

December 8, 2008

## CIRCULAR LETTER TO ALL MEMBER COMPANIES

Re: <u>Workers Compensation Insurance</u>

NCCI Item R-1397 – Excess Loss Factors

NCCI Item R-1398 – State Hazard Group Relativities

The Bureau has adopted and the North Carolina Commissioner of Insurance has approved changes to the Expected Loss Ranges and State Hazard Group Relativities.

The attached Filing Memorandum describes the changes which have been approved to become effective April 1, 2009, applicable to new and renewal business.

Sincerely,

Sue Taylor

**Director of Insurance Operations** 

ST:dg

C-08-24

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC. (Applies in: AL, AK, AR, CO, CT, DC, GA, HI, IL, IN, KS, KY, LA, ME, MD, MS, MO, MT, NE, NV, NH, NM, NC, OK, OR, RI, SC, SD, TN, UT, VT, VA)

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#### FILING MEMORANDUM

# ITEM R-1397—2008 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS-EXCESS LOSS FACTORS

#### **PURPOSE**

This item proposes to update the Excess Loss Factors in NCCI's *Retrospective Rating Plan Manual for Workers Compensation and Employers Liability Insurance*.

#### BACKGROUND

Retrospective rating is a plan for adjusting premium according to the loss experience during the effective period of a policy.

The Retrospective Rating Plan contains an optional provision—an individual loss limitation—which limits the amount of loss arising out of any one accident that will be used in the calculation of retrospective premium adjustments. The charge for limiting losses is determined by application of an Excess Loss Factor (ELF).

The ELFs vary by loss limitation and hazard group. The variation in ELFs across hazard groups reflects the varying degrees of severity exposure to occupational hazards inherent to operations associated with each classification. ELFs need to be updated periodically for two reasons:

- 1. ELFs are computed from excess ratios, giving the percentage of losses expected to be above a given limit. For any fixed limit, inflation will increase the percentage of losses above that limit. Therefore, excess ratios and ELFs are periodically updated to accurately reflect the effect of inflation on those losses.
- 2. Overall excess ratios are computed as a weighted average of injury type excess ratios. Thus, excess ratios, and consequently ELFs, need to be updated regularly for changes in the mix of injury types.

The proposed state ELFs are based on the data underlying the currently approved NCCI loss cost filing. This data was trended forward to the effective date of the next anticipated NCCI loss cost filing. The proposed ELFs were then computed in the same way as the currently approved ELFs.

## **PROPOSAL**

In states for which loss costs are developed rather than final rates, this filing proposes to update the ELFs that are used with an optional loss limitation in the Retrospective Rating Plan. The proposed ELFs for loss cost states are found in Exhibit 1 and Exhibit 2. For states where final rates are developed, updated ELFs will be included in the state's next rate filing.

#### **IMPACT**

The proposed ELFs are necessary to maintain the aggregate expected balance between the retrospectively rated premium and the guaranteed cost premium. If the ELFs were not updated, there would be a natural slippage caused by inflation acting over time to increase the percentage of losses over any fixed loss limit. The proposed ELFs also reflect the updated mix of injury types. These changes are not expected to have any impact on overall premium levels.

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#### FILING MEMORANDUM

## ITEM R-1397—2008 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS-EXCESS LOSS FACTORS

#### **IMPLEMENTATION**

In order to implement this item, the attached Exhibits detail the changes required in NCCI's **Retrospective Rating Plan Manual**.

This item is applicable to new and renewal voluntary policies and will become effective concurrently with each state's approved rate/loss cost filing for the 2009 filing cycle. For example, this item will be effective January 1, 2009 for approved rate/loss cost fillings that have a January 1, 2009 effective date. Similarly, this item will be effective July 1, 2009 for approved rate/loss filings that have a July 1, 2009 effective date. If there is no rate/loss cost filing for a state in a given year, this item will take effect on that state's "normal" rate effective date. (The "normal" rate effective date is the anniversary date of the state's previous year's rate effective date.

The following chart shows the proposed effective dates for each state:

State	Anticipated Effective Date
Alabama	01-Mar-2009
Alaska	01-Jan-2009
Arkansas	01-Jul-2009
Colorado	01-Jan–2009
Connecticut	01–Jan-2009
District of Columbia	01-Nov-2008
Georgia	01-May-2009
Hawaii	Effective date is determined upon regulatory approval of the individual carrier's election to adopt this change.
Illinois	01-Jan-2009
Indiana	01-Jan-2009
Kansas	01-Jan-2009
Kentucky	01-Oct-2008
Louisiana	01-May-2009
Maine	01-Jan-2009
Maryland	01-Jan-2009
Mississippi	01-Mar-2009
Missouri	01-Jan-2009
Montana	01-Jul-2009

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## FILING MEMORANDUM

# ITEM R-1397—2008 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS-EXCESS LOSS FACTORS

Nebraska	01-Feb-2009
Nevada	01-Mar-2009
New Hampshire	01-Jan-2009
New Mexico	01-Jan-2009
North Carolina	01-Apr-2009
Oklahoma	01-Jan-2009
Oregon	01-Jan-2009
Rhode Island	01-Jun-2009
South Carolina	01-Jul-2009
South Dakota	01-Jul-2009
Tennessee	01-Mar-2009
Utah	01-Dec-2008
Vermont	01-Apr-2009
Virginia	In Virginia, these changes will become effective for policies effective on or after 12:01 a.m. on April 1, 2009.

## ITEM R-1397—2008 UPDATE TO RETROSPECTIVE RATING PLAN EXCESS LOSS FACTORS

# EXHIBIT 1 RETROSPECTIVE RATING PLAN MANUAL APPLIES IN NORTH CAROLINA NORTH CAROLINA EXCESS LOSS PURE PREMIUM FACTORS

xcess Loss Per		-					
Accident	Hazard Groups						
Limitation	Α	В	С	D	E	F	G
\$10,000 †	0.701	0.734	0.750	0.766	0.781	0.802	0.818
\$15,000 †	0.660	0.734	0.730	0.736	0.755	0.780	0.800
\$20,000 †	0.626	0.669	0.691	0.730	0.732	0.761	0.784
\$25,000	0.520	0.643	0.666	0.687	0.732	0.743	0.770
\$30,000	0.591	0.619	0.643	0.666	0.692	0.726	0.756
\$35,000	0.547	0.597	0.623	0.647	0.675	0.711	0.743
\$40,000	0.526	0.578	0.604	0.629	0.658	0.697	0.731
\$50,000	0.488	0.542	0.570	0.527	0.629	0.670	0.709
\$75,000	0.416	0.472	0.503	0.532	0.568	0.615	0.661
\$100,000	0.365	0.419	0.451	0.481	0.520	0.570	0.622
\$125,000	0.325	0.378	0.410	0.441	0.480	0.533	0.588
\$150,000	0.294	0.346	0.378	0.408	0.448	0.502	0.560
\$175,000	0.267	0.317	0.350	0.380	0.420	0.475	0.534
\$200,000	0.244	0.293	0.325	0.355	0.395	0.451	0.511
\$225,000	0.225	0.272	0.303	0.333	0.373	0.429	0.491
\$250,000	0.209	0.254	0.285	0.314	0.354	0.410	0.473
\$275,000	0.194	0.238	0.268	0.297	0.336	0.392	0.456
\$300,000	0.181	0.223	0.253	0.281	0.320	0.375	0.439
\$325,000	0.170	0.210	0.239	0.266	0.305	0.360	0.424
\$350,000	0.159	0.198	0.227	0.253	0.291	0.345	0.410
\$375,000	0.150	0.188	0.215	0.241	0.278	0.332	0.397
\$400,000	0.142	0.178	0.205	0.230	0.266	0.320	0.384
\$425,000	0.135	0.169	0.196	0.220	0.256	0.308	0.372
\$450,000	0.128	0.161	0.187	0.211	0.245	0.297	0.361
\$475,000	0.121	0.154	0.179	0.202	0.236	0.287	0.351
\$500,000	0.116	0.147	0.172	0.194	0.227	0.277	0.341
\$600,000	0.097	0.125	0.147	0.167	0.198	0.244	0.305
\$700,000	0.083	0.108	0.128	0.147	0.174	0.218	0.277
\$800,000	0.073	0.095	0.114	0.131	0.156	0.197	0.254
\$900,000	0.065	0.085	0.102	0.117	0.141	0.179	0.233
\$1,000,000	0.058	0.076	0.092	0.106	0.128	0.164	0.216
\$2,000,000	0.026	0.036	0.045	0.053	0.065	0.086	0.121
\$3,000,000	0.016	0.022	0.029	0.034	0.042	0.057	0.084
\$4,000,000	0.012	0.016	0.021	0.025	0.031	0.042	0.063
\$5,000,000	0.010	0.013	0.016	0.019	0.024	0.033	0.050
\$6,000,000	0.008	0.010	0.013	0.015	0.019	0.026	0.041
\$7,000,000	0.007	0.008	0.011	0.013	0.016	0.022	0.034
\$8,000,000	0.006	0.008	0.010	0.011	0.014	0.019	0.030
\$9,000,000	0.006	0.007	0.009	0.010	0.012	0.016	0.026
\$10,000,000	0.005	0.006	0.008	0.009	0.011	0.015	0.023

<sup>†</sup> This loss limit is not applicable for retrospective rating in this state.

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## ITEM R-1397—2008 UPDATE TO RETROSPECTIVE RATING PLAN EXCESS LOSS FACTORS

# EXHIBIT 1 RETROSPECTIVE RATING PLAN MANUAL APPLIES IN NORTH CAROLINA NORTH CAROLINA EXCESS LOSS PURE PREMIUM FACTORS

Per							
Accident	Hazard Groups						
Limitation	Α	В	С	D	E	F	G
\$10,000 †	0.760	0.794	0.811	0.826	0.842	0.863	0.872
\$15,000 †	0.719	0.759	0.778	0.797	0.816	0.841	0.855
\$20,000 †	0.684	0.728	0.750	0.771	0.793	0.822	0.840
\$25,000	0.654	0.701	0.725	0.747	0.772	0.804	0.825
\$30,000	0.627	0.677	0.702	0.726	0.752	0.787	0.812
\$35,000	0.603	0.655	0.681	0.706	0.735	0.772	0.80
\$40,000	0.581	0.635	0.662	0.688	0.718	0.757	0.78
\$50,000	0.542	0.598	0.627	0.655	0.688	0.730	0.76
\$75,000	0.466	0.525	0.557	0.588	0.625	0.674	0.71
\$100,000	0.411	0.470	0.503	0.535	0.575	0.628	0.67
\$125,000	0.369	0.426	0.460	0.492	0.534	0.589	0.64
\$150,000	0.335	0.391	0.425	0.458	0.500	0.557	0.61
\$175,000	0.306	0.361	0.395	0.427	0.470	0.528	0.58
\$200,000	0.281	0.334	0.369	0.401	0.444	0.502	0.56
\$225,000	0.260	0.311	0.345	0.377	0.420	0.479	0.54
\$250,000	0.242	0.292	0.325	0.357	0.400	0.459	0.52
\$275,000	0.225	0.274	0.307	0.338	0.381	0.440	0.50
\$300,000	0.211	0.257	0.290	0.321	0.363	0.422	0.49
\$325,000	0.198	0.243	0.275	0.305	0.347	0.406	0.47
\$350,000	0.186	0.230	0.261	0.290	0.331	0.390	0.45
\$375,000	0.176	0.218	0.249	0.277	0.318	0.376	0.44
\$400,000	0.166	0.207	0.237	0.265	0.305	0.363	0.43
\$425,000	0.158	0.197	0.227	0.254	0.293	0.350	0.41
\$450,000	0.150	0.188	0.217	0.243	0.281	0.338	0.40
\$475,000	0.143	0.180	0.208	0.234	0.271	0.327	0.39
\$500,000	0.136	0.172	0.200	0.225	0.261	0.316	0.38
\$600,000	0.115	0.146	0.172	0.194	0.228	0.280	0.34
\$700,000	0.098	0.127	0.150	0.171	0.202	0.250	0.31
\$800,000	0.087	0.112	0.134	0.153	0.182	0.227	0.28
\$900,000	0.077	0.100	0.120	0.137	0.164	0.207	0.26
\$1,000,000	0.069	0.090	0.108	0.124	0.149	0.190	0.24
\$2,000,000	0.032	0.043	0.054	0.062	0.076	0.100	0.14
\$3,000,000	0.020	0.027	0.034	0.040	0.050	0.067	0.09
\$4,000,000	0.014	0.019	0.025	0.029	0.036	0.049	0.07
\$5,000,000	0.011	0.015	0.019	0.023	0.028	0.039	0.05
\$6,000,000	0.009	0.012	0.015	0.018	0.022	0.031	0.04
\$7,000,000	0.008	0.010	0.013	0.015	0.019	0.026	0.04
\$8,000,000	0.007	0.009	0.011	0.013	0.016	0.022	0.03
\$9,000,000	0.006	0.008	0.010	0.012	0.014	0.019	0.03
\$10,000,000	0.006	0.007	0.009	0.011	0.013	0.017	0.02

<sup>†</sup> This loss limit is not applicable for retrospective rating in this state.

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#### FILING MEMORANDUM

# ITEM R-1398—2008 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS-STATE HAZARD GROUP RELATIVITIES

(To be effective 12:01 a.m. on January 1, 2009, applicable to new and renewal voluntary policies only.)

#### **PURPOSE**

This item updates the State Hazard Group Relativities in NCCI's **Retrospective Rating Plan Manual for Workers Compensation and Employers Liability Insurance**.

#### **BACKGROUND**

The Retrospective Rating Plan 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
С	=	Loss conversion factor, generally reflecting loss adjustment expense
L	=	Actual incurred loss during the effective policy period
Т	=	Tax multiplier

The 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 carrier. It also includes a net insurance charge, which results from the maximum and minimum limitations on the retrospective premium. The net insurance charge reflects the charge to compensate for the possibility that R will exceed the maximum premium amount. It also reflects the 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.

The Table of Insurance Charges contains the excess ratios needed to quantify the insurance charge and savings described above. The ratio of the loss limit to expected losses—the entry ratio—is used to look up the values in the Table of Insurance Charges. The charges depend not only on the maximum and minimum subject losses, but also on the size of the insured. This is because the expected variation in losses is lower for larger employers.

#### **State Hazard Group Relativities**

The variation in the loss ratios for employers in the lower hazard groups generally 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

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#### FILING MEMORANDUM

## ITEM R-1398—2008 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS-STATE HAZARD GROUP RELATIVITIES

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 to reflect changes in the circumstances (e.g., state statutory benefit levels, inflation, etc.) underlying each state's severity.

#### **PROPOSAL**

It is proposed that the attached exhibits, showing the revisions to NCCI's **Retrospective Rating Plan Manual**, be adopted. This filing updates the State Hazard Group Relativities of the Retrospective Rating Plan. The exhibits provide the following:

- Exhibit 1 for the State Hazard Group Relativities—seven hazard groups
- Exhibit 2 for the State Hazard Group Relativities—four hazard groups
- Exhibit 3 provides a description of the development of the relativities for the seven hazard groups
- Exhibit 4 provides a description of the development of the relativities for the four hazard groups.

As explained in these exhibits, individual state severities, as well as countrywide severities, are used in the calculation of the relativities.

### **IMPACT**

#### **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 premium. The object of this change is to maintain the aggregate expected balance, although the impact will vary slightly for individual insured employers. Therefore, 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 is expected to be minimal.

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

#### **IMPLEMENTATION**

The State Hazard Group Relativities will be effective 12:01 a.m. on January 1, 2009, applicable to new and renewal voluntary policies only.

#### **Exceptions:**

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

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC. (Applies in: AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD, ME, MI, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, UT, VA, VT, WI)

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#### FILING MEMORANDUM

# ITEM R-1398—2008 UPDATE TO RETROSPECTIVE RATING PLAN PARAMETERS-STATE HAZARD GROUP RELATIVITIES

• In Virginia, these changes will become effective for policies effective on or after 12:01 a.m. April 1, 2009.

EXHIBIT 1

RETROSPECTIVE RATING PLAN MANUAL STATE HAZARD GROUP RELATIVITIES

		Hazard Group					
State	Α	В	С	D	E	F	G
AK	1.75	1.31	1.17	1.05	0.91	0.74	0.56
AL						_	
	1.61	1.20	1.06	0.95	0.82	0.66	0.49
AR	1.94	1.45	1.28	1.15	0.99	0.80	0.59
AZ	1.71	1.27	1.13	1.01	0.87	0.70	0.52
CO	1.87	1.41	1.25	1.13	0.97	0.78	0.59
CT	1.70	1.26	1.12	1.00	0.86	0.70	0.52
DC	1.78	1.33	1.17	1.05	0.90	0.73	0.55
FL	1.82	1.39	1.23	1.11	0.96	0.78	0.56
GA	1.45	1.08	0.96	0.86	0.74	0.60	0.46
HI	2.18	1.62	1.45	1.30	1.13	0.92	0.70
IA	1.83	1.37	1.22	1.10	0.95	0.77	0.59
ID	1.89	1.42	1.27	1.15	1.00	0.82	0.62
IL	1.24	0.95	0.86	0.77	0.66	0.54	0.42
IN	2.08	1.58	1.42	1.29	1.13	0.93	0.72
KS	1.77	1.34	1.20	1.08	0.93	0.76	0.58
KY	1.50	1.11	0.98	0.88	0.75	0.61	0.45
LA	1.63	1.21	1.08	0.97	0.84	0.68	0.52
MD	1.75	1.30	1.16	1.04	0.89	0.73	0.55
ME	1.66	1.23	1.10	0.99	0.86	0.70	0.53
MI	2.12	1.59	1.43	1.30	1.13	0.94	0.72
MO	2.14	1.63	1.46	1.31	1.13	0.92	0.70
MS	1.82	1.36	1.21	1.09	0.94	0.77	0.59
MT	1.64	1.23	1.09	0.97	0.84	0.68	0.51
NC	1.25	0.94	0.84	0.75	0.64	0.52	0.40
NE	1.69	1.27	1.13	1.01	0.87	0.71	0.54
NH	1.68	1.24	1.10	0.99	0.86	0.70	0.53
NM	1.77	1.32	1.18	1.06	0.92	0.75	0.58
NV	1.89	1.41	1.25	1.12	0.96	0.73	0.58
OK	1.71	1.29	1.25		0.96	0.77	0.56
				1.02			
OR	2.18	1.62	1.43	1.28	1.09	0.88	0.64
RI	2.16	1.61	1.43	1.29	1.12	0.91	0.70
SC	1.30	0.98	0.88	0.79	0.68	0.55	0.42
SD	1.85	1.38	1.22	1.10	0.95	0.77	0.58
TN	1.76	1.32	1.18	1.06	0.92	0.74	0.56
UT	1.99	1.49	1.32	1.19	1.02	0.83	0.62
VA	1.40	1.04	0.92	0.83	0.71	0.58	0.43
VT	1.70	1.26	1.12	1.01	0.87	0.71	0.54
WI	2.18	1.62	1.45	1.31	1.13	0.92	0.71

EXHIBIT 2

RETROSPECTIVE RATING PLAN MANUAL STATE HAZARD GROUP RELATIVITIES

	Hazard Group					
State	1*	2*	3*	4*		
AK	1.41	1.13	0.82	0.56		
AL	1.28	1.02	0.74	0.49		
AR	1.55	1.24	0.89	0.59		
AZ	1.37	1.09	0.78	0.52		
CO	1.51	1.21	0.88	0.52		
CT	1.34	1.08	0.78	0.52		
DC	1.43	1.14	0.82	0.55		
FL	1.50	1.19	0.87	0.56		
GA	1.16	0.93	0.67	0.46		
HI	1.74	1.40	1.03	0.70		
IA	1.46	1.18	0.86	0.70		
ID	1.51	1.13	0.86	0.59		
IL	1.00	0.82	0.61	0.62		
IN	1.67	1.38	1.03	0.42		
KS	1.42	1.36	0.84			
KY KY				0.58		
	1.18	0.95	0.68	0.45		
LA	1.30	1.04	0.76	0.52		
MD	1.40	1.12	0.81	0.55		
ME	1.32	1.06	0.78	0.53		
MI	1.70	1.38	1.04	0.72		
MO	1.73	1.41	1.03	0.70		
MS	1.45	1.17	0.86	0.59		
MT	1.32	1.05	0.75	0.51		
NC	1.00	0.81	0.58	0.40		
NE	1.35	1.09	0.79	0.54		
NH	1.33	1.07	0.78	0.53		
NM	1.42	1.14	0.83	0.58		
NV	1.51	1.20	0.87	0.58		
OK	1.37	1.11	0.80	0.54		
OR	1.74	1.38	0.97	0.64		
RI	1.72	1.39	1.01	0.70		
SC	1.05	0.85	0.62	0.42		
SD	1.48	1.18	0.86	0.58		
TN	1.41	1.14	0.82	0.56		
UT	1.59	1.27	0.92	0.62		
VA	1.12	0.89	0.64	0.43		
VT	1.34	1.09	0.79	0.54		
WI	1.70	1.40	1.03	0.71		

<sup>\*</sup> Carriers that elect to use NCCl's four hazard groups must make a filing in each state to adopt the filed four hazard groups referenced in this item. If a carrier does not file to elect the four hazard groups, they are considered to have accepted the seven hazard groups.

#### **EXHIBIT 3**

## DEVELOPMENT OF NORTH CAROLINA HAZARD GROUP RELATIVITIES FOR HAZARD GROUPS A TO G

- **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, 155,000 claims are regarded as fully credible and the square root rule is used 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 for 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.

Step 1	Hazard Group	North Carol			
Severities	Α	53,032	33,011		
	В	70,332	44,215		
	С	78,764	49,899		
	D	87,938	55,494		
	E	102,507	64,458		
	F	126,606	79,499		
	G	165,132			
Step 2	Claim Count =	65,706			
	Credibility =	(65,706 /	155,000) ^ 0.5 = 0.651		
Step 3	Hazard Group	North Carol	<u>ina</u>		
Credibility	Α	46,046	= (0.651)(53,032) + (0.349)(33,011)		
Weighted	В	61,220			
Severities	С	68,692			
	D	76,618			
	Е	89,231			
	F	110,170			
	G	144,266			
	Countrywide Overall:	57,375			
Step 4	Hazard Group	North Carol	<u>ina</u>		
Relativities	Α	1.25	= 57,375 / 46,046		
	В	0.94			
	С	0.84			
	D	0.75			
	E	0.64			
	F	0.52			
	G		0.40		

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

#### **EXHIBIT 4**

## DEVELOPMENT OF NORTH CAROLINA HAZARD GROUP RELATIVITIES FOR HAZARD GROUPS 1 TO 4\*

- **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, 155,000 claims are regarded as fully credible and the square root rule is used 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 for 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.

Step 1 Severities	Hazard Group  1 2 3 4	North Carolina 66,279 81,413 115,036 165,132	Countrywide 41,374 51,657 71,203 105,328
Step 2	Claim Count =  Credibility =	65,706 (65,706 / 155,000) ^ 0.5 =	0.651
Step 3 Credibility Weighted Severities	Hazard Group  1 2 3 4	North Carolina 57,589 = (0.651)(6 71,031 99,742 144,266	66,279) + (0.349)(41,374)
Step 4 Relativities	Countrywide Overall:  Hazard Group  1 2 3 4	57,375  North Carolina  1.00 = 57,375 / 0.81 0.58 0.40	<sup>7</sup> 57,589

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

<sup>\*</sup> Carriers that elect to use NCCl's four hazard groups must make a filing in each state to adopt the filed four hazard groups referenced in this item. If a carrier does not file to elect the four hazard groups, they are considered to have accepted the seven hazard groups.