

PENNSYLVANIA COMPENSATION RATING BUREAU
NCCI Filing Memorandum

Attached is an NCCI Filing Memorandum (ITEM R-1395-2005 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS).

The PCRБ is filing the Table of Expected Loss Ranges as shown on page 5 of ITEM R-1395.

FILING MEMORANDUM

ITEM R-1395—2005 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS

PURPOSE

The purpose of this item is to update the Expected Loss Ranges and State Hazard Group Relativities in NCCI's *Retrospective Rating Plan Manual for Workers Compensation and Employers Liability Insurance*.

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 Expenses
L	=	Actual Incurred Loss during the effective policy period
t	=	Tax Multiplier

The final retrospective premium, 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 a net insurance charge, which contains a charge to compensate for the possibility that R will exceed the maximum premium amount. Similarly, there is a savings resulting from the possibility that R will be less than the minimum premium amount. The net insurance charge is the difference between the charge for the maximum and the savings from the minimum.

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 that expect many losses should be much lower than the variation for smaller employers.

As inflation increases claim size, there is an apparent growth in size of the insured, measured in expected losses, but no *real* growth in the size of the insured, measured in the expected number of claims. 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. The last time such an update was made was in 2004 (Item R-1388-2004—Update to Retrospective Rating Plan Parameters). The current Table of Expected Loss Ranges is based on a projected annual increase in severity of 6% from June 22, 2000 to July 1, 2005. We have since observed an actual annualized growth in severity of 10.6% from June 22, 2000 to March 5, 2002, and we project an annual growth in severity of 9% from March 5, 2002 to August 15, 2006. The new table incorporates both of these observed and projected changes in severity.

State Hazard Group Relativities

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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 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 column selection in the Table of Insurance Charges, which then impacts the basic premium portion of the retrospective policy premium.

The State 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.

PROPOSAL

It is proposed that NCCI's *Retrospective Rating Plan Manual* be amended as contained in the attached exhibits.

Expected Loss Ranges

This filing updates the Table of Expected Loss Ranges for entry into the Table of Insurance Charges. The proposed ranges are found in Exhibit 2.

State Hazard Group Relativities

This filing also updates the State Hazard Group Relativities of NCCI's *Retrospective Rating Plan Manual* for each state. Exhibit 1 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 are found in Exhibit 3.

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 over time because risks would have an apparent growth in size as seen by increasing expected losses, but no real growth in size as seen by their expected number of claims.

State 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 this change 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. For most of the insured employers electing retrospective rating, the impact on final premium from these changes will be quite small.

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

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ITEM R-1395—2005 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS IMPLEMENTATION

Exhibit 1 displays an example of the calculation of the development of State Hazard Group Relativities. Exhibits 2 and 3 detail the changes made to NCCI's *Retrospective Rating Plan Manual*.

In all states, **except** Hawaii and Virginia, this item will be implemented effective 12:01 a.m. on October 1, 2005 applicable to new and renewal business only.

In Hawaii, effective date is determined upon regulatory approval of the individual carrier's election to adopt this change.

In Virginia, this item will be implemented for policies effective on or after 12:01 a.m. October 1, 2005.

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ITEM R-1395—2005 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS

EXHIBIT 1

DEVELOPMENT OF STATE 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 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 hazard group severities.

Example: State X

<u>Step 1</u>	<u>Hazard Group</u>	<u>State X</u>	<u>Countrywide</u>
Severities	1	26,850	31,845
	2	30,062	36,628
	3	48,785	55,055
	4	72,951	84,145

<u>Step 2</u>	Claim Count	57,351
	Credibility =	$(57,351 / 155,000)^{0.5} = 0.61$

<u>Step 3</u>	<u>Hazard Group</u>	<u>State X</u>	
Cred. Wtd. Severities	1	28,798	= 0.61 x 26,850 + 0.39 x 31,845
	2	32,623	
	3	51,230	
	4	77,317	

Countrywide Overall: 44,457

<u>Step 4</u>	<u>Hazard Group</u>	<u>State X</u>	
Relativities	1	1.54	= 44,457 / 28,798
	2	1.36	
	3	0.87	
	4	0.57	

Note: The underlying data source for the above calculations is NCCI's *Pre-URE Workers Compensation Statistical Plan* and *URE Workers Compensation Statistical Plan*, excluding medical-only claims. NCCI's *Pre-URE Workers Compensation Statistical Plan* and *URE Workers Compensation Statistical Plan* data for each state is adjusted accordingly, as reflected in the data underlying the Excess Loss Factor (ELF) calculation.

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EXHIBIT 2
RETROSPECTIVE RATING PLAN MANUAL
2005 EXPECTED LOSS RANGES EFFECTIVE
10/01/05

2005—TABLE OF EXPECTED LOSS RANGES

Expected				Expected				Expected			
Loss		Range		Loss		Range		Loss		Range	
Group	Rounded Values			Group	Rounded Values			Group	Rounded Values		
95	835	—	1,303	65	70,026	—	75,631	35	873,373	—	980,596
94	1,304	—	1,930	64	75,632	—	81,686	34	980,597	—	1,100,988
93	1,931	—	2,549	63	81,687	—	88,225	33	1,100,989	—	1,255,459
92	2,550	—	3,370	62	88,226	—	95,287	32	1,255,460	—	1,443,070
91	3,371	—	4,384	61	95,288	—	102,915	31	1,443,071	—	1,658,718
90	4,385	—	5,294	60	102,916	—	111,175	30	1,658,719	—	1,906,594
89	5,295	—	6,390	59	111,176	—	120,208	29	1,906,595	—	2,266,395
88	6,391	—	7,418	58	120,209	—	129,789	28	2,266,396	—	2,710,115
87	7,419	—	8,610	57	129,790	—	139,840	27	2,710,116	—	3,240,713
86	8,611	—	9,987	56	139,841	—	150,672	26	3,240,714	—	3,995,127
85	9,988	—	11,295	55	150,673	—	162,344	25	3,995,128	—	5,083,915
84	11,296	—	12,769	54	162,345	—	175,536	24	5,083,916	—	6,469,430
83	12,770	—	14,420	53	175,537	—	189,854	23	6,469,431	—	8,266,795
82	14,421	—	16,045	52	189,855	—	205,344	22	8,266,796	—	10,578,147
81	16,046	—	17,852	51	205,345	—	222,091	21	10,578,148	—	13,535,740
80	17,853	—	19,859	50	222,092	—	239,659	20	13,535,741	—	17,320,261
79	19,860	—	22,095	49	239,660	—	258,575	19	17,320,262	—	22,162,911
78	22,096	—	24,382	48	258,576	—	279,120	18	22,162,912	—	30,401,010
77	24,383	—	26,843	47	279,121	—	303,668	17	30,401,011	—	44,962,849
76	26,844	—	29,555	46	303,669	—	330,373	16	44,962,850	—	66,499,700
75	29,556	—	32,478	45	330,374	—	359,428	15	66,499,701	—	98,352,526
74	32,479	—	35,558	44	359,429	—	392,777	14	98,352,527	—	145,462,603
73	35,559	—	38,928	43	392,778	—	429,782	13	145,462,604	—	215,138,027
72	38,929	—	42,624	42	429,783	—	470,277	12	215,138,028	—	336,773,184
71	42,625	—	46,526	41	470,278	—	518,422	11	336,773,185	—	532,910,055
70	46,527	—	50,752	40	518,423	—	572,907	10	532,910,056	—	843,277,140
69	50,753	—	55,355	39	572,908	—	633,119	9	843,277,141	—	& over
68	55,356	—	60,018	38	633,120	—	699,659				
67	60,019	—	64,828	37	699,660	—	777,867				
66	64,829	—	70,025	36	777,868	—	873,372				

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ITEM R-1395—2005 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS

EXHIBIT 3

RETROSPECTIVE RATING PLAN MANUAL
 STATE HAZARD GROUP RELATIVITIES
 EFFECTIVE 10/01/05

State	Hazard Group			
	I	II	III	IV
AK	1.35	1.18	0.79	0.51
AL	1.10	0.97	0.64	0.41
AR	1.56	1.37	0.91	0.60
AZ	1.24	1.09	0.73	0.48
CO	1.34	1.17	0.78	0.50
CT	1.38	1.22	0.81	0.53
DC	1.34	1.17	0.78	0.50
FL	1.38	1.23	0.72	0.46
GA	1.22	1.09	0.74	0.49
HI	1.68	1.48	1.00	0.66
IA	1.57	1.39	0.94	0.62
ID	1.47	1.31	0.90	0.60
IL	1.24	1.13	0.78	0.54
IN	1.66	1.50	1.05	0.72
KS	1.52	1.35	0.91	0.60
KY	1.02	0.89	0.59	0.38
LA	1.16	1.02	0.69	0.45
MD	1.30	1.16	0.78	0.52
ME	1.35	1.20	0.81	0.53
MI	1.55	1.43	0.90	0.61
MO	1.59	1.42	0.96	0.63
MS	1.39	1.23	0.83	0.55
MT	1.20	1.08	0.69	0.44
NC	1.03	0.91	0.61	0.41
NE	1.39	1.22	0.81	0.53
NH	1.38	1.22	0.82	0.54
NM	1.50	1.31	0.88	0.58
NV	1.44	1.24	0.80	0.51
OK	1.36	1.24	0.80	0.56
OR	1.62	1.41	0.92	0.59
RI	1.77	1.55	1.04	0.68
SC	1.18	1.06	0.69	0.46
SD	1.50	1.31	0.86	0.56
TN	1.13	1.01	0.68	0.46
UT	1.59	1.40	0.94	0.61
VA	1.21	1.08	0.73	0.48
VT	1.34	1.19	0.80	0.52
WI	1.83	1.68	1.11	0.75