



NORTH CAROLINA RATE BUREAU
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April 19, 2002

CIRCULAR LETTER TO ALL MEMBER COMPANIES

Re: Workers Compensation Insurance

Item R-1378-2002 Update to Retrospective
Rating Plan Parameters

The Bureau has adopted and the North Carolina Commissioner of Insurance has approved a proposal to update the State and Hazard Group Severity Relativities of the Retrospective Rating Plan.

The attached Filing Memorandum describes the changes which have been approved to become effective July 1, 2002, applicable to new and renewal business only.

Very truly yours,

Jerry G. Hamrick

Workers Compensation Manager

JGH:dg

Enclosure

C-02-4

FILING MEMORANDUM

ITEM R-1378—2002 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS

(To be effective 12:01 a.m. on July 1, 2002, applicable to new and renewal business only.)

PURPOSE

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

BACKGROUND

Retrospective Rating is a plan that adjusts 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 expires 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 occasions when losses exceed an amount leading to the maximum premium, but reduced by the average savings resulting from the occasions when 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.

Comment: This sentence needs clarification. Please help!

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 (e.g., changes in state statutory benefit levels, inflation, etc.) that underlie each state's severity.

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ITEM R-1378—2002 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS

PROPOSAL**State and Hazard Group Relativities**

It is proposed that the State and Hazard Group Relativities of the Retrospective Rating Plan be updated 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 can be found in Exhibit 2.

It is proposed that these changes be effective 12:01 a.m. on July 1, 2002 for use by companies affiliated with NCCI for Large Accounts License, Service, and Maintenance, applicable to new and renewal business only.

IMPACT**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 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 *Retrospective Rating Plan Manual for Workers Compensation and Employers Liability Insurance*.

ITEM R-1378—2002 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS**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

Step 1	Hazard Group	State X	Countrywide
Severities	1	21,361	19,712
	2	23,085	21,723
	3	33,771	34,925
	4	45,265	50,597
Step 2	Claim Count	59,672	
	Credibility	=	$(59,672/155,000)^{0.5} = 0.62$
Step 3	Hazard Group	State X	
Cred. Wtd. Severities	1	20,734	= 0.62 x 21,361 + 0.38 x 19,712
	2	22,567	
	3	34,210	
	4	47,291	
	Countrywide Overall:	27,321	
Step 4	Hazard Group	State X	
Relativities	1	1.32	= 27,321 / 20,734
	2	1.21	
	3	0.80	
	4	0.58	

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.

ITEM R-1378—2002 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS

**NORTH CAROLINA
RETROSPECTIVE RATING PLAN**

HAZARD GROUP RELATIVITIES

EFFECTIVE 7/1/2002

Hazard Group I	Hazard Group II	Hazard Group III	Hazard Group IV
1.04	0.93	0.58	0.39