Exhibit 24
As Filed

PENNSYLVANIA COMPENSATION RATING BUREAU

<u>State and Hazard Group Relativities</u>

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, 2023 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, 2023 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	1.61	40,973	1.681	1.528	1.602	39,088	5,778	0.193	39,452	1.587	**1.59**
B	1.28	49,035	1.405	1.277	1.307	47,889	14,386	0.305	48,239	1.298	**1.30**
C	1.10	54,791	1.257	1.143	1.169	53,578	30,434	0.443	54,115	1.157	**1.16**
D	0.98	67,203	1.025	0.932	0.993	63,063	35,254	0.477	65,038	0.963	**0.96**
E	0.84	72,465	0.951	0.864	0.840	74,517	16,581	0.327	73,846	0.848	**0.85**
F	0.65	107,697	0.640	0.581	0.685	91,412	15,466	0.316	96,558	0.648	**0.65**
G	0.59	113,169	0.609	0.553	0.597	104,820	6,245	0.201	106,499	0.588	**0.59**
All		68,894		0.909		62,613	124,144	0.895	68,234		

(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) ^ 5.25 years] = 62,613
where 5.25 years is the difference between one year past the filing effective date (4/1/2024) 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