87,522
88,000 -	88,999	18,522	182	\$ 2,310,085,862	\$ 16,099,721	0.4807	\$ 88,460
89,000 -	89,999	18,340	149	\$ 2,323,422,301	\$ 13,336,439	0.4782	\$ 89,506
90,000 -	90,999	18,191	141	\$ 2,336,176,511	\$ 12,754,210	0.4758	\$ 90,455

PENNSYLVANIA  
DISTRIBUTION OF LOSSES

LIMITS	ACCUMULATED CLAIMS (ADDED UP)	NUMBER OF CLAIMS	ACCUMULATED LOSSES (ADDED DOWN)	INDEMNITY AND MEDICAL	EXCESS RATIO	AVERAGE
91,000 -	91,999	18,050	\$ 2,352,271,933	\$ 16,095,422	0.4734	\$ 91,451
92,000 -	92,999	17,874	\$ 2,364,480,539	\$ 12,208,606	0.4710	\$ 92,489
93,000 -	93,999	17,742	\$ 2,378,871,252	\$ 14,390,713	0.4687	\$ 93,446
94,000 -	94,999	17,588	\$ 2,393,145,481	\$ 14,274,229	0.4664	\$ 94,531
95,000 -	95,999	17,437	\$ 2,404,223,659	\$ 11,078,178	0.4640	\$ 95,502
96,000 -	96,999	17,321	\$ 2,416,768,319	\$ 12,544,660	0.4617	\$ 96,497
97,000 -	97,999	17,191	\$ 2,432,564,793	\$ 15,796,474	0.4595	\$ 97,509
98,000 -	98,999	17,029	\$ 2,448,910,756	\$ 16,345,963	0.4572	\$ 98,470
99,000 -	99,999	16,863	\$ 2,464,434,074	\$ 15,523,318	0.4549	\$ 99,508
100,000 -	109,999	16,707	\$ 2,599,486,268	\$ 135,052,194	0.4527	\$ 104,692
110,000 -	119,999	15,417	\$ 2,737,612,062	\$ 138,125,794	0.4315	\$ 114,722
120,000 -	129,999	14,213	\$ 2,870,368,497	\$ 132,756,435	0.4120	\$ 125,006
130,000 -	139,999	13,151	\$ 2,997,404,463	\$ 127,035,966	0.3938	\$ 135,145
140,000 -	149,999	12,211	\$ 3,123,067,487	\$ 125,663,024	0.3770	\$ 144,773
150,000 -	159,999	11,343	\$ 3,248,050,144	\$ 124,982,657	0.3615	\$ 154,873
160,000 -	169,999	10,536	\$ 3,366,282,126	\$ 118,231,982	0.3470	\$ 164,898
170,000 -	179,999	9,819	\$ 3,484,079,440	\$ 117,797,314	0.3336	\$ 174,773
180,000 -	189,999	9,145	\$ 3,601,166,846	\$ 117,087,406	0.3210	\$ 184,972
190,000 -	199,999	8,512	\$ 3,708,249,280	\$ 107,082,434	0.3093	\$ 195,050
200,000 -	209,999	7,963	\$ 3,812,539,140	\$ 104,289,860	0.2984	\$ 204,892
210,000 -	219,999	7,454	\$ 3,906,644,676	\$ 94,105,536	0.2882	\$ 214,853
220,000 -	229,999	7,016	\$ 3,996,441,332	\$ 89,796,656	0.2787	\$ 225,054
230,000 -	239,999	6,617	\$ 4,076,360,226	\$ 79,918,894	0.2697	\$ 235,056
240,000 -	249,999	6,277	\$ 4,161,583,758	\$ 85,223,532	0.2611	\$ 244,895
250,000 -	259,999	5,929	\$ 4,238,306,487	\$ 76,722,729	0.2530	\$ 254,893
260,000 -	269,999	5,628	\$ 4,310,911,504	\$ 72,605,017	0.2454	\$ 264,982
270,000 -	279,999	5,354	\$ 4,392,618,773	\$ 81,707,269	0.2381	\$ 275,109
280,000 -	289,999	5,057	\$ 4,467,070,217	\$ 74,451,444	0.2312	\$ 285,255
290,000 -	299,999	4,796	\$ 4,536,948,977	\$ 69,878,760	0.2247	\$ 294,847
300,000 -	314,999	4,559	\$ 4,641,180,134	\$ 104,231,157	0.2185	\$ 307,467
315,000 -	329,999	4,220	\$ 4,737,393,352	\$ 96,213,218	0.2098	\$ 321,783
330,000 -	344,999	3,921	\$ 4,830,840,523	\$ 93,447,171	0.2018	\$ 337,354
345,000 -	359,999	3,644	\$ 4,916,465,688	\$ 85,625,165	0.1943	\$ 352,367
360,000 -	374,999	3,401	\$ 5,003,983,954	\$ 87,518,266	0.1873	\$ 367,724
375,000 -	389,999	3,163	\$ 5,091,504,995	\$ 87,521,041	0.1807	\$ 382,188
390,000 -	404,999	2,934	\$ 5,169,804,577	\$ 78,299,582	0.1747	\$ 397,460
405,000 -	419,999	2,737	\$ 5,242,310,745	\$ 72,506,168	0.1691	\$ 411,967
420,000 -	439,999	2,561	\$ 5,336,756,077	\$ 94,445,332	0.1638	\$ 429,297
440,000 -	459,999	2,341	\$ 5,424,280,455	\$ 87,524,378	0.1574	\$ 448,843
460,000 -	479,999	2,146	\$ 5,498,554,210	\$ 74,273,755	0.1515	\$ 470,087
480,000 -	499,999	1,988	\$ 5,573,995,588	\$ 75,441,378	0.1460	\$ 489,879
500,000 -	519,999	1,834	\$ 5,638,326,691	\$ 64,331,103	0.1409	\$ 510,564
520,000 -	539,999	1,708	\$ 5,717,386,897	\$ 79,060,206	0.1362	\$ 530,605
540,000 -	559,999	1,559	\$ 5,775,031,430	\$ 57,644,533	0.1319	\$ 548,996
560,000 -	579,999	1,454	\$ 5,827,418,170	\$ 52,386,740	0.1279	\$ 569,421
580,000 -	599,999	1,362	\$ 5,876,906,420	\$ 49,488,250	0.1242	\$ 589,146

PENNSYLVANIA  
DISTRIBUTION OF LOSSES

LIMITS	ACCUMULATED CLAIMS (ADDED UP)	NUMBER OF CLAIMS	ACCUMULATED LOSSES (ADDED DOWN)	INDEMNITY AND MEDICAL	EXCESS RATIO	AVERAGE
600,000 -	629,999	1,278	\$ 5,943,282,132	\$ 66,375,712	0.1207	\$ 614,590
630,000 -	659,999	1,170	\$ 6,003,914,842	\$ 60,632,710	0.1159	\$ 645,029
660,000 -	699,999	1,076	\$ 6,083,477,103	\$ 79,562,261	0.1114	\$ 680,019
700,000 -	749,999	959	\$ 6,174,201,182	\$ 90,724,079	0.1060	\$ 725,793
750,000 -	799,999	834	\$ 6,257,929,309	\$ 83,728,127	0.1001	\$ 775,260
800,000 -	849,999	726	\$ 6,333,589,851	\$ 75,660,542	0.0949	\$ 822,397
850,000 -	899,999	634	\$ 6,395,699,158	\$ 62,109,307	0.0904	\$ 874,779
900,000 -	999,999	563	\$ 6,490,680,327	\$ 94,981,169	0.0865	\$ 949,812
1,000,000 -	1,099,999	463	\$ 6,579,896,185	\$ 89,215,858	0.0797	\$ 1,049,598
1,100,000 -	1,199,999	378	\$ 6,642,151,954	\$ 62,255,769	0.0741	\$ 1,152,885
1,200,000 -	1,299,999	324	\$ 6,701,759,661	\$ 59,607,707	0.0695	\$ 1,241,827
1,300,000 -	1,399,999	276	\$ 6,754,571,338	\$ 52,811,677	0.0655	\$ 1,354,146
1,400,000 -	1,499,999	237	\$ 6,796,680,308	\$ 42,108,970	0.0621	\$ 1,452,033
1,500,000 -	1,599,999	208	\$ 6,822,957,028	\$ 26,276,720	0.0592	\$ 1,545,689
1,600,000 -	1,699,999	191	\$ 6,859,042,431	\$ 36,085,403	0.0565	\$ 1,640,246
1,700,000 -	1,799,999	169	\$ 6,885,275,905	\$ 26,233,474	0.0542	\$ 1,748,898
1,800,000 -	1,899,999	154	\$ 6,922,478,321	\$ 37,202,416	0.0521	\$ 1,860,121
1,900,000 -	1,999,999	134	\$ 6,937,919,699	\$ 15,441,378	0.0501	\$ 1,930,172
2,000,000 -	2,999,999	126	\$ 7,078,335,062	\$ 140,415,363	0.0484	\$ 2,463,427
3,000,000 -	3,999,999	69	\$ 7,167,451,491	\$ 89,116,429	0.0358	\$ 3,427,555
4,000,000 -	4,999,999	43	\$ 7,217,953,880	\$ 50,502,389	0.0286	\$ 4,591,126
5,000,000 -	5,999,999	32	\$ 7,245,725,518	\$ 27,771,638	0.0235	\$ 5,554,328
6,000,000 -	6,999,999	27	\$ 7,259,085,696	\$ 13,360,178	0.0196	\$ 6,680,089
7,000,000 -	7,999,999	25	\$ 7,304,761,051	\$ 45,675,355	0.0161	\$ 7,612,559
8,000,000 -	8,999,999	19	\$ 7,321,948,872	\$ 17,187,821	0.0131	\$ 8,593,911
9,000,000 -	9,999,999	17	\$ 7,350,158,469	\$ 28,209,597	0.0107	\$ 9,403,199
10,000,000 -	AND GREATER	14	\$ 7,555,823,995	\$ 205,665,526	0.0087	\$ 14,690,395
GRAND TOTALS		476,236	EXCLUDING CONTRACT MEDICAL	\$ 7,555,823,995		\$ 15,866

**Pennsylvania Compensation Rating Bureau  
Distribution of Losses**

<u>Excess Loss Limits *</u>		Loss Amount	Number of Claims	Excess Loss Amount	Average	Empirical Excess Ratio
From	TO (<)					
				7,555,823,995		
0	10,000	577,948,938	402,315	6,238,665,057	1,437	0.8257
10,000	15,000	168,311,449	13,709	5,906,383,608	12,277	0.7817
15,000	20,000	153,453,628	8,842	5,628,709,980	17,355	0.7449
20,000	25,000	134,794,365	6,016	5,387,465,615	22,406	0.7130
25,000	30,000	131,275,823	4,791	5,173,149,792	27,401	0.6847
30,000	35,000	125,100,799	3,867	4,980,578,993	32,351	0.6592
35,000	40,000	119,944,661	3,205	4,805,354,332	37,424	0.6360
40,000	50,000	222,384,603	4,972	4,496,659,729	44,727	0.5951
50,000	75,000	460,079,901	7,527	3,888,129,828	61,124	0.5146
75,000	100,000	371,139,907	4,285	3,420,689,921	86,614	0.4527
100,000	125,000	339,556,206	3,025	3,041,583,715	112,250	0.4025
125,000	150,000	319,077,208	2,339	2,731,306,508	136,416	0.3615
150,000	175,000	302,113,296	1,861	2,471,293,212	162,339	0.3271
175,000	200,000	283,068,497	1,519	2,254,974,715	186,352	0.2984
200,000	225,000	243,293,724	1,147	2,070,568,491	212,206	0.2740
225,000	250,000	210,040,754	888	1,911,990,237	236,666	0.2530
250,000	275,000	190,181,381	724	1,772,546,356	262,863	0.2346
275,000	300,000	185,183,839	647	1,651,175,018	286,441	0.2185
300,000	325,000	168,373,302	538	1,543,785,049	312,768	0.2043
325,000	350,000	154,059,965	458	1,449,391,750	336,620	0.1918
350,000	375,000	144,601,709	400	1,365,715,041	361,504	0.1807
375,000	400,000	139,720,762	360	1,291,052,612	387,754	0.1709
400,000	425,000	122,217,362	297	1,224,851,917	411,969	0.1621
425,000	450,000	114,596,188	263	1,165,730,729	436,557	0.1543
450,000	475,000	99,467,505	216	1,112,775,724	460,498	0.1473
475,000	500,000	94,009,817	194	1,064,828,407	485,839	0.1409
500,000	600,000	302,910,832	556	912,117,575	544,804	0.1207
600,000	700,000	206,570,683	319	801,046,892	647,557	0.1060
700,000	800,000	174,452,206	233	717,094,686	748,722	0.0949
800,000	900,000	137,769,849	163	653,424,837	845,214	0.0865
900,000	1,000,000	94,981,169	100	602,143,668	949,812	0.0797
1,000,000	2,000,000	447,239,372	337	365,904,296	1,327,120	0.0484
2,000,000	3,000,000	140,415,363	57	270,488,933	2,463,427	0.0358
3,000,000	4,000,000	89,116,429	26	216,372,504	3,427,555	0.0286
4,000,000	5,000,000	50,502,389	11	177,870,115	4,591,126	0.0235
5,000,000	6,000,000	27,771,638	5	148,098,477	5,554,328	0.0196
6,000,000	7,000,000	13,360,178	2	121,738,299	6,680,089	0.0161
7,000,000	8,000,000	45,675,355	6	99,062,944	7,612,559	0.0131
8,000,000	9,000,000	17,187,821	2	80,875,123	8,593,911	0.0107
9,000,000	10,000,000	28,209,597	3	65,665,526	9,403,199	0.0087
10,000,000 & Over		205,665,526	14		14,690,395	
TOTAL/AVERAGE		7,555,823,995	476,236		15,866	

\* Limits consistent with published loss limits for excess loss factors  
Values have been interpolated when not available on prior pages

**PENNSYLVANIA  
DISTRIBUTION OF LOSSES**

Loss Limit	Death-Pareto		PT-Lognormal		PP-Pareto		TT-Pareto		Med only
	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio
1,000	0.9985	0.9985	0.9999	0.9999	0.9943	0.9943	0.9667	0.9667	0.6430
2,000	0.9970	0.9970	0.9998	0.9998	0.9887	0.9887	0.9351	0.9351	0.4972
3,000	0.9955	0.9956	0.9996	0.9996	0.9830	0.9830	0.9052	0.9052	0.4105
4,000	0.9941	0.9942	0.9995	0.9995	0.9775	0.9775	0.8772	0.8771	0.3506
5,000	0.9928	0.9928	0.9994	0.9994	0.9720	0.9720	0.8508	0.8508	0.3059
6,000	0.9915	0.9916	0.9993	0.9993	0.9665	0.9665	0.8259	0.8259	0.2710
7,000	0.9902	0.9903	0.9992	0.9992	0.9611	0.9611	0.8024	0.8023	0.2430
8,000	0.9889	0.9890	0.9991	0.9990	0.9558	0.9558	0.7801	0.7800	0.2200
9,000	0.9876	0.9877	0.9989	0.9989	0.9505	0.9505	0.7590	0.7589	0.2008
10,000	0.9863	0.9864	0.9988	0.9988	0.9453	0.9453	0.7388	0.7387	0.1844
11,000	0.9851	0.9851	0.9987	0.9987	0.9401	0.9401	0.7197	0.7196	0.1703
12,000	0.9838	0.9839	0.9986	0.9986	0.9350	0.9350	0.7014	0.7013	0.1581
13,000	0.9825	0.9826	0.9985	0.9984	0.9299	0.9299	0.6839	0.6838	0.1472
14,000	0.9813	0.9813	0.9984	0.9983	0.9249	0.9249	0.6671	0.6670	0.1376
15,000	0.9800	0.9801	0.9982	0.9982	0.9199	0.9199	0.6511	0.6509	0.1290
16,000	0.9788	0.9788	0.9981	0.9981	0.9150	0.9150	0.6357	0.6355	0.1213
17,000	0.9775	0.9776	0.9980	0.9980	0.9101	0.9101	0.6209	0.6207	0.1143
18,000	0.9762	0.9763	0.9979	0.9978	0.9053	0.9053	0.6066	0.6065	0.1080
19,000	0.9750	0.9751	0.9978	0.9977	0.9005	0.9005	0.5930	0.5928	0.1023
20,000	0.9737	0.9738	0.9977	0.9976	0.8958	0.8957	0.5798	0.5797	0.0971
21,000	0.9725	0.9726	0.9975	0.9975	0.8911	0.8910	0.5671	0.5670	0.0923
22,000	0.9712	0.9713	0.9974	0.9974	0.8864	0.8864	0.5549	0.5547	0.0878
23,000	0.9700	0.9701	0.9973	0.9972	0.8818	0.8818	0.5430	0.5428	0.0836
24,000	0.9688	0.9689	0.9972	0.9971	0.8772	0.8772	0.5315	0.5313	0.0798
25,000	0.9675	0.9676	0.9971	0.9970	0.8727	0.8727	0.5204	0.5202	0.0762
26,000	0.9663	0.9664	0.9969	0.9969	0.8682	0.8682	0.5097	0.5095	0.0728
27,000	0.9651	0.9652	0.9968	0.9967	0.8638	0.8637	0.4993	0.4991	0.0697
28,000	0.9639	0.9639	0.9967	0.9966	0.8594	0.8593	0.4892	0.4890	0.0667
29,000	0.9626	0.9627	0.9966	0.9965	0.8550	0.8550	0.4794	0.4792	0.0639
30,000	0.9614	0.9615	0.9965	0.9964	0.8507	0.8506	0.4699	0.4697	0.0614
31,000	0.9602	0.9603	0.9964	0.9963	0.8464	0.8463	0.4607	0.4605	0.0590
32,000	0.9590	0.9591	0.9962	0.9961	0.8421	0.8421	0.4518	0.4516	0.0567
33,000	0.9578	0.9579	0.9961	0.9960	0.8379	0.8379	0.4432	0.4430	0.0546
34,000	0.9566	0.9567	0.9960	0.9959	0.8337	0.8337	0.4348	0.4346	0.0526
35,000	0.9554	0.9555	0.9959	0.9958	0.8296	0.8296	0.4266	0.4264	0.0507
36,000	0.9542	0.9543	0.9958	0.9957	0.8255	0.8254	0.4186	0.4184	0.0489
37,000	0.9530	0.9531	0.9957	0.9955	0.8214	0.8214	0.4109	0.4107	0.0472
38,000	0.9518	0.9519	0.9955	0.9954	0.8174	0.8173	0.4034	0.4032	0.0456
39,000	0.9506	0.9507	0.9954	0.9953	0.8133	0.8133	0.3961	0.3959	0.0441
40,000	0.9494	0.9495	0.9953	0.9952	0.8094	0.8094	0.3890	0.3887	0.0426
41,000	0.9482	0.9483	0.9952	0.9951	0.8054	0.8054	0.3820	0.3818	0.0413
42,000	0.9471	0.9471	0.9951	0.9949	0.8015	0.8015	0.3753	0.3750	0.0400
43,000	0.9459	0.9460	0.9950	0.9948	0.7976	0.7976	0.3687	0.3685	0.0388

**PENNSYLVANIA  
DISTRIBUTION OF LOSSES**

Loss Limit	Death-Pareto		PT-Lognormal		PP-Pareto		TT-Pareto		Med only
	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio
44,000	0.9447	0.9448	0.9948	0.9947	0.7938	0.7938	0.3623	0.3621	0.0377
45,000	0.9435	0.9436	0.9947	0.9946	0.7900	0.7899	0.3561	0.3559	0.0366
46,000	0.9423	0.9424	0.9946	0.9945	0.7862	0.7862	0.3500	0.3498	0.0355
47,000	0.9412	0.9413	0.9945	0.9943	0.7824	0.7824	0.3441	0.3439	0.0346
48,000	0.9400	0.9401	0.9944	0.9942	0.7787	0.7787	0.3384	0.3381	0.0336
49,000	0.9388	0.9389	0.9942	0.9941	0.7750	0.7750	0.3327	0.3325	0.0327
50,000	0.9377	0.9378	0.9941	0.9940	0.7713	0.7713	0.3272	0.3270	0.0319
51,000	0.9365	0.9366	0.9940	0.9939	0.7677	0.7676	0.3219	0.3216	0.0311
52,000	0.9354	0.9355	0.9939	0.9937	0.7640	0.7640	0.3166	0.3163	0.0303
53,000	0.9342	0.9343	0.9938	0.9936	0.7604	0.7604	0.3115	0.3112	0.0295
54,000	0.9331	0.9332	0.9937	0.9935	0.7569	0.7568	0.3065	0.3062	0.0288
55,000	0.9319	0.9320	0.9935	0.9934	0.7533	0.7533	0.3016	0.3013	0.0281
56,000	0.9308	0.9309	0.9934	0.9933	0.7498	0.7498	0.2968	0.2965	0.0275
57,000	0.9297	0.9297	0.9933	0.9931	0.7463	0.7463	0.2921	0.2919	0.0268
58,000	0.9285	0.9286	0.9932	0.9930	0.7429	0.7428	0.2876	0.2873	0.0262
59,000	0.9274	0.9275	0.9931	0.9929	0.7394	0.7394	0.2831	0.2828	0.0257
60,000	0.9263	0.9263	0.9930	0.9928	0.7360	0.7360	0.2788	0.2785	0.0251
61,000	0.9251	0.9252	0.9928	0.9927	0.7326	0.7326	0.2745	0.2742	0.0246
62,000	0.9240	0.9240	0.9927	0.9925	0.7292	0.7292	0.2703	0.2700	0.0240
63,000	0.9228	0.9229	0.9926	0.9924	0.7259	0.7259	0.2662	0.2659	0.0235
64,000	0.9217	0.9218	0.9925	0.9923	0.7226	0.7225	0.2622	0.2619	0.0231
65,000	0.9206	0.9206	0.9924	0.9922	0.7193	0.7192	0.2583	0.2580	0.0226
66,000	0.9194	0.9195	0.9923	0.9921	0.7160	0.7159	0.2544	0.2541	0.0222
67,000	0.9183	0.9183	0.9921	0.9919	0.7127	0.7127	0.2507	0.2504	0.0217
68,000	0.9172	0.9172	0.9920	0.9918	0.7095	0.7094	0.2470	0.2467	0.0213
69,000	0.9160	0.9161	0.9919	0.9917	0.7063	0.7062	0.2434	0.2431	0.0209
70,000	0.9149	0.9149	0.9918	0.9916	0.7031	0.7030	0.2398	0.2395	0.0206
71,000	0.9138	0.9138	0.9917	0.9915	0.6999	0.6999	0.2364	0.2361	0.0202
72,000	0.9126	0.9127	0.9915	0.9913	0.6967	0.6967	0.2330	0.2327	0.0198
73,000	0.9115	0.9115	0.9914	0.9912	0.6936	0.6936	0.2296	0.2293	0.0195
74,000	0.9104	0.9104	0.9913	0.9911	0.6905	0.6904	0.2263	0.2260	0.0192
75,000	0.9092	0.9093	0.9912	0.9910	0.6874	0.6873	0.2231	0.2228	0.0188
76,000	0.9081	0.9081	0.9911	0.9908	0.6843	0.6843	0.2200	0.2196	0.0185
77,000	0.9070	0.9070	0.9910	0.9907	0.6812	0.6812	0.2169	0.2165	0.0182
78,000	0.9059	0.9059	0.9908	0.9906	0.6782	0.6782	0.2138	0.2135	0.0179
79,000	0.9048	0.9048	0.9907	0.9905	0.6752	0.6751	0.2108	0.2105	0.0176
80,000	0.9037	0.9037	0.9906	0.9904	0.6722	0.6721	0.2079	0.2076	0.0173
81,000	0.9026	0.9026	0.9905	0.9902	0.6692	0.6691	0.2050	0.2047	0.0171
82,000	0.9015	0.9015	0.9904	0.9901	0.6662	0.6661	0.2022	0.2019	0.0168
83,000	0.9004	0.9004	0.9903	0.9900	0.6632	0.6632	0.1994	0.1991	0.0165
84,000	0.8993	0.8993	0.9901	0.9899	0.6603	0.6603	0.1967	0.1963	0.0163
85,000	0.8982	0.8982	0.9900	0.9898	0.6574	0.6573	0.1940	0.1936	0.0160
86,000	0.8971	0.8971	0.9899	0.9896	0.6545	0.6544	0.1913	0.1910	0.0158



**PENNSYLVANIA  
DISTRIBUTION OF LOSSES**

Loss Limit	Death-Pareto		PT-Lognormal		PP-Pareto		TT-Pareto		Med only
	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio
87,000	0.8960	0.8960	0.9898	0.9895	0.6516	0.6516	0.1887	0.1884	0.0155
88,000	0.8949	0.8949	0.9897	0.9894	0.6488	0.6487	0.1862	0.1858	0.0153
89,000	0.8938	0.8938	0.9896	0.9893	0.6459	0.6459	0.1836	0.1833	0.0151
90,000	0.8927	0.8927	0.9894	0.9892	0.6431	0.6430	0.1812	0.1808	0.0149
91,000	0.8917	0.8916	0.9893	0.9890	0.6403	0.6402	0.1787	0.1784	0.0147
92,000	0.8906	0.8905	0.9892	0.9889	0.6375	0.6374	0.1763	0.1760	0.0145
93,000	0.8895	0.8895	0.9891	0.9888	0.6347	0.6346	0.1740	0.1736	0.0143
94,000	0.8884	0.8884	0.9890	0.9887	0.6319	0.6319	0.1717	0.1713	0.0141
95,000	0.8873	0.8873	0.9888	0.9886	0.6292	0.6291	0.1694	0.1690	0.0139
96,000	0.8862	0.8862	0.9887	0.9884	0.6264	0.6264	0.1671	0.1668	0.0138
97,000	0.8852	0.8851	0.9886	0.9883	0.6237	0.6236	0.1649	0.1646	0.0136
98,000	0.8841	0.8840	0.9885	0.9882	0.6210	0.6209	0.1627	0.1624	0.0134
99,000	0.8830	0.8829	0.9884	0.9881	0.6183	0.6182	0.1606	0.1602	0.0132
100,000	0.8819	0.8818	0.9883	0.9880	0.6156	0.6155	0.1585	0.1581	0.0131
110,000	0.8711	0.8710	0.9871	0.9868	0.5897	0.5896	0.1393	0.1389	0.0116
120,000	0.8603	0.8601	0.9859	0.9856	0.5651	0.5650	0.1230	0.1227	0.0105
130,000	0.8496	0.8494	0.9847	0.9843	0.5418	0.5417	0.1092	0.1088	0.0096
140,000	0.8391	0.8388	0.9836	0.9831	0.5197	0.5196	0.0974	0.0970	0.0088
150,000	0.8287	0.8284	0.9824	0.9819	0.4989	0.4988	0.0872	0.0869	0.0081
160,000	0.8185	0.8181	0.9812	0.9807	0.4794	0.4792	0.0785	0.0781	0.0075
170,000	0.8085	0.8080	0.9800	0.9795	0.4609	0.4608	0.0708	0.0704	0.0069
180,000	0.7985	0.7980	0.9789	0.9783	0.4436	0.4434	0.0641	0.0637	0.0065
190,000	0.7886	0.7880	0.9777	0.9771	0.4273	0.4271	0.0582	0.0578	0.0061
200,000	0.7788	0.7781	0.9765	0.9759	0.4119	0.4118	0.0530	0.0526	0.0057
210,000	0.7691	0.7684	0.9754	0.9747	0.3975	0.3974	0.0484	0.0480	0.0053
220,000	0.7596	0.7588	0.9742	0.9735	0.3839	0.3837	0.0442	0.0438	0.0050
230,000	0.7502	0.7493	0.9730	0.9723	0.3710	0.3708	0.0405	0.0401	0.0047
240,000	0.7410	0.7400	0.9718	0.9711	0.3587	0.3585	0.0372	0.0367	0.0045
250,000	0.7319	0.7308	0.9707	0.9699	0.3470	0.3469	0.0341	0.0337	0.0043
260,000	0.7229	0.7216	0.9695	0.9687	0.3360	0.3358	0.0314	0.0310	0.0041
270,000	0.7139	0.7125	0.9683	0.9675	0.3254	0.3252	0.0289	0.0285	0.0039
280,000	0.7049	0.7034	0.9671	0.9663	0.3153	0.3151	0.0267	0.0263	0.0037
290,000	0.6960	0.6945	0.9660	0.9651	0.3057	0.3055	0.0248	0.0243	0.0036
300,000	0.6873	0.6856	0.9648	0.9639	0.2966	0.2964	0.0230	0.0226	0.0034
315,000	0.6746	0.6727	0.9630	0.9621	0.2837	0.2834	0.0207	0.0202	0.0032
330,000	0.6622	0.6601	0.9613	0.9603	0.2717	0.2715	0.0187	0.0183	0.0029
345,000	0.6501	0.6478	0.9595	0.9585	0.2605	0.2603	0.0170	0.0165	0.0027
360,000	0.6381	0.6356	0.9577	0.9567	0.2501	0.2498	0.0155	0.0150	0.0026
375,000	0.6263	0.6235	0.9560	0.9548	0.2404	0.2401	0.0141	0.0136	0.0024
390,000	0.6146	0.6116	0.9542	0.9530	0.2313	0.2310	0.0129	0.0124	0.0022
405,000	0.6034	0.6001	0.9525	0.9512	0.2230	0.2226	0.0118	0.0113	0.0021
420,000	0.5923	0.5889	0.9507	0.9494	0.2151	0.2148	0.0108	0.0103	0.0020
440,000	0.5777	0.5739	0.9484	0.9470	0.2055	0.2051	0.0097	0.0092	0.0019

**PENNSYLVANIA  
DISTRIBUTION OF LOSSES**

Loss Limit	Death-Pareto		PT-Lognormal		PP-Pareto		TT-Pareto		Med only
	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio	Fitted Excess Ratio	Actual Excess Ratio
460,000	0.5637	0.5596	0.9460	0.9446	0.1967	0.1963	0.0087	0.0082	0.0018
480,000	0.5504	0.5458	0.9437	0.9422	0.1885	0.1881	0.0078	0.0073	0.0017
500,000	0.5377	0.5327	0.9413	0.9398	0.1810	0.1806	0.0070	0.0065	0.0016
520,000	0.5253	0.5203	0.9390	0.9374	0.1740	0.1737	0.0063	0.0058	0.0015
540,000	0.5130	0.5085	0.9366	0.9350	0.1676	0.1672	0.0057	0.0051	0.0014
560,000	0.5014	0.4975	0.9343	0.9326	0.1617	0.1613	0.0052	0.0046	0.0014
580,000	0.4901	0.4870	0.9319	0.9302	0.1562	0.1557	0.0047	0.0041	0.0013
600,000	0.4788	0.4771	0.9296	0.9278	0.1511	0.1505	0.0044	0.0037	0.0012
630,000	0.4626	0.4631	0.9261	0.9242	0.1439	0.1434	0.0040	0.0032	0.0011
660,000	0.4467	0.4501	0.9225	0.9206	0.1373	0.1369	0.0036	0.0028	0.0010
700,000	0.4262	0.4342	0.9178	0.9158	0.1293	0.1291	0.0033	0.0023	0.0009
750,000	0.4023	0.4162	0.9120	0.9099	0.1207	0.1205	0.0029	0.0019	0.0007
800,000	0.3797	0.4000	0.9061	0.9040	0.1132	0.1130	0.0026	0.0016	0.0006
850,000	0.3590	0.3853	0.9002	0.8981	0.1068	0.1064	0.0023	0.0013	0.0004
900,000	0.3392	0.3718	0.8944	0.8922	0.1012	0.1005	0.0021	0.0011	0.0003
1,000,000	0.3025	0.3482	0.8826	0.8805	0.0918	0.0905	0.0017	0.0008	0.0000
1,100,000	0.2703	0.3279	0.8709	0.8690	0.0841	0.0823	0.0015	0.0006	0.0000
1,200,000	0.2419	0.3104	0.8591	0.8576	0.0778	0.0755	0.0012	0.0005	0.0000
1,300,000	0.2200	0.2950	0.8484	0.8463	0.0725	0.0698	0.0010	0.0004	0.0000
1,400,000	0.2021	0.2813	0.8380	0.8351	0.0678	0.0648	0.0009	0.0003	0.0000
1,500,000	0.1874	0.2691	0.8281	0.8241	0.0638	0.0605	0.0008	0.0002	0.0000
1,600,000	0.1750	0.2581	0.8184	0.8133	0.0602	0.0568	0.0007	0.0002	0.0000
1,700,000	0.1654	0.2481	0.8086	0.8025	0.0570	0.0535	0.0006	0.0002	0.0000
1,800,000	0.1566	0.2389	0.7988	0.7920	0.0541	0.0506	0.0005	0.0001	0.0000
1,900,000	0.1487	0.2306	0.7890	0.7816	0.0515	0.0480	0.0004	0.0001	0.0000
2,000,000	0.1414	0.2229	0.7792	0.7713	0.0493	0.0456	0.0004	0.0001	0.0000
3,000,000	0.1003	0.1695	0.6814	0.6787	0.0331	0.0306	0.0000	0.0000	0.0000
4,000,000	0.0760	0.1382	0.5948	0.5998	0.0250	0.0232	0.0000	0.0000	0.0000
5,000,000	0.0607	0.1172	0.5127	0.5330	0.0198	0.0187	0.0000	0.0000	0.0000
6,000,000	0.0473	0.1018	0.4399	0.4762	0.0161	0.0157	0.0000	0.0000	0.0000
7,000,000	0.0340	0.0900	0.3747	0.4278	0.0130	0.0136	0.0000	0.0000	0.0000
8,000,000	0.0206	0.0805	0.3129	0.3862	0.0105	0.0120	0.0000	0.0000	0.0000
9,000,000	0.0118	0.0727	0.2608	0.3503	0.0086	0.0108	0.0000	0.0000	0.0000
10,000,000	0.0051	0.0662	0.2136	0.3192	0.0071	0.0098	0.0000	0.0000	0.0000

# Pennsylvania Compensation Rating Bureau Cumulative Distribution of Loss By Type of Injury (2016 - 2018)

