Exhibit 24
As Filed

PENNSYLVANIA COMPENSATION RATING BUREAU

State and Hazard Group Relativities

The attached exhibit pages present an analysis of Pennsylvania State and Hazard Group relativities.

The exhibit on page 24.1 shows the derivation of the April 1, 2022 proposed relativities. PCRB and countrywide average severities are shown by hazard group and in total. A credibility weight is calculated for each hazard group based on the number of claims. A credibility weighted average severity is then calculated and these average severities are related to the countrywide average severity for all hazard groups combined to generate the indicated (and selected) relativities.

Page 24.2 shows the calculation of the overall countrywide average severity that is used in page 24.1.

Derivation of State and Hazard Group Relativities
Pennsylvania April 1, 2022 Filing

Hazard Group	Current Relativity	PCRB Average Severity	Ratio to PCRB Total	Ratio PCRB to Countrywide Total	Ratio to NCCI Total	Countrywide Average Severity	# Claims	Credibility	Credibility Weighted Average Severity	Ratio to Countrywide Total	Selected State & Hazard Group Relativity
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
A	1.60	38,311	1.720	1.620	1.602	38,740	5,632	0.191	38,658	1.605	**1.61**
B	1.26	50,007	1.318	1.241	1.307	47,463	23,763	0.392	48,460	1.281	**1.28**
C	1.10	59,442	1.109	1.044	1.169	53,100	39,253	0.503	56,290	1.102	**1.10**
D	0.99	64,419	1.023	0.963	0.993	62,501	16,108	0.322	63,118	0.983	**0.98**
E	0.83	73,531	0.896	0.844	0.840	73,853	26,334	0.412	73,720	0.842	**0.84**
F	0.66	111,224	0.593	0.558	0.685	90,598	10,974	0.266	96,084	0.646	**0.65**
G	0.58	116,329	0.567	0.533	0.597	103,886	2,233	0.120	105,379	0.589	**0.59**
All		65,904		0.942		62,055	124,297	0.895	65,500		

(1) Prior Year Values
(2) From PCRB Unit Statistical Data
(3) = $(2)_{All} / (2)_i$
(4) = $(6)_{All} / (2)_i$
(5) From NCCI Item Filing R-1413 - 2017 Update to the Retrospective Rating Plan Parameters
     The value for each hazard group = (Countrywide Average Severity for the Hazard Group / Countrywide Overall Average Severity)
(6) = $(6)_{All} / (5)_i$ with the value, $(5)_{All}$, calculated on page 24.2
(7) From PCRB Unit Statistical Data
(8) = [# claims by TOI / 155,000]^0.5
(9) = [PCRB Average Severity * Credibility] + [Countrywide Average Severity * (1-Credibility)]
(10) = $(6)_{All} / (9)_i$
(11) = (10), rounded to two decimals

Projected Countrywide Average Severity

NCCI Effective Date	NCCI Countrywide Average Severity	Exponential Trends	
1/1/2007	44,457	12 year	1.70%
1/1/2008	51,533	11 year	1.00%
1/1/2009	55,578	10 year	0.60%
1/1/2010	57,375	9 year	0.50%
1/1/2011	57,797	8 year	0.60%
1/1/2012	57,797	7 year (selected)	0.90%
1/1/2013	57,027	6 year	1.50%
1/1/2014	55,818	5 year	2.10%
1/1/2015	55,954	4 year	2.10%
1/1/2016	59,215	3 year	0.40%
1/1/2017	60,022	2 year	-0.50%
1/1/2018	59,736 *		

Selected Countrywide Average Severity = 59,736 * [(1.009) ^ 4.25 years] = 62,055
where 4.25 years is the difference between one year past the filing effective date (4/1/2023)
and one year past the latest NCCI effective date (1/1/2019).

* From NCCI Item Filing R-1413 - 2017 Update to the Retrospective Rating Plan Parameters