

DELAWARE COMPENSATION RATING BUREAU, INC

State & Hazard Group Relativities

The attached exhibit pages present the application of a methodology previously provided to the DCRB by the NCCI for calculating State and Hazard Group relativities. The procedure compares Delaware severities with countrywide (NCCI states) severities.

DELAWARE

State and Hazard Group Relativities

Proposed Effective: 12/1/2003

Hazard Group	Proposed Relativities	Current Relativities	Percentage Change
I	1.269	1.279	-0.8%
II	1.160	1.177	-1.4%
III	0.769	0.778	-1.2%
IV	0.547	0.551	-0.7%

Table I  
 RUN DATE: 6/23/03

Unweighted Countrywide Average Cost/Case for  
 Serious Injury Type and Hazard Group

Injury Type	Hazard Group				Weighted Average
	I	II	III	IV	
Fatal	\$69,515	\$88,694	\$110,723	\$131,911	\$105,162
P.T.	\$197,844	\$214,883	\$293,551	\$352,559	\$264,007
Major	\$69,288	\$73,525	\$85,199	\$98,235	\$80,150

Differential to Unweighted Average

Injury Type	Hazard Group			
	I	II	III	IV
Fatal	0.661	0.843	1.053	1.254
P.T.	0.749	0.814	1.112	1.335
Major	0.864	0.917	1.063	1.226

Date: 6/23/03

Countrywide Standard Earned Premium by Hazard Group

Hazard Group	Standard Premium	Ratio to Smallest Premium
I	\$324,495,944	1.000
II	\$23,444,564,742	0.014
III	\$25,372,947,368	0.013
IV	\$1,484,071,356	0.219
Total	\$50,626,079,410	

Table II

Countrywide Type of Injury Loss Distribution Table

Hazard Group	Fatal	P.T.	Major	Minor	T.T.	Medical
I	0.057	0.131	0.220	0.391	0.343	0.328
II	0.117	0.156	0.222	0.278	0.297	0.334
III	0.270	0.264	0.262	0.181	0.207	0.196
IV	0.556	0.449	0.296	0.150	0.153	0.142

DELAWARE  
Proposed Effective: 12/1/2003  
Non-Escalating Fatal Benefits -- Non-Escalating PT/Major Benefits

Exhibit I

Premium Distribution By Hazard Group\*

Hazard Group	(1) Standard Premium	(2) Total Standard Premium	(3) Ratio
I	1,528,541	485,211,752	0.003
II	252,654,029		0.521
III	217,669,057		0.449
IV	13,360,125		0.028

\*Based on Unit Statistical Data.

Exhibit II

Distribution of Losses by Injury Type Derived from Hazard Group Premium Distribution & Countrywide Loss Distribution

Injury Type	I	II	III	IV
Fatal	0.001	0.308	0.612	0.079
P.T.	0.002	0.382	0.557	0.059
Major	0.003	0.477	0.486	0.034
Minor	0.005	0.626	0.351	0.018
T.T.	0.004	0.612	0.367	0.017
Medical	0.004	0.651	0.330	0.015

For each hazard group, the following procedure is utilized to obtain the distribution of losses within each injury type:

The percentage of countrywide losses by hazard group (see Table II) is multiplied by the corresponding statewide ratio of standard earned premium to total (Exhibit I). This is then divided by the sum of these calculations for all four hazard groups. This procedure is done for each injury type.

Exhibit III

Factors to Adjust Countrywide Differential to State Differential

(A) Injury Type

Fatal	0.9491
P.T.	0.96301
Major	0.99196

(B)

Injury Type	I	II	III	IV
Fatal	0.696	0.888	1.109	1.321
P.T.	0.778	0.845	1.155	1.386
Major	0.871	0.924	1.072	1.236

(C)

Injury Type	I	II	III	IV
P.T./Major	0.857	0.910	1.091	1.283
Serious	0.856	0.910	1.092	1.285

(A) For each serious injury type, the countrywide hazard group unweighted average cost per case differential (Table I) is multiplied times percent of premium (Exhibit I) in the hazard group for that state. These products are summed to form the factors in (A)

(B) For each hazard group the factors from Table I are divided by the appropriate injury type factor in section (A) of this exhibit.

(C) For P.T. and Major injury types, a combined (by hazard group) differential is derived by calculating a weighted average of the two differentials using the factors from Exhibit VII as weights.

DELAWARE  
Proposed Effective: 12/1/2003  
Non-Escalating Fatal Benefits -- Non-Escalating PT/Major Benefits

Exhibit IV Calculation of ELPF Trend

Policy Period	1/1/00-12/31/00	1/1/99-12/31/99	1/1/98-12/31/98
	First Report	Second Report	Third Report
(1) Proposed Effective Date of Filing		12/1/2003	
(2a) Trend to		12/1/04	
(2b) Midpoint of Policy Period	1/1/01	1/1/00	1/1/99
(3) Benefit Level to Which Losses are Brought		7/1/03	
(4a) Yrs. from (2a) to (2b)	3.9167	4.9167	5.9167
(4b)			
(5) Indemnity Trend { $1.0414^{(4a)}$ }	1.1722	1.2207	1.2713
(6)			
(7)			
(8)			
(9)			
(10) Medical Trend { $1.071^{(4a)}$ }	1.3082	1.4011	1.5006

Date: 6/23/03

DELAWARE  
Proposed Effective: 12/1/2003  
Policy Period: 1/1/00-12/31/00  
Report: FIRST

Exhibit V - a

Excess Loss Premium Factor Calculation  
Average Cost Per Case

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Type of Injury	Indemnity Losses	Amend. Factor	Trend in Ind Cost per Case	Indem Trended on Level (1)x(2)x(3)	Medical Losses	Amend. Factor	Medical Trend	Medical Trended on Level (5)x(6)x(7)	
A. Death	715,800	1.0643	1.1722	893,012	9,800	1.0000	1.3082	12,820	
B. P.T.	927,100	1.0908	1.1722	1,185,423	596,400	1.0000	1.3082	780,210	
C. Major	6,743,400	1.0835	1.1722	8,564,649	4,159,100	1.0000	1.3082	5,440,935	
D. Minor	6,523,400	1.0851	1.1722	8,297,466	6,837,500	1.0000	1.3082	8,944,818	
E. T.T.	15,463,800	1.0908	1.1722	19,772,568	20,859,300	1.0000	1.3082	27,288,136	
F. Med. Only					6,853,700	1.0000	1.3082	8,966,010	
G. Overall	30,373,500	XX	XX	38,713,118	39,315,800	1.0000	XX	51,432,929	
	(9) Total Losses (4)+(8)	(10) No. of Claims	(11) Average Severity (9)/(10)	(12) Severity Dev. to Ult. Rep	(13) Developed Severity (11)x(12)	(14) Case Development	(15) Indemnity Dev. to Ult. Rpt.	(16) Medical Dev. to Ult. Report	(17) Total Developed (4)x(15)+(8)x(16)
A. Death	905,832	2	452,916	1.0434	472,573	1.0000	1.0418	1.336 (a)	947,467
B. P.T.	1,965,633	3	204,759	1.7924	367,010	1.6667	4.1994	3.853 (a)	7,984,214
C. Major	14,005,584	75	40,286	1.3499	21,779	2.5600	3.9624	4.046 (a)	55,950,588
D. Minor	17,242,284	428	15,729	1.0881		1.2734	1.4440	1.889 (a)	28,878,302
E. T.T.	47,060,704	2,992				1.0421	0.9880	1.321 (a)	55,582,925
F. Medical	8,966,010	XX	XX	XX	XX	XX		1.000 (b)	8,966,010

(a) (14) x (MED DEV 5TH TO ULT)  
(b) SELECTED

Date: 6/23/03

DELAWARE  
Proposed Effective: 12/1/2003  
Policy Period: 1/1/99-12/31/99  
Report: SECOND

Exhibit V - b

Excess Loss Premium Factor Calculation  
Average Cost Per Case

Type of Injury	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
	Indemnity Losses	Amend. Factor	Trend in Ind Cost per Case	Indem Trended on Level (1)x(2)x(3)	Medical Losses	Amend. Factor	Medical Trend	Medical Trended on Level (5)x(6)x(7)	(9)	(10)
									Total Losses (4)+(8)	No. of Claims
A. Death	704,600	1.0844	1.2207	932,698	1,149,600	1.0000	1.4011	1,610,705		
B. P.T.	2,756,200	1.1204	1.2207	3,769,578	4,315,800	1.0000	1.4011	6,046,867		
C. Major	14,138,200	1.1106	1.2207	19,167,291	8,554,700	1.0000	1.4011	11,985,990		
D. Minor	6,913,900	1.1130	1.2207	9,393,495	8,335,400	1.0000	1.4011	11,678,729		
E. T.T.	14,670,900	1.1204	1.2207	20,064,983	19,348,800	1.0000	1.4011	27,109,604		
F. Med. Only					7,066,900	1.0000	1.4011	9,901,434		
G. Overall	39,183,800	XX	XX	53,328,045	48,771,200	1.0000	xx	68,333,329		
									(11)	(12)
									Average Severity (9)/(10)	Severity Dev. to Ult. Rep
A. Death	2,543,403	6	423,901	0.9167	388,590	1.3333	1.2759	1.781 (a)		4,058,695
B. P.T.	9,816,445	5	274,965	1.6024	440,604	1.4000	1.8823	3.236 (a)		26,663,138
C. Major	31,153,281	144				1.3611	1.8063	2.151 (a)		60,403,742
D. Minor	21,072,224	513	41,076	1.3275		1.1326	1.2883	1.680 (a)		31,721,904
E. T.T.	47,174,587	3,068	15,376	1.0992	22,292	1.0000	0.9210	1.268 (a)		52,854,827
F. Medical	9,901,434	XX	XX	XX	XX	XX		1.000 (b)		9,901,434

(a) (14) x (MED DEV 5TH TO ULT)  
(b) SELECTED

Date: 6/23/03

DELAWARE  
Proposed Effective: 12/1/2003  
Policy Period: 1/1/98-12/31/98  
Report: THIRD

Exhibit V - c

Excess Loss Premium Factor Calculation  
Average Cost Per Case

Type of Injury	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
	Indemnity Losses	Amend. Factor	Trend in Ind Cost per Case	Indem Trended on Level (1)x(2)x(3)	Medical Losses	Amend. Factor	Medical Trend	Medical Trended on Level (5)x(6)x(7)	(9)	(10)
									Total Losses (4)+(8)	No. of Claims
A. Death	495,600	1.1030	1.2713	694,952	7,000	1.0000	1.5006	10,504		
B. P.T.	1,351,900	1.1487	1.2713	1,974,237	1,275,000	1.0000	1.5006	1,913,265		
C. Major	14,714,300	1.1365	1.2713	21,259,698	10,109,800	1.0000	1.5006	15,170,766		
D. Minor	5,939,500	1.1395	1.2713	8,604,235	7,625,300	1.0000	1.5006	11,442,525		
E. T.T.	12,418,600	1.1487	1.2713	18,135,407	17,387,000	1.0000	1.5006	26,090,932		
F. Med. Only					6,430,100	1.0000	1.5006	9,649,008		
G. Overall	34,919,900	XX	XX	50,668,529	42,834,200	1.0000	xx	64,277,000		
									(11)	(12)
									Average Severity (9)/(10)	Severity Dev. to Ult. Rep
A. Death	705,456	3	235,152	1.1252	264,593	1.0000	1.1244	1.336 (a)	795,437	
B. P.T.	3,887,502	3	258,449	1.5073	389,560	1.3333	2.1161	3.082 (a)	10,074,366	
C. Major	36,430,464	153				1.1111	1.3366	1.756 (a)	55,055,577	
D. Minor	20,046,760	471	42,562	1.3233	21,947	1.0849	1.2271	1.610 (a)	28,980,722	
E. T.T.	44,226,339	3,020	14,644	1.1326		0.9990	0.9598	1.267 (a)	50,463,574	
F. Medical	9,649,008	XX	xx	xx	xx			1.000 (b)	9,649,008	

(a) (14) x (MED DEV 5TH TO ULT)  
(b) SELECTED

Date: 6/23/03



DELAWARE  
Proposed Effective: 12/1/2003  
Non-Escalating Fatal Benefits -- Non-Escalating PT/Major Benefits

Exhibit VI					Exhibit VII						
Adjusted Average Cost Per Case by Injury Types					Combined Injury Weights						
For Each Hazard Group					Hazard Group I			Hazard Group II			
I. * Injury Type	Average Cost Per Case				Type of Injury	Total Incurred Losses	Injury Weights	Type of Injury	Total Incurred Losses	Injury Weights	
Fatal	370,042				Death	5,802	0.003	Death	1,786,892	0.007	
P.T. / Major	404,825				P.T.	89,443	0.049	P.T.	17,083,696	0.063	
Minor/T.T.	22,010				Major	514,230	0.285	Major	81,762,526	0.300	
					P.T./Major	603,673	0.334	P.T./Major	98,846,222	0.363	
					Minor	447,905	0.248	Minor	56,077,661	0.206	
					T.T.	635,605	0.352	T.T.	97,247,612	0.357	
					Minor/T.T.	1,083,510	0.600	Minor/T.T.	153,325,273	0.563	
II.** Injury Type	Hazard Group				Medical <th style="text-align: right;">114,066 <th style="text-align: center;">XX</th> <th style="text-align: left;">Medical <th style="text-align: right;">18,564,210 <th style="text-align: center;">XX</th> </th></th></th>	114,066 <th style="text-align: center;">XX</th> <th style="text-align: left;">Medical <th style="text-align: right;">18,564,210 <th style="text-align: center;">XX</th> </th></th>	XX	Medical <th style="text-align: right;">18,564,210 <th style="text-align: center;">XX</th> </th>	18,564,210 <th style="text-align: center;">XX</th>	XX	
		I	II	III	IV						
Fatal		257,549	328,597	410,377	488,825	Total	1,807,051	XX	Total	272,522,597	XX
P.T./Major		346,935	368,391	441,664	519,390						
Minor/T.T.		22,010	22,010	22,010	22,010						
						Hazard Group III			Hazard Group IV		
						Type of Injury	Total Incurred Losses	Injury Weights	Type of Injury	Total Incurred Losses	Injury Weights
						Death	3,550,579	0.017	Death	458,326	0.034
						P.T.	24,909,997	0.118	P.T.	2,638,581	0.193
						Major	83,305,215	0.395	Major	5,827,937	0.426
						P.T./Major	108,215,212	0.513	P.T./Major	8,466,518	0.619
						Minor	31,442,906	0.149	Minor	1,612,457	0.118
						T.T.	58,316,787	0.276	T.T.	2,701,323	0.198
						Minor/T.T.	89,759,693	0.425	Minor/T.T.	4,313,780	0.316
						Medical	9,410,429	XX	Medical	427,747	XX
						Total	210,935,913	XX	Total	13,666,371	XX

Date: 6/23/03

For each hazard group the following procedure is utilized to obtain the distribution of loss. The percentage of losses by injury type (Exhibit II) is multiplied by the corresponding injury type total incurred losses to achieve combined injury weights.

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State and Hazard Group Relativities  
Proposed Effective: 12/1/2003

Exhibit VIII

	(1) Severity	(2) Incurred Losses	(3) Calculated # Claims	(4) Average Severity	(5) Cred- ibility (a)	(6) NCCI Ave Sev (b)	(7) Delaware Cred Wtd Ave Sev	(8) Delaware Relativity (6T)/(7)	(9) Selected  (c)
Hazard Group I									
Fatal	257,549	5,802	0.0						
PT/Major	346,935	603,673	1.7						
TT/Minor	22,010	1,083,510	49.2						
Combined		1,692,985	50.9	33,261		24,225	26,755	1.269	1.269
Hazard Group II									
Fatal	328,597	1,786,892	5.4						
PT/Major	368,391	98,846,222	268.3						
TT/Minor	22,010	153,325,273	6,966.2						
Combined		253,958,387	7,239.9	35,078		27,004	29,265	1.160	1.160
Hazard Group III									
Fatal	410,377	3,550,579	8.7						
PT/Major	441,664	108,215,212	245.0						
TT/Minor	22,010	89,759,693	4,078.1						
Combined		201,525,484	4,331.8	46,522		43,250	44,166	0.769	0.769
Hazard Group IV									
Fatal	488,825	458,326	0.9						
PT/Major	519,390	8,466,518	16.3						
TT/Minor	22,010	4,313,780	196.0						
Combined		13,238,624	213.2	62,095		62,011	62,035	0.547	0.547
Total - All Hazard Groups									
Combined			11,835.8		0.28	33,958			

Notes:

(a) Full credibility equals 155,000 claims.  $Z = (\text{calculated \# claims} / 155,000)^{0.5}$

(b) Credibility weighted average severity of NCCI states underlying Table M expected loss group ranges.

(c) Selected Relativities limited to a range from 0.500 to 2.000

Date: 6/23/03