

PENNSYLVANIA COMPENSATION RATING BUREAU, INC.

NCCI Filing Memorandum

Attached is an NCCI Filing Memorandum (ITEM R-1371-2001 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS).

The PCRБ is filing the Table of Expected Loss Ranges as shown in Exhibit III, page 6 of ITEM R-1371.

FILING MEMORANDUM

ITEM R-1371—2001 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS

(To be effective 12:01 a.m. on July 1, 2001 applicable to new and renewal business only.)

PURPOSE

The purpose of this filing is to update the Expected Loss Ranges and State and Hazard Group Severity Relativities of the Retrospective Rating Plan.

BACKGROUND

Retrospective Rating is a plan for adjusting the risk premium of a policy according to the loss experience during the effective period of the policy. At the simplest level, an insured's retrospective premium is determined by the formula: $R = (B + cL)t$, where

- R = Retrospective Premium, subject to minimum and maximum amounts
- B = Basic Premium
- c = Loss Conversion Factor, generally reflecting loss adjustment expense
- L = Actual incurred loss during the effective policy period
- t = Tax Multiplier

R is not known until after the policy has expired and the actual losses are fully developed.

The Basic Premium contains provisions for the expenses of the carriers. It also includes an insurance charge to compensate for the times losses exceed an amount leading to the maximum premium, but reduced by the average savings resulting from the times losses are less than an amount leading to the minimum premium. The source of the values used to determine the charges and savings is the Table of Insurance Charges.

Expected Loss Ranges

The Table of Insurance Charges contains the excess ratios needed to quantify the insurance charge and savings described above. The ratio of actual losses to expected losses, the entry ratio, is used to look up the values in the Table. The charges depend not only on the maximum and minimum subject losses, but also on the size of the insured. The variation in the loss ratios, hence the charges, of the larger employers who expect many losses should be much lower than the variation for smaller employers.

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As inflation increases claim size, there is an apparent growth in the size of the insured employers, but no real change in loss ratio distributions. To correct for the impact of loss size inflation, NCCI is proposing that the Table of Expected Loss Ranges be updated for the trend in average size of loss since the last time such an update was made (Item R-1365, "2000 Table of Insurance Charges"). The current Table of Expected Loss Ranges already includes an estimate of actual severity trend from 10/94 to 10/96 of 5.0%, and an estimate of future annual severity trend from 10/96 to 07/01 of 1.0%. The result is a severity trend assumption of 10.0% from 10/94 to 07/01. The updated estimate of the actual severity trend from 10/94 to 10/97 is 7.5%, and the estimated future annual severity trend is 2.0%. The net result is to update the 7/1/2000 ranges by 7.2% to obtain the 7/1/2001 ranges.

State and Hazard Group Relativities

The variation in the loss ratios of employers in the lower hazard groups should be smaller than the variation for employers in the higher hazard groups. The State and Hazard Group Relativity Factors adjust for this difference by placing lower hazard group employers in a higher Expected Loss Size Range and higher hazard group employers in a lower Expected Loss Size Range than would otherwise be the case. This adjustment affects the selection of the column of the Table of Insurance Charges, which then impacts the basic premium portion of the retrospective policy premium.

The State and Hazard Group Relativities should be updated regularly due to changes in the circumstances (changes in state statutory benefit levels, inflation, etc.) underlying each state's severity.

PROPOSALExpected Loss Ranges

It is proposed that the Table of Expected Loss Ranges be updated for the trend in average size of loss since the last time such an update was made. The proposed ranges can be found in Exhibit III.

State and Hazard Group Relativities

It is further proposed that the State and Hazard Group Relativities of the Retrospective Rating Plan be updated for each state. Exhibit I provides a description of the development of the relativities. As explained in the exhibit, individual state severities, as well as countrywide severities are used in the calculation of the relativities.

The proposed relativities can be found in Exhibit II.

It is proposed that these changes are to be effective 12:01 a.m., on July 1, 2001, for use by companies affiliated with NCCI for Large Accounts License, Service, and Maintenance, applicable to new and renewal business only.

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IMPACT

Expected Loss Ranges

The proposed Expected Loss Ranges are necessary to maintain the aggregate expected balance between the retrospectively rated premium and the guaranteed cost premium. If these ranges were not updated, there would be a natural slippage caused by inflation because risks would have an apparent growth as seen by increasing expected losses, but no real change in their loss ratio distributions.

State and Hazard Group Relativities

Retrospective rating should produce premium that is equitably distributed to all insured employers, but on average close to the guaranteed cost in the approved rate. The object of the update to the State and Hazard Group Relativities of the Retrospective Rating Plan is to maintain the aggregate expected balance, but the impact will vary slightly for individual insured employers. Thus, insurance charges and premiums will be higher for some insureds and lower for others, depending on their state and hazard group assignments. For most of the insured employers electing retrospective rating, the impact on final premium from these changes will be quite small.

The improved equitability from this change will result in slightly lower average insurance charges for some states, and slightly higher for others. However, this statewide impact will be negligible. The program is designed to be revenue neutral countrywide.

IMPLEMENTATION

The attached exhibits outline the changes necessary in the Retrospective Rating Plan Manual for Workers Compensation and Employers Liability Insurance.

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EXHIBIT I

DEVELOPMENT OF STATE AND HAZARD GROUP RELATIVITIES

- Step 1. Individual state severities are calculated for each hazard group.
- Step 2. The severities are weighted with the countrywide severities by hazard group using a credibility that varies by state. For this purpose, we regard 155,000 claims as fully credible, and use the square root rule to compute partial credibilities.
- Step 3. Credibility weighted severities for each state and hazard group are produced. A new countrywide average severity is calculated by taking the weighted average of the formula state severities using claim counts as weights.
- Step 4. The relativities are calculated by dividing the countrywide severity by the individual state and hazard group severities.

Example: State X

<u>Step 1</u>	<u>Hazard Group</u>	<u>State X</u>	<u>Countrywide</u>
Severities	1	21,361	17,155
	2	23,085	18,894
	3	33,771	29,974
	4	45,265	43,752
<u>Step 2</u>	Claim Count	59,672	
	Credibility	=	$(59,672/155,000)^{0.5} = 0.62$
<u>Step 3</u>	<u>Hazard Group</u>	<u>State X</u>	
Cred. Wtd. Severities	1	19,763	= 0.62 x 21,361 + 0.38 x 17,155
	2	21,492	
	3	32,328	
	4	44,690	
	Countrywide Overall: 23,381		
<u>Step 4</u>	<u>Hazard Group</u>	<u>State X</u>	
Relativities	1	1.18	= 23,381/19,763
	2	1.09	
	3	0.72	
	4	0.52	

Note: The underlying data source for the above calculations is the Unit Statistical Plan (USP), excluding medical only claims. The USP data for each state is adjusted accordingly, as reflected in the data underlying the Excess Loss Factor (ELF) calculation.

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EXHIBIT II

STATE HAZARD GROUP RELATIVITIES
EFFECTIVE 7/01/2001

State	I	II	III	IV
AK	1.52	1.35	0.86	0.60
AL	1.15	1.01	0.62	0.42
AR	1.57	1.39	0.89	0.63
AZ	1.47	1.32	0.80	0.55
CO	1.14	1.00	0.62	0.40
CT	1.65	1.49	0.96	0.66
DC	1.35	1.22	0.74	0.51
FL	0.87	0.78	0.46	0.30
GA	1.27	1.12	0.70	0.48
HI	1.62	1.46	0.91	0.63
IA	1.53	1.40	0.91	0.63
ID	1.53	1.19	0.76	0.53
IL	1.51	1.41	0.97	0.69
IN	1.60	1.48	1.02	0.73
KS	1.52	1.37	0.89	0.63
KY	1.26	1.12	0.68	0.45
LA	1.26	1.14	0.71	0.50
MD	1.42	1.27	0.79	0.55
ME	1.38	1.26	0.79	0.56
MI	1.39	1.32	0.83	0.58
MO	1.87	1.69	1.12	0.77
MS	1.38	1.27	0.80	0.56
MT	1.38	1.23	0.77	0.53
NC	1.06	0.94	0.58	0.39
NE	1.27	1.12	0.70	0.48
NH	1.36	1.22	0.74	0.51
NM	1.49	1.32	0.84	0.59
NV	1.44	1.26	0.80	0.57
OK	1.49	1.39	0.89	0.62
OR	1.87	1.65	1.00	0.68
RI	1.54	1.35	0.84	0.58
SC	1.48	1.32	0.85	0.60
SD	1.46	1.28	0.78	0.52
TN	1.12	1.01	0.66	0.47
UT	1.73	1.52	0.92	0.60
VA	1.24	1.11	0.68	0.47
VT	1.38	1.24	0.79	0.55
WI	1.89	1.78	1.21	0.84

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EXHIBIT III

2001 - TABLE OF EXPECTED LOSS RANGES

The following Table of Expected Loss Ranges is effective July 1, 2001

Expected Loss Group	Range Rounded Values		Expected Loss Group	Range Rounded Values		Expected Loss Group	Range Rounded Values	
95	430	671	65	36053	38938	35	449651	504854
94	672	994	64	38939	42056	34	504855	566837
93	995	1312	63	42057	45422	33	566838	646366
92	1313	1735	62	45423	49058	32	646367	742956
91	1736	2257	61	49059	52985	31	742957	853981
90	2258	2725	60	52986	57238	30	853982	981599
89	2726	3290	59	57239	61888	29	981600	1166840
88	3291	3819	58	61889	66821	28	1166841	1395287
87	3820	4433	57	66822	71996	27	1395288	1668462
86	4434	5142	56	71997	77572	26	1668463	2056868
85	5143	5815	55	77573	83581	25	2056869	2617424
84	5816	6574	54	83582	90374	24	2617425	3330748
83	6575	7424	53	90375	97745	23	3330749	4256111
82	7425	8260	52	97746	105720	22	4256112	5446097
81	8261	9191	51	105721	114342	21	5446098	6968796
80	9192	10224	50	114343	123387	20	6968797	8917234
79	10225	11375	49	123388	133126	19	8917235	11410444
78	11376	12553	48	133127	143703	18	11410445	15651781
77	12554	13820	47	143704	156342	17	15651782	23148859
76	13821	15216	46	156343	170091	16	23148860	34236979
75	15217	16721	45	170092	185049	15	34236980	50636219
74	16722	18307	44	185050	202219	14	50636220	74890565
73	18308	20042	43	202220	221271	13	74890566	110762548
72	20043	21944	42	221272	242119	12	110762549	173385693
71	21945	23954	41	242120	266906	11	173385694	274365607
70	23955	26129	40	266907	294958	10	274365608	434156275
69	26130	28499	39	294959	325958	9	434156276	& over
68	28500	30900	38	325959	360215			
67	30901	33376	37	360216	400481			
66	33377	36052	36	400482	449650			