July 25, 2023

ALL ASSOCIATION MEMBERS

Circular Letter No. 23-1822

RE: **INFORMATIONAL FILING**
NCCI ITEM E-1409 —ENHANCEMENT TO NCCI'S EXPERIENCE RATING
PLAN METHODOLOGY

The Minnesota Department of Commerce has approved the above informational filing. The purpose of this item is to provide information on experience rating plan methodology changes:

Component	Current Methodology	New Methodology	Commentary
State Accident Limit (SAL)	25 x State Average Cost per Case	95th percentile of lost-time claims	Lowers the SAL
Split Point	Indexed to severity	Targets a 40% statewide D-Ratio with indexing for severity changes	Indexing preserves alignment with other parameters
G Value	Approximately the State Average Cost per Case (in thousands of dollars)	Total Losses / Total Number of Claims, where losses are limited by the SAL and medical-only losses are reduced by 70%. (in thousands of dollars)	The definition is updated to align with the definition of expected losses
Credibility	$B = E\left(\dfrac{0.1\frac{E}{G} + 2,570}{\frac{E}{G} + 700}\right)$ B bounded below by 2,500G $C = E\left(\dfrac{0.375\frac{E}{G} + 150,000}{\frac{E}{G} + 5,100}\right)$ C bounded below by 60,000G	$B = E\left(\dfrac{0.056\frac{E}{G} + 2,910}{\frac{E}{G} + 600}\right)$ B bounded below by 4,600G $C = E\left(\dfrac{0.205\frac{E}{G} + 130,000}{\frac{E}{G} + 4,500}\right)$ C bounded below by 33,000G	The credibility formulas are calibrated to increase equity across employers of different sizes
D-Ratio Specificity	By class code	By hazard group	

Informational Exhibit 1-A
Exhibit 1-A details the credibility formula recalibration applicable to Minnesota.

Informational Exhibit B
Exhibit B shows simulated experience modification factor changes for the 2022 rating year using the methodology changes compared to the actual experience modification factors in effect. The exhibits show the changes for rating counts in different premium buckets.

Informational Exhibit C
Exhibit C shows simulated experience modification factor changes for the 2022 rating year using the methodology changes compared to the actual experience modification factors in effect. The exhibits show the changes in premium distribution within different premium buckets.

Implementation
The methodology changes will be effective 1/1/2024 coinciding with ***the 2024 Minnesota Ratemaking Report***. The changes will be filed in the ***2024 Minnesota Ratemaking Report*** and subsequent ratemaking reports as follows:

Pure Premium Base Rate Schedule:
- D-Ratios will be at the hazard group level.

Table of Weighting Values:
- Weighting values will reflect updated credibility parameters.
- Weighting values will reflect updated G-value.
- Actual Primary Loss Split Point will be calculated using updated methodology.
- State Per Claim Accident Limitation will be calculated using updated methodology.

Table of Ballast Values:
- Ballast values will reflect updated credibility parameters.
- Ballast values and formula will reflect updated G-value.

Metrics calculated from these values will be indirectly impacted, such as the State Multiple Claim Accident Limitation.

Impact
No statewide premium impact is anticipated from the changes proposed in this item. The overall average experience rating modification is not expected to be impacted by these changes.

Impacts to experience rating modifications at the individual employer level will vary, and may be offset by changes in loss experience and routine updates to rating values.

If you have questions, please contact our Actuarial staff by calling 952.897.1737, Option 3 or by emailing actuarial@mwcia.org.

ITEM E-1409—ENHANCEMENT TO NCCI'S EXPERIENCE RATING PLAN METHODOLOGY

INFORMATIONAL EXHIBIT 1-A
PROPOSED WEIGHT AND BALLAST FORMULAS
(Applies in: AK, AL, AR, AZ, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD,
ME, MO, MS, MT, NE, NH, NM, NV, OK, RI, SC, SD, TN, TX, UT, VA, VT, WV)

The W and B values for each jurisdiction are currently determined by the following formulas:

$$B = E\left(\frac{0.1\frac{E}{G} + 2{,}570}{\frac{E}{G} + 700}\right),$$

where B is bounded below by $2{,}500G$.

E is the employer's total expected losses and G is the state average severity.

$$W = \frac{E + B}{E + C},$$

where

$$C = E\left(\frac{0.375\frac{E}{G} + 150{,}000}{\frac{E}{G} + 5{,}100}\right)$$

and C is bounded below by $60{,}000G$.

This filing proposes to update the formulas to be:

$$B = E\left(\frac{0.056\frac{E}{G} + 2{,}910}{\frac{E}{G} + 600}\right),$$

where B is bounded below by $4{,}600G$.

$$W = \frac{E + B}{E + C},$$

where

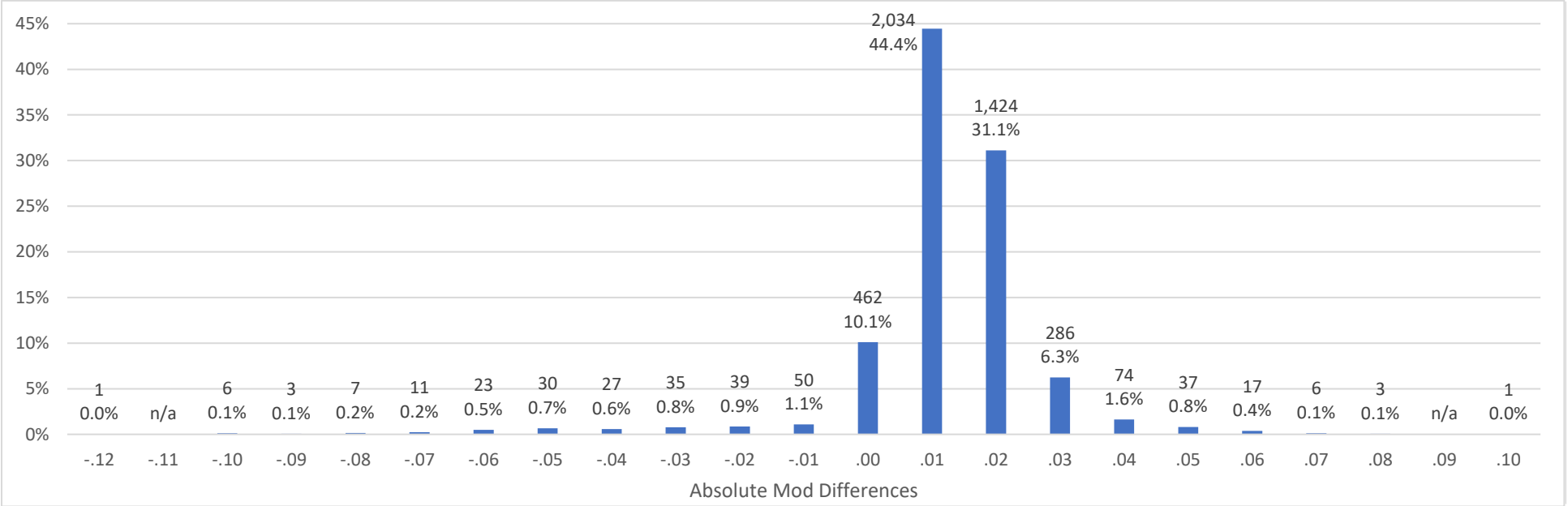$$C = E\left(\frac{0.205\frac{E}{G} + 130{,}000}{\frac{E}{G} + 4{,}500}\right)$$

and C is bounded below by $33{,}000G$.

These values are proposed to be the same for all jurisdictions, regardless of whether medical-only losses are reduced by 70%. Note that under the proposed formulas, G is the state **limited** average severity.
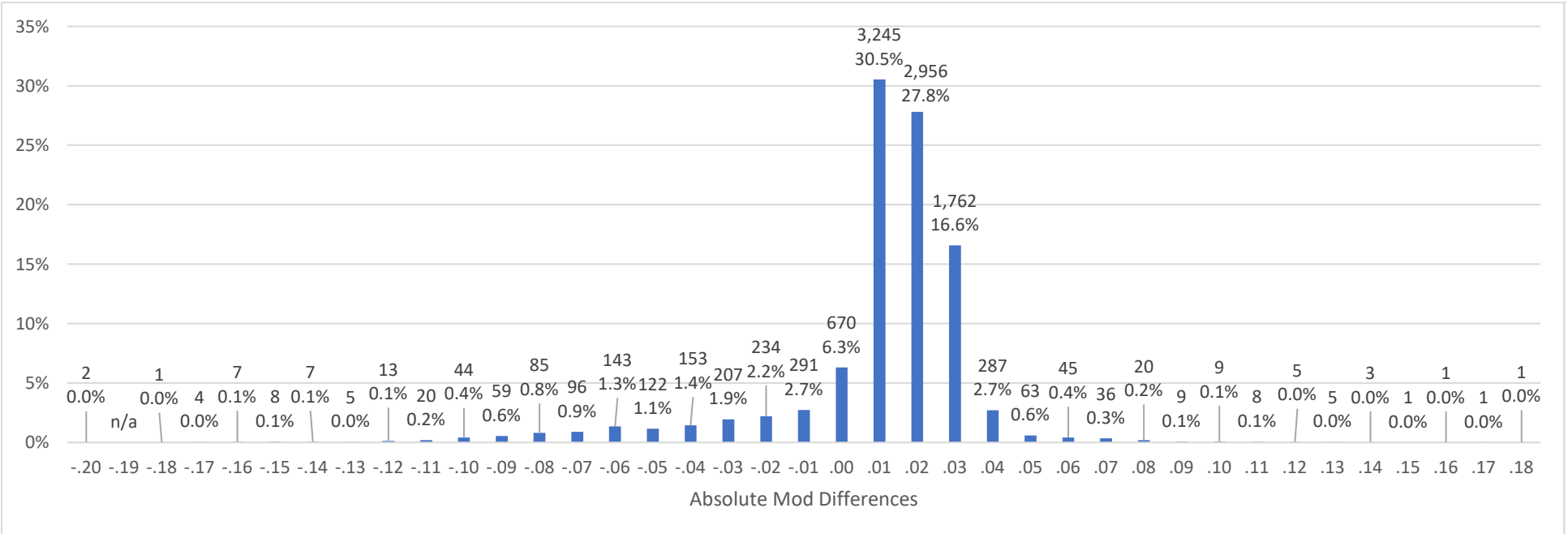
Informational Exhibit B: Policy Year 2022 Rating Count Charts

These exhibits compare the actual experience modification factors to experience rating factors simulated using the new methodology. Please note the difference in y-axis and x-axis across charts. Data labels are employer counts and proportion of total.

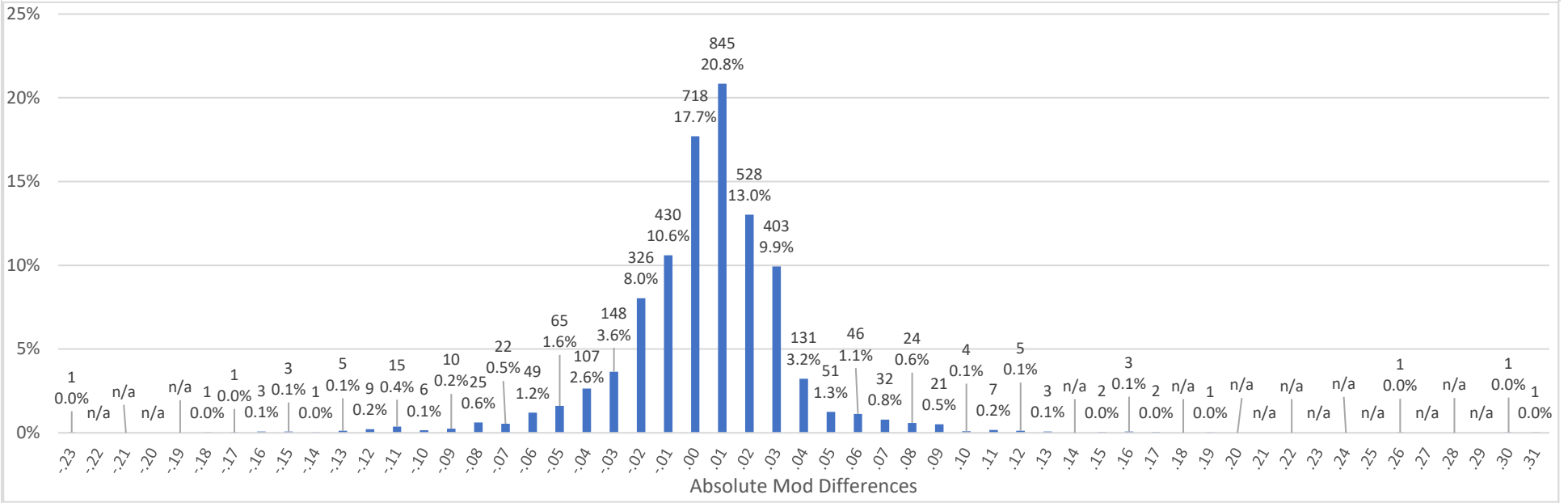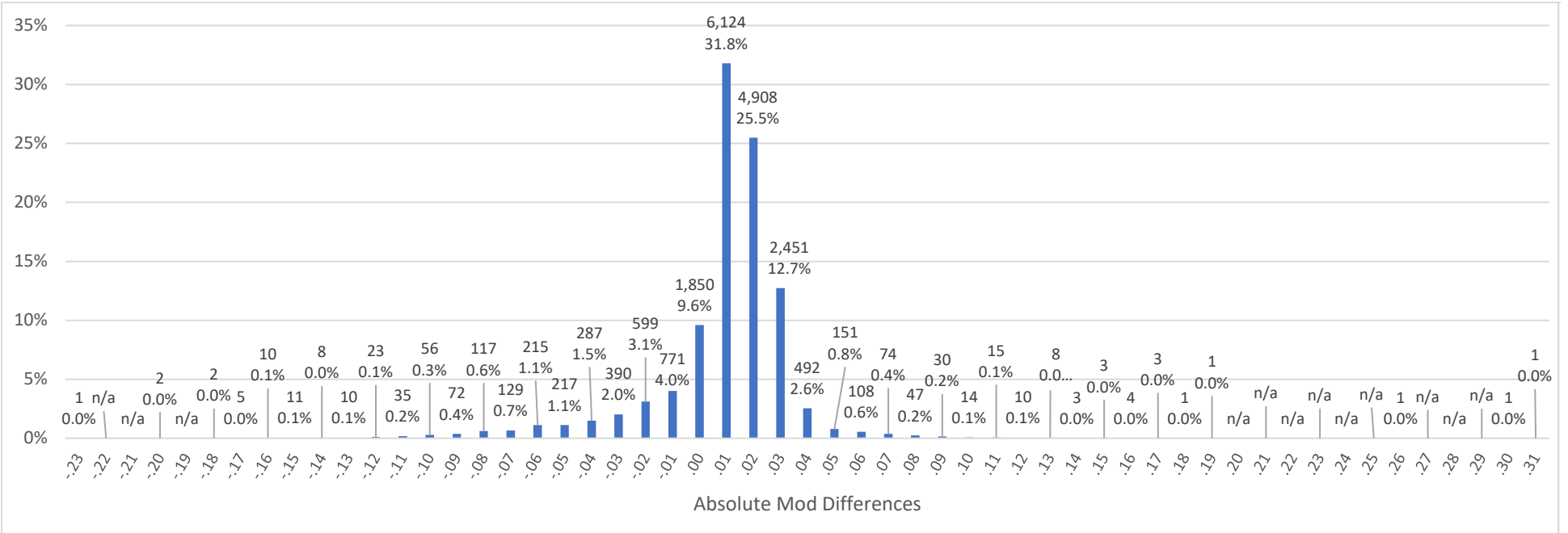**Distribution of 2022 Rating Differences:** Premium Range <$25,000

Absolute Mod Differences	Count	Proportion
-.12	1	0.0%
-.11		n/a
-.10	6	0.1%
-.09	3	0.1%
-.08	7	0.2%
-.07	11	0.2%
-.06	23	0.5%
-.05	30	0.7%
-.04	27	0.6%
-.03	35	0.8%
-.02	39	0.9%
-.01	50	1.1%
.00	462	10.1%
.01	2,034	44.4%
.02	1,424	31.1%
.03	286	6.3%
.04	74	1.6%
.05	37	0.8%
.06	17	0.4%
.07	6	0.1%
.08	3	0.1%
.09		n/a
.10	1	0.0%

Distribution of 2022 Rating Differences: Premium Range [$25,000, $100,000)

Absolute Mod Differences	Count	Proportion
-.20	2	0.0%
-.19		n/a
-.18	1	0.0%
-.17	4	0.1%
-.16	7	0.1%
-.15	8	0.1%
-.14	5	0.0%
-.13	13	0.1%
-.12	20	0.2%
-.11	44	0.4%
-.10	59	0.6%
-.09	85	0.8%
-.08	96	0.9%
-.07	143	1.3%
-.06	122	1.1%
-.05	153	1.4%
-.04	207	1.9%
-.03	234	2.2%
-.02	291	2.7%
-.01	670	6.3%
.00	3,245	30.5%
.01	2,956	27.8%
.02	1,762	16.6%
.03	287	2.7%
.04	63	0.6%
.05	45	0.4%
.06	36	0.3%
.07	20	0.2%
.08	9	0.1%
.09	8	0.1%
.10	5	0.0%
.11	3	0.0%
.12	1	0.0%
.13	1	0.0%
.14	1	0.0%

Informational Exhibit B: Policy Year 2022 Rating Count Charts

These exhibits compare the actual experience modification factors to experience rating factors simulated using the new methodology. Please note the difference in y-axis and x-axis across charts. Data labels are employer counts and proportion of total.

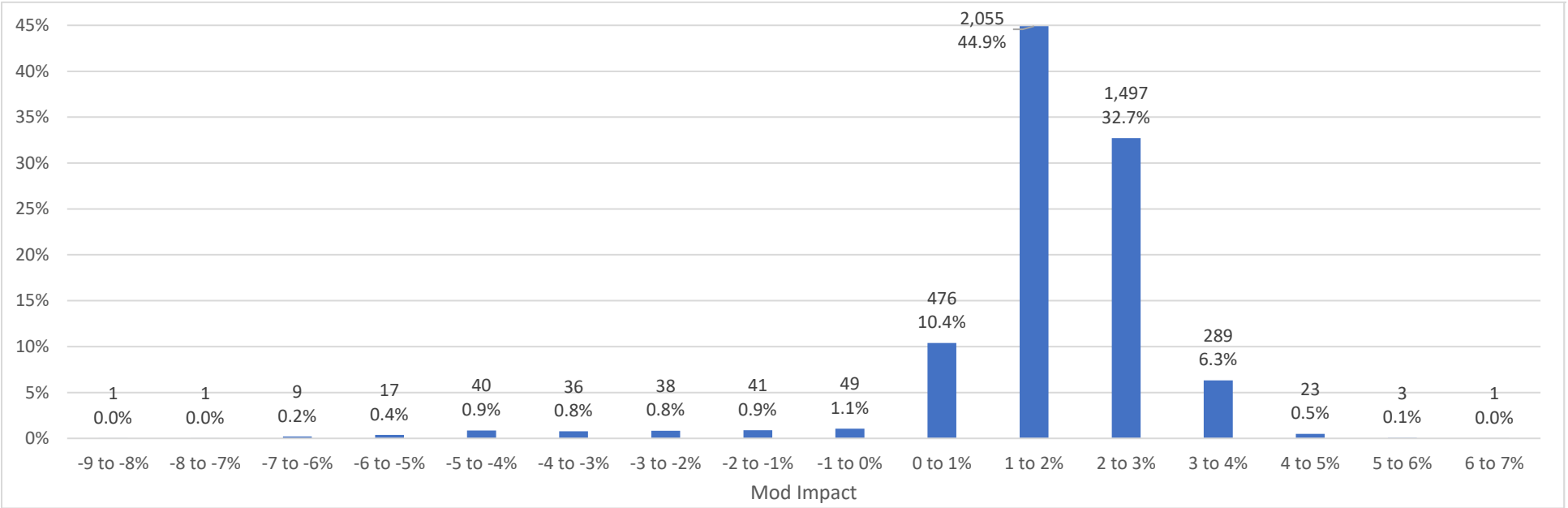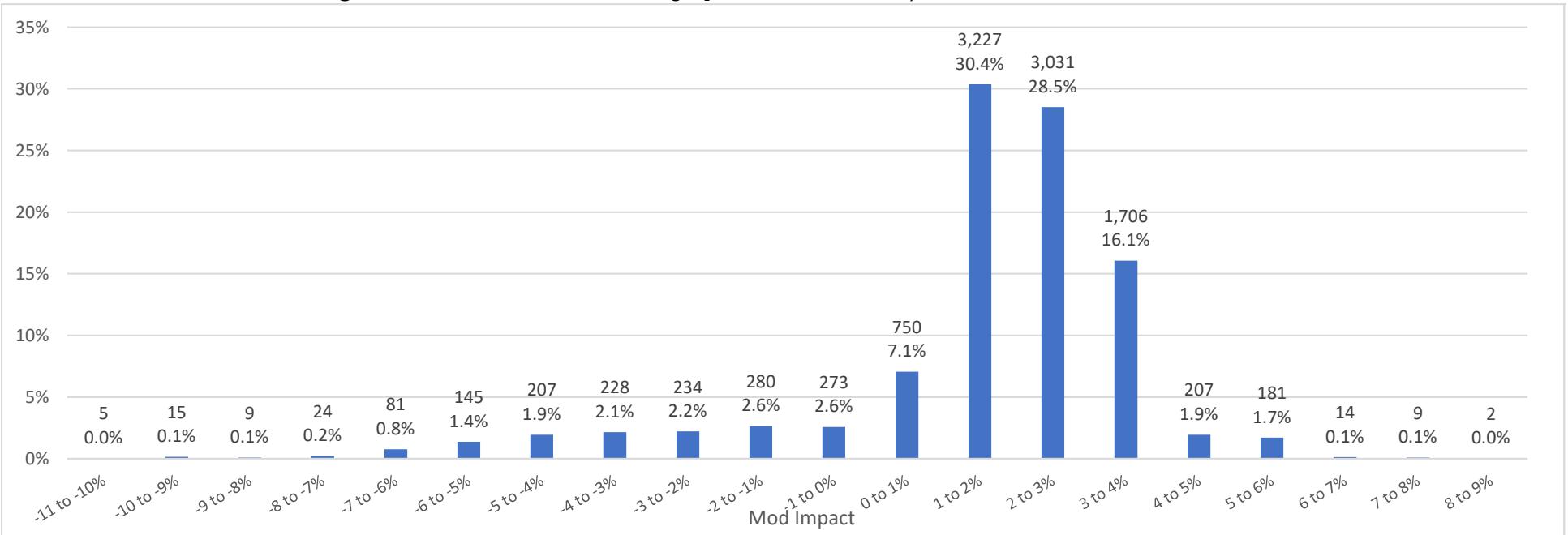**Distribution of 2022 Rating Differences:** Premium Range ≥$100,000

Absolute Mod Differences (x-axis: -.23 to .31)

Mod Diff	Count	Proportion
-.23	1	0.0%
-.22	n/a	n/a
-.21	n/a	n/a
-.20	1	0.0%
-.19	3	0.1%
-.18	1	0.1%
-.17	5	0.1%
-.16	9	0.4%
-.15	15	0.2%
-.14	6	0.1%
-.13	10	0.5%
-.12	25	0.6%
-.11	49	1.2%
-.10	22	2.6%
-.09	107	—
-.08	65	1.6%
-.07	148	3.6%
-.06	326	8.0%
-.05	430	10.6%
-.04	718	17.7%
-.03	845	20.8%
-.02	528	13.0%
-.01	403	9.9%
.00	131	3.2%
.01	51	1.3%
.02	46	1.1%
.03	32	0.8%
.04	24	0.6%
.05	21	0.5%
.06	4	0.1%
.07	7	0.2%
.08	5	0.1%
.09	3	0.1%
.10	3	n/a
.11	2	0.1%
.12	2	n/a
.13	1	n/a
.14	n/a	n/a
.15	n/a	n/a
.16	3	—
.17	n/a	0.0%
.18	n/a	n/a
.19	1	0.0%
.20	n/a	0.0%
.31	1	0.0%

Distribution of 2022 Rating Differences: All Ratings

Absolute Mod Differences (x-axis: -.23 to .31)

Mod Diff	Count	Proportion
-.23	1	0.0%
-.22	n/a	n/a
-.21	2	0.0%
-.20	n/a	n/a
-.19	2	0.0%
-.18	5	0.0%
-.17	11	0.1%
-.16	10	0.1%
-.15	8	0.1%
-.14	35	0.2%
-.13	23	0.1%
-.12	72	0.4%
-.11	56	0.3%
-.10	129	0.7%
-.09	117	0.6%
-.08	217	1.1%
-.07	215	1.1%
-.06	390	2.0%
-.05	287	1.5%
-.04	599	3.1%
-.03	771	4.0%
-.02	1,850	9.6%
-.01	6,124	31.8%
.00	4,908	25.5%
.01	2,451	12.7%
.02	492	2.6%
.03	151	0.8%
.04	108	0.6%
.05	74	0.4%
.06	47	0.2%
.07	30	0.2%
.08	14	0.1%
.09	15	0.1%
.10	10	0.1%
.11	8	0.0%
.12	3	0.0%
.13	3	0.0%
.14	4	0.0%
.15	3	0.0%
.16	1	0.0%
.17	n/a	n/a
.18	n/a	n/a
.19	n/a	n/a
.20	1	0.0%
.31	1	0.0%

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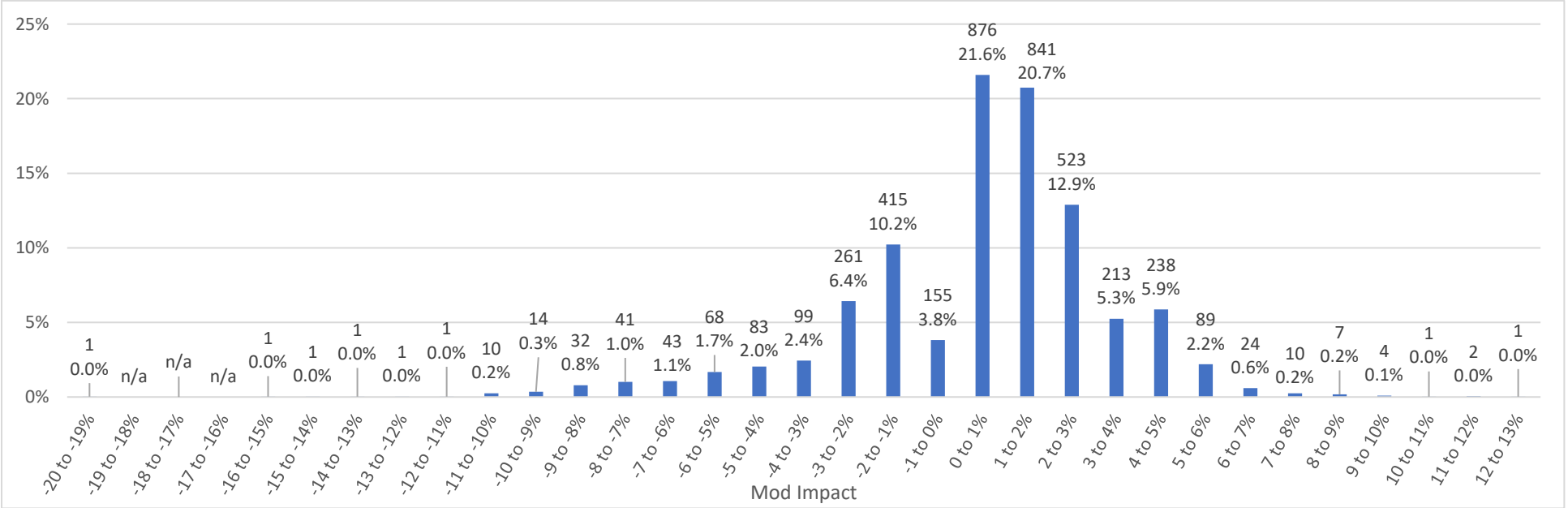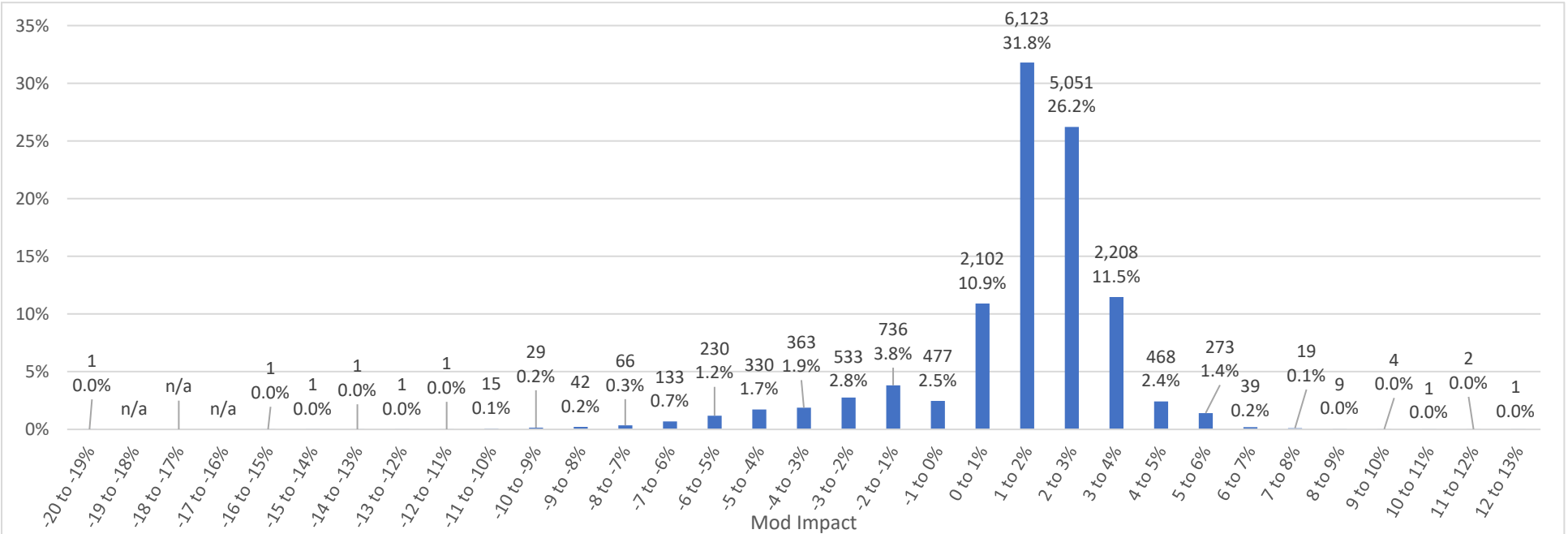**Distribution of 2022 Percentage Differences:** Premium Range <$25,000

Mod Impact	Count	Proportion
-9 to -8%	1	0.0%
-8 to -7%	1	0.0%
-7 to -6%	9	0.2%
-6 to -5%	17	0.4%
-5 to -4%	40	0.9%
-4 to -3%	36	0.8%
-3 to -2%	38	0.8%
-2 to -1%	41	0.9%
-1 to 0%	49	1.1%
0 to 1%	476	10.4%
1 to 2%	2,055	44.9%
2 to 3%	1,497	32.7%
3 to 4%	289	6.3%
4 to 5%	23	0.5%
5 to 6%	3	0.1%
6 to 7%	1	0.0%

Distribution of 2022 Percentage Differences: Premium Range [$25,000, $100,000)

Mod Impact	Count	Proportion
-11 to -10%	5	0.0%
-10 to -9%	15	0.1%
-9 to -8%	9	0.1%
-8 to -7%	24	0.2%
-7 to -6%	81	0.8%
-6 to -5%	145	1.4%
-5 to -4%	207	1.9%
-4 to -3%	228	2.1%
-3 to -2%	234	2.2%
-2 to -1%	280	2.6%
-1 to 0%	273	2.6%
0 to 1%	750	7.1%
1 to 2%	3,227	30.4%
2 to 3%	3,031	28.5%
3 to 4%	1,706	16.1%
4 to 5%	207	1.9%
5 to 6%	181	1.7%
6 to 7%	14	0.1%
7 to 8%	9	0.1%
8 to 9%	2	0.0%

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These exhibits compare the actual experience modification factors to experience rating factors simulated using the new methodology. Please note the difference in y-axis and x-axis across charts. Data labels are employer counts and proportion of total.

Distribution of 2022 Percentage Differences: Premium Range ≥$100,000

Mod Impact	Count	%
-20 to -19%	1	0.0%
-19 to -18%	n/a	n/a
-18 to -17%	n/a	n/a
-17 to -16%	n/a	n/a
-16 to -15%	1	0.0%
-15 to -14%	1	0.0%
-14 to -13%	1	0.0%
-13 to -12%	1	0.0%
-12 to -11%	1	0.0%
-11 to -10%	10	0.2%
-10 to -9%	14	0.3%
-9 to -8%	32	0.8%
-8 to -7%	41	1.0%
-7 to -6%	43	1.1%
-6 to -5%	68	1.7%
-5 to -4%	83	2.0%
-4 to -3%	99	2.4%
-3 to -2%	261	6.4%
-2 to -1%	415	10.2%
-1 to 0%	155	3.8%
0 to 1%	876	21.6%
1 to 2%	841	20.7%
2 to 3%	523	12.9%
3 to 4%	213	5.3%
4 to 5%	238	5.9%
5 to 6%	89	2.2%
6 to 7%	24	0.6%
7 to 8%	10	0.2%
8 to 9%	7	0.2%
9 to 10%	4	0.1%
10 to 11%	1	0.0%
11 to 12%	2	0.0%
12 to 13%	1	0.0%

Distribution of 2022 Percentage Differences: All Ratings

Mod Impact	Count	%
-20 to -19%	1	0.0%
-19 to -18%	n/a	n/a
-18 to -17%	n/a	n/a
-17 to -16%	n/a	n/a
-16 to -15%	1	0.0%
-15 to -14%	1	0.0%
-14 to -13%	1	0.0%
-13 to -12%	1	0.0%
-12 to -11%	1	0.0%
-11 to -10%	15	0.1%
-10 to -9%	29	0.2%
-9 to -8%	42	0.2%
-8 to -7%	66	0.3%
-7 to -6%	133	0.7%
-6 to -5%	230	1.2%
-5 to -4%	330	1.7%
-4 to -3%	363	1.9%
-3 to -2%	533	2.8%
-2 to -1%	736	3.8%
-1 to 0%	477	2.5%
0 to 1%	2,102	10.9%
1 to 2%	6,123	31.8%
2 to 3%	5,051	26.2%
3 to 4%	2,208	11.5%
4 to 5%	468	2.4%
5 to 6%	273	1.4%
6 to 7%	39	0.2%
7 to 8%	19	0.1%
8 to 9%	9	0.0%
9 to 10%	4	0.0%
10 to 11%	1	0.0%
11 to 12%	2	0.0%
12 to 13%	1	0.0%

Informational Exhibit C: Policy Year 2022 Premium Distribution Charts

These exhibits compare the premium distribution of modification changes between actual and simulated factors.
Please note the difference in y-axis and x-axis across charts. Data labels are proportion of total premium in the premium range.

Distribution of 2022 Rating Differences: Premium Range <$25,000

Distribution of 2022 Rating Differences: Premium Range [$25,000, $100,000)

Informational Exhibit C: Policy Year 2022 Premium Distribution Charts

These exhibits compare the premium distribution of modification changes between actual and simulated factors.

Please note the difference in y-axis and x-axis across charts. Data labels are proportion of total premium in the premium range.

Distribution of 2022 Rating Differences: Premium Range ≥$100,000

Percentage of Premium vs. Absolute Mod Differences

Bin	Value	Bin	Value
-.23	0.0%	-.04	5.0%
-.22	n/a	-.03	4.7%
-.21	n/a	-.02	10.0%
-.20	0.0%	-.01	10.8%
-.19	0.0%	.00	15.3%
-.18	0.0%	.01	14.7%
-.17	0.1%	.02	10.0%
-.16	0.1%	.03	7.4%
-.15	0.4%	.04	3.9%
-.14	0.3%	.05	2.0%
-.13	0.5%	.06	2.0%
-.12	0.9%	.07	1.0%
-.11	1.4%	.08	1.2%
-.10	2.5%	.09	0.9%
-.09	2.8%	.10	0.5%
-.08		.11	0.4%
-.07		.12	0.3%
-.06		.13	0.1%
-.05		.14	n/a

(Additional bins extend to .31 with values including 0.2%, 0.1%, 0.1%, 0.0%, n/a, 0.1%, n/a, 0.1%, 0.1%)

Distribution of 2022 Rating Differences: All Ratings

Percentage of Premium vs. Absolute Mod Differences

Bin	Value	Bin	Value
-.23	0.0%	-.04	3.8%
-.22	0.0%	-.03	3.8%
-.21	n/a	-.02	7.4%
-.20	0.0%	-.01	8.1%
-.19	0.1%	.00	12.6%
-.18	0.1%	.01	20.4%
-.17	n/a	.02	15.5%
-.16	0.0%	.03	10.3%
-.15	0.1%	.04	3.6%
-.14	0.3%	.05	1.5%
-.13	0.3%	.06	1.4%
-.12	1.2%	.07	0.7%
-.11	2.1%	.08	0.9%
-.10	2.3%	.09	0.6%
-.09		.10	0.4%

(Additional bins extend to .31 with values including 0.2%, 0.3%, 0.1%, 0.0%, 0.1%, 0.0%, n/a, 0.0%, n/a, 0.1%, 0.1%)

Informational Exhibit C: Policy Year 2022 Premium Distribution Charts

These exhibits compare the premium distribution of modification changes between actual and simulated factors.

Please note the difference in y-axis and x-axis across charts. Data labels are proportion of total premium in the premium range.

Distribution of 2022 Percentage Differences: Premium Range <$25,000

Distribution of 2022 Percentage Differences: Premium Range [$25,000, $100,000)

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Distribution of 2022 Percentage Differences: Premium Range ≥$100,000

Distribution of 2022 Percentage Differences: All Ratings
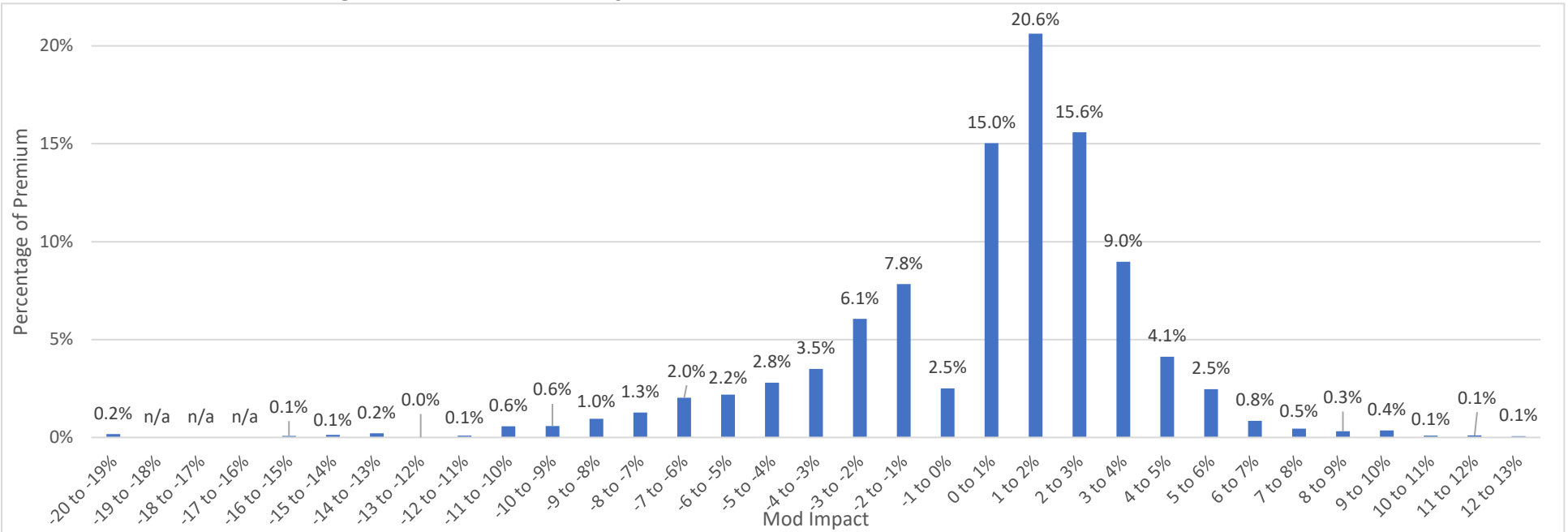
FILING MEMORANDUM

ITEM E-1409—ENHANCEMENT TO NCCI'S EXPERIENCE RATING PLAN METHODOLOGY

PURPOSE

This item revises certain underlying components provided in the methodology used in NCCI's Experience Rating Plan (Plan) to reflect current business and industry needs. The underlying Plan components impacted are:

- Primary/excess loss split point (split point)
- State per claim accident limitation (SAL) and United States Longshore and Harbor Workers' Compensation (USL&HW) per claim accident limitation
- G value
- Credibility parameters underlying calculation of the weight (W) and ballast (B) values
- Discount ratios (D-ratios)

The formulas and general structure of the Plan remain unchanged.

BACKGROUND

The experience rating modification is intended to predict an employer's *future* loss experience using its *historical* loss experience. For example, an experience rating modification of 1.20 is a prediction that the employer's future loss experience will be 20% worse than the average employer in the same classification. The experience rating modification is intended to reflect the employer's past loss experience only to the extent that it is considered predictive of future loss experience. The weight given to actual losses in the experience rating modification calculation is called credibility; as the size of the employer increases, credibility also increases.

NCCI periodically evaluates Plan methodology and performance. During the latest review, NCCI identified some opportunities to improve Plan performance, with revisions that will result in:

- A more accurate and predictive experience rating modification
- Experience rating modifications that reflect a more equitable determination of primary and excess losses across states with varying cost levels
- More comparable Plan performance in states with claim costs that vary significantly from the countrywide average
- Experience rating modifications less sensitive to large outlier claims without sacrificing predictive accuracy
- More consistent calculation of each employer's expected claim count, which is expected to result in more appropriate credibility being assigned to each employer's loss experience
- Recalibrated credibility parameters underlying the weight and ballast values to increase equity across employers
- The elimination of complex calculations where no value is added

The following underlying components are impacted by the enhanced Plan.

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, MO, MS, MT, NE, NH, NM, NV, OK, OR, RI, SC, SD,
TN, TX, UT, VA, VT, WV)

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ITEM E-1409—ENHANCEMENT TO NCCI'S EXPERIENCE RATING PLAN METHODOLOGY

Split Point

The primary/excess loss split point divides the losses from each historical claim into two layers: primary losses (those beneath the split point) and excess losses (those above the split point). For example, if the split point is $15,000, a claim totaling $50,000 would contribute $15,000 to the primary layer and $35,000 to the excess layer. Primary losses receive a greater weight than excess losses in the experience rating modification formula. Because of this, primary losses have a greater impact on the experience rating modification. The split point is currently a countrywide value ($18,500) that is updated with each state's annual loss cost/rate filing to reflect changes in countrywide claim costs.

State per Claim Accident Limitation (SAL)

The state per claim accident limitation (SAL) is the maximum dollar amount from any one claim that may impact the experience rating modification. For example, if the SAL is $200,000, then any claims with incurred losses above that amount will be limited to $200,000 for the purpose of calculating the experience rating modification. Currently, the SAL is calculated as the state average cost per case times 25. The SAL can also be derived at 10% times the state reference point (SRP), where SRP is calculated as state average cost per case times 250.

The SAL is intended to curtail the impact that extremely large outlier claims have on the experience rating modification, because these dollars are not expected to be predictive of future loss experience beyond a certain point.

The state multiple claim accident limitation is the maximum dollar amount that an accident involving two or more persons may impact the experience rating modification. It is calculated as twice the SAL.

The USL&HW per claim and multiple claim accident limitations are calculated in a similar manner as the state accident limitations and apply to claims subject to the USL&HW Act. These accident limitations are updated with each state's annual loss cost/rate filing.

G Value

The G value represents state average claim severity (in thousands of dollars). Its primary use is in the determination of an employer's expected claim count, which serves as the basis for the credibility assigned to its primary and excess loss experience. The G value is updated with each state's annual loss cost/rate filing.

Credibility Parameters

NCCI's current experience rating modification (M) formula is:

$$M = \frac{A_p + WA_e + (1 - W)E_e + B}{E + B}$$

FILING MEMORANDUM

ITEM E-1409—ENHANCEMENT TO NCCI'S EXPERIENCE RATING PLAN METHODOLOGY

Where:
- A_p, A_e = **A**ctual Losses (**P**rimary, **E**xcess)
- E_p, E_e = Expected Losses (**P**rimary, **E**xcess)
- E = Total **E**xpected Losses
- W = **W**eight
- B = **B**allast

The weighting value (W) and ballast value (B) influence the degree to which an employer's actual losses impact the experience rating modification. The W and B values are determined by a set of 10 credibility parameters and these parameters have not been updated in over two decades. The current and proposed formulas governing the calculation of W and B are included in Informational Exhibit 1.

Tables of W and B values corresponding to employer size ranges are updated with each state's annual loss cost/rate filing.

Discount Ratio (D-Ratio)

The Discount ratio (D-ratio) is the expected percentage of losses that fall below the split point value and is used to determine the expected excess losses to be used in the experience rating modification calculation. NCCI publishes D-ratios by classification code. D-ratios are updated with each state's annual loss cost/rate filing.

PROPOSAL

This item proposes the following changes to the Plan:

1. **Implement state-specific split points reflecting an average D-ratio of approximately 40% by state.**

   Currently, the split point is set at a common level across states where NCCI provides ratemaking services. Because the average D-ratio in a state depends not only on the split point, but also on that state's average claim costs, having a common split point results in an average D-ratio that varies widely across states.

   The proposed methodology level-sets the average D-ratio across states to approximately 40% by introducing a state-specific split point, which allows the split point to better reflect each state's average claim costs. As a result, experience rating modifications will reflect a more equitable determination of primary and excess losses across states with varying cost levels.

   For example, instead of the current split point value of $18,500 applying to all states, under the proposed Plan a state with higher-than-average claim severity may have a split point value of $25,000, while a state with lower-than-average claim severity may have a split point value of $15,000. The use of state-specific split point values that reflect individual state cost differences is intended to better align across states the weight given to actual employer loss experience in the experience rating modification calculation. In turn, this is expected to produce improved and more comparable Plan performance in states with claim costs that vary significantly from the countrywide average.

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Informational Exhibit 2 shows each state's proposed split point value, which was calculated using Workers Compensation Statistical Plan (WCSP) data underlying the 2018 loss cost/rate filing, and trended, based on the anticipated future loss cost/rate filing effective date for each state as provided in the Implementation section of this item.

Average claim costs vary significantly across NCCI states. The experience rating modification applies to premium that is based on manual loss costs/rates. Because loss costs/rates vary by state in accordance with cost differences, it is paramount that the experience rating modification similarly reflects state cost differences to achieve comparable performance across states. Tailoring the split point to reflect these cost differences is a big step towards aligning performance across states and results in a more accurate and predictive experience rating modification compared to applying a countrywide split point uniformly across states.

To keep up with changes in claim costs and preserve alignment with other experience rating parameters, it is anticipated that the split point value will be indexed concurrent with each state's annual loss cost/rate filing based on an estimate of annual severity changes between the average loss date for experience rating modifications in the initial implementation year and the effective year.

2. **Revise the calculation of accident limitations to reflect the 95th percentile of lost-time claims.**

The state per claim accident limitation (SAL) is used to curtail the impact of large claims on the experience rating modification because large outlier claims are generally not expected to be predictive of future loss experience. The use of a state-level 95th percentile results in an SAL that is expected to impact the largest 5% of lost-time claims. A similar change is proposed for the USL&HW per claim accident limitation to reflect the 95th percentile of lost-time claims reported under USL&HW Act benefits for F-classifications. Note that this change renders the state reference point (SRP) obsolete (the SAL was previously calculated as 10% of SRP).

The new definition of the SAL and USL&HW per claim accident limitation results in lower limits in every state, making experience rating modifications less sensitive to large outlier claims without sacrificing predictive accuracy.

Informational Exhibit 5 demonstrates how the SAL decreases under the new proposed methodology across states, using historical data underlying experience rating modifications effective in 2018. This new methodology is expected to result in an SAL that is not only lower than the current SAL, but also more stable over time.

Note that, unlike the split point, this item does not propose a new SAL value to go along with the updated methodology. Rather, the state per claim accident limitation and USL&HW per claim accident limitation will be calculated under the new methodology in the state's loss cost/rate filing corresponding to the anticipated effective date provided in the Implementation section of this item.

3. **Revise the calculation of G to reflect accident limitations and the reduction of medical-only losses, where applicable.**

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G represents state average claim severity (in thousands of dollars). While G currently reflects the unlimited average severity in a state, this item proposes to update the methodology under which G is calculated to reflect accident limitations and the 70% reduction of medical-only losses (per the experience rating adjustment [ERA]), where applicable.

In the calculation of an employer's expected claim count, the employer's expected losses are divided by the G value (average claim severity). Because expected losses already reflect ERA and accident limitations, this change in how G is calculated makes for a more consistent calculation of each employer's expected claim count. In turn, this is expected to result in more appropriate credibility being assigned to each employer's loss experience.

Note that, unlike the split point, this item does not propose a new G value to go along with the updated methodology. Rather, the G value will be calculated under the new methodology in the state's loss cost/rate filing corresponding to the anticipated effective date provided in the Implementation section of this item.

4. **Update the credibility parameters underlying the weight and ballast values.**

   The proposed credibility parameters underlying the weight and ballast values have been recalibrated to increase equity across employers. All other things being equal, the new credibility parameters would increase credibility for larger risks and decrease credibility for smaller risks. However, because of the interaction of the split point change with the credibility change, the combined impact will vary across states and across employers of difference sizes.

   Informational Exhibit 1 contains the proposed updates to the values used in calculating the weight and ballast values.

5. **Simplify the D-ratio calculation by removing the classification-level weighting adjustment.**

   NCCI currently produces D-ratios that vary by classification code. D-ratios are first calculated by hazard group (HG) and then adjusted to reflect a classification's share of indemnity and medical pure premium. While the classification-level adjustment adds complexity to the calculation, NCCI's research found that this adjustment does not add value. As such, this item proposes to eliminate the classification-level adjustment, meaning that the D-ratio will vary only by HG and not by classification code.

IMPACT

No statewide premium impact is anticipated from the changes proposed in this item. The overall average experience rating modification in each state is not expected to be impacted by these changes.

Impacts to experience rating modifications at the individual employer level will vary, and may be offset by changes in loss experience and routine updates to rating values. See Informational Exhibit 3 for details on how experience rating modifications can be expected to change. Experience rating modifications are expected to change by less than +/- 5% for most employers. Informational Exhibit 3 provides details for each state.

Overall, the proposed changes to the experience rating modification calculation are expected to produce Plan performance that is both improved and more comparable across states. Informational Exhibit 4 shows

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how Plan performance improves on a countrywide basis under the enhanced methodology proposed in this item. Ultimately, this update to the Plan is expected to result in overall improved performance of the Plan and increased equity across individual employers.

IMPLEMENTATION

This item will become effective for experience rating modifications with rating effective dates on and after each state's anticipated loss cost/rate filing effective on and after November 1, 2023. For example, this item will become effective for experience rating modifications with rating effective dates on and after January 1, 2024, for states with loss cost/rate filings that have an anticipated January 1, 2024 effective date. Similarly, this item will become effective for experience rating modifications with rating effective dates on and after July 1, 2024, for states with loss cost/rate filings that have an anticipated July 1, 2024 effective date.

Effective Dates by State

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

State	Anticipated Effective Date[*]
Alabama	March 1, 2024
Alaska	January 1, 2024
Arizona	January 1, 2024
Arkansas	July 1, 2024
Colorado	January 1, 2024
Connecticut	January 1, 2024
District of Columbia	November 1, 2023
Florida	January 1, 2024
Georgia	March 1, 2024
Hawaii	The effective date will be determined upon regulatory approval of the individual carrier's election to adopt this change.
Idaho	January 1, 2024
Illinois	January 1, 2024
Indiana	January 1, 2024
Iowa	January 1, 2024
Kansas	January 1, 2024

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State	Anticipated Effective Date*
Kentucky	January 1, 2024
Louisiana	May 1, 2024
Maine	April 1, 2024
Maryland	January 1, 2024
Mississippi	March 1, 2024
Missouri	January 1, 2024
Montana	July 1, 2024
Nebraska	February 1, 2024
Nevada	March 1, 2024
New Hampshire	January 1, 2024
New Mexico	January 1, 2024
Oklahoma	January 1, 2024
Oregon	January 1, 2024
Rhode Island	August 1, 2024
South Carolina	April 1, 2024
South Dakota	July 1, 2024
Tennessee	March 1, 2024
Texas	July 1, 2024
Utah	January 1, 2024
Vermont	April 1, 2024
Virginia	April 1, 2024
West Virginia	November 1, 2023

* Subject to change, depending on the approved effective date of the loss cost/rate filing if a loss cost/rate filing has been submitted for a state.

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EXHIBIT COMMENTS AND IMPLEMENTATION SUMMARY

Exhibit	Exhibit Comments
Informational Exhibit 1-A	Details the revised weight and ballast formulas applicable in AK, AL, AR, AZ, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD, ME, MO, MS, MT, NE, NH, NM, NV, OK, RI, SC, SD, TN, TX, UT, VA, VT, and WV.
Informational Exhibit 1-B	Details the revised weight and ballast formulas applicable in CO and OR.
Informational Exhibit 2	Details each state's revised primary/excess loss split point.
Informational Exhibit 3	Details the state impact analyses of changes in experience rating modifications.
Informational Exhibit 4	Details countrywide Experience Rating Plan performance.
Informational Exhibit 5	Details how the historical state per claim accident limitation (SAL) values change under the proposed methodology.

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INFORMATIONAL EXHIBIT 1-A
PROPOSED WEIGHT AND BALLAST FORMULAS
(Applies in: AK, AL, AR, AZ, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD,
ME, MO, MS, MT, NE, NH, NM, NV, OK, RI, SC, SD, TN, TX, UT, VA, VT, WV)

The W and B values for each jurisdiction are currently determined by the following formulas:

$$B = E\left(\frac{0.1\frac{E}{G} + 2{,}750}{\frac{E}{G} + 700}\right),$$

where *B* is bounded below by $2{,}500G$.

E is the employer's total expected losses and *G* is the state average severity.

$$W = \frac{E + B}{E + C},$$

where

$$C = E\left(\frac{0.375\frac{E}{G} + 150{,}000}{\frac{E}{G} + 5{,}100}\right)$$

and *C* is bounded below by $60{,}000G$.

This filing proposes to update the formulas to be:

$$B = E\left(\frac{0.056\frac{E}{G} + 2{,}910}{\frac{E}{G} + 600}\right),$$

where *B* is bounded below by $4{,}600G$.

$$W = \frac{E + B}{E + C},$$

where

$$C = E\left(\frac{0.205\frac{E}{G} + 130{,}000}{\frac{E}{G} + 4{,}500}\right)$$

and *C* is bounded below by $33{,}000G$.

These values are proposed to be the same for all jurisdictions, regardless of whether medical-only losses are reduced by 70%. Note that under the proposed formulas, *G* is the state **limited** average severity.

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INFORMATIONAL EXHIBIT 4
EXPERIENCE RATING PLAN PERFORMANCE COMPARISON

</div>

The chart below demonstrates performance of the Experience Rating Plan (Plan) under both the current and proposed methodology using NCCI's standard quintile test, which can be interpreted as follows:

- Employers are placed into one of five groups (quintiles) based on their experience rating modification (mod), with the employers on the left receiving the lowest mods and the employers on the right receiving the highest mods.

- While the mod is generally based on the experience from the three most recent policies reported in accordance with NCCI's ***Statistical Plan for Workers Compensation and Employers Liability Insurance,*** this chart is showing the experience that actually emerged from the policy that the mod applies to. For example, a mod effective January 1, 2018 will generally be based on experience from 2014–2016 and applies to policies effective in 2018.

- The five groups on the top half of this chart are shown **before** the application of the mod. The five groups on the bottom half of this chart are shown **after** the application of the mod.

- The top half of this chart reveals that the Plan was generally able to identify the better-than-average and worse-than-average employers. This is because the employers receiving the lowest mods subsequently had the best experience. Likewise, the employers receiving the highest mods subsequently had the worst experience.

- If the Plan were performing at an optimal level, the loss ratios shown on the bottom half of this chart would be 100% for all five groups. Under the current Plan, the loss ratio for the left-most group is notably less than 100%. Under the proposed Plan, this group's loss ratio is corrected to 100%. Additionally, all but the third group's loss ratio are closer to 100%.

- One metric for measuring Plan performance, the quintile test statistic, is calculated as follows:

$$\text{Quintile metric} = \frac{\sum_{n=1}^{5}\left[LR_i^{After} - 1\right]^2}{\sum_{n=1}^{5}\left[LR_i^{Before} - 1\right]^2} \quad ,$$

where: LR_i^{After} is the loss ratio after the application of the mod for quintile i, and

LR_i^{Before} is the loss ratio before the application of the mod for quintile *i.*

The proposed Plan scores **0.003**, an improvement over the current Plan's score of **0.013**.

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INFORMATIONAL EXHIBIT 4 (CONT'D)
EXPERIENCE RATING PLAN PERFORMANCE COMPARISON

These charts show the quintiles test on all rated employers for both the current Plan and the proposed Plan.

Loss Ratio Before Mod

Loss Ratio After Mod
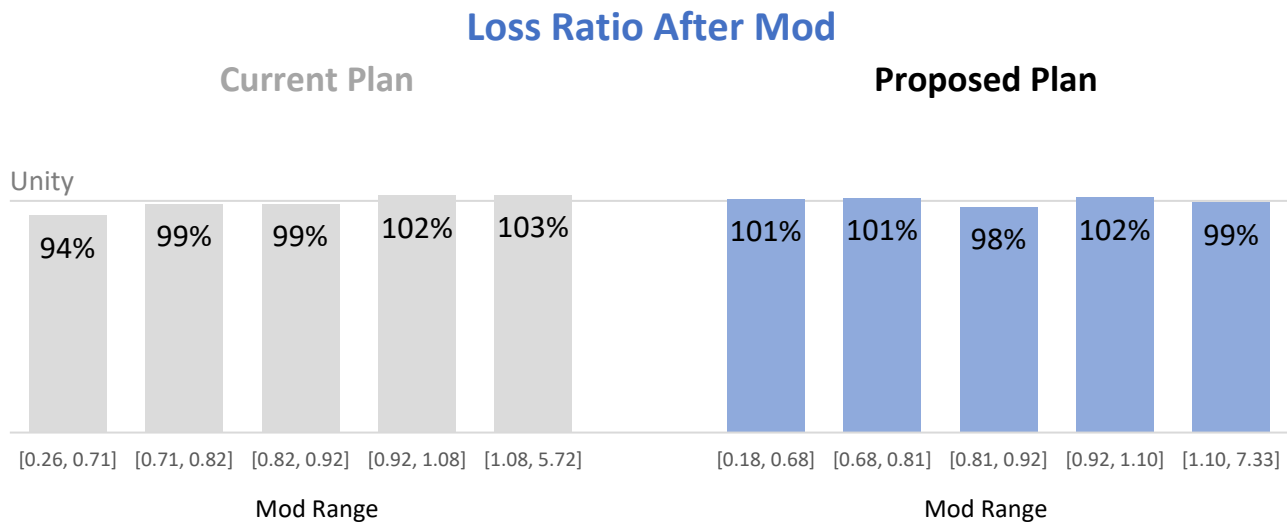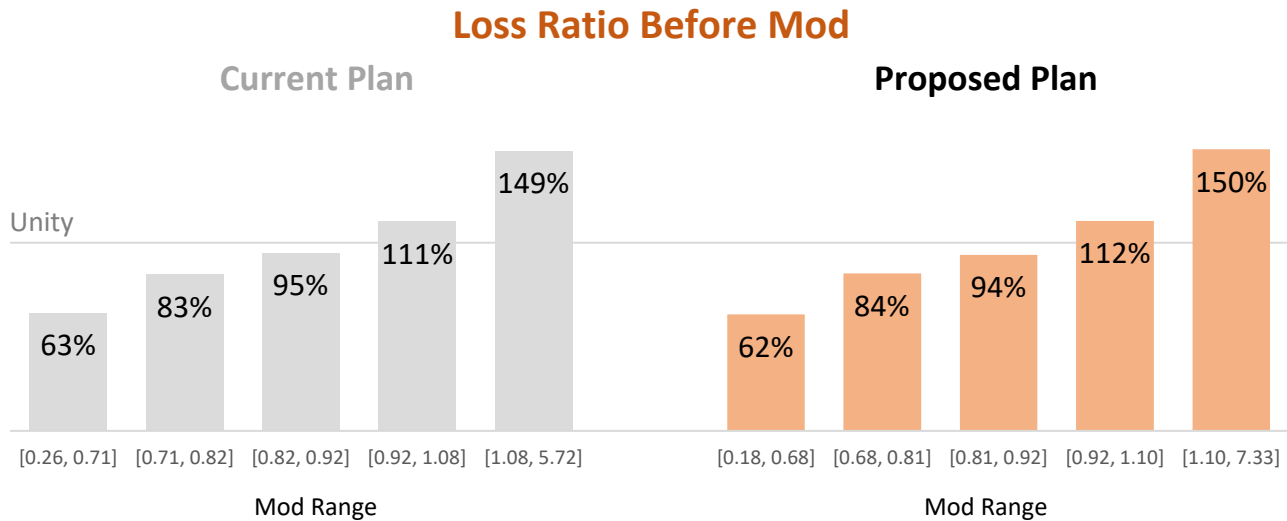
Reflects ratings effective 1/1/2016 through 12/31/2018.

Quintiles are weighted by rating period expected losses (pure premium).

Loss ratios reflect limited losses and are normalized by state and rating year.

Jurisdictions included: AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MA*, MD, ME, MN*, MO, MS, MT, NC*, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, UT, VA, VT, WI*, WV.

* Included only for interstate ratings. Quintile loss ratios do not include MA, MN, and WI.

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INFORMATIONAL EXHIBIT 5
STATE PER CLAIM ACCIDENT LIMITATION (SAL) COMPARISON

This chart shows how the historical SALs for 2018 differ under the current and proposed methodologies.

State per Claim Accident Limitation ($ thousands)

● Current   ● Proposed

States in Order of Increasing G Values (Under the Proposed Methodology)
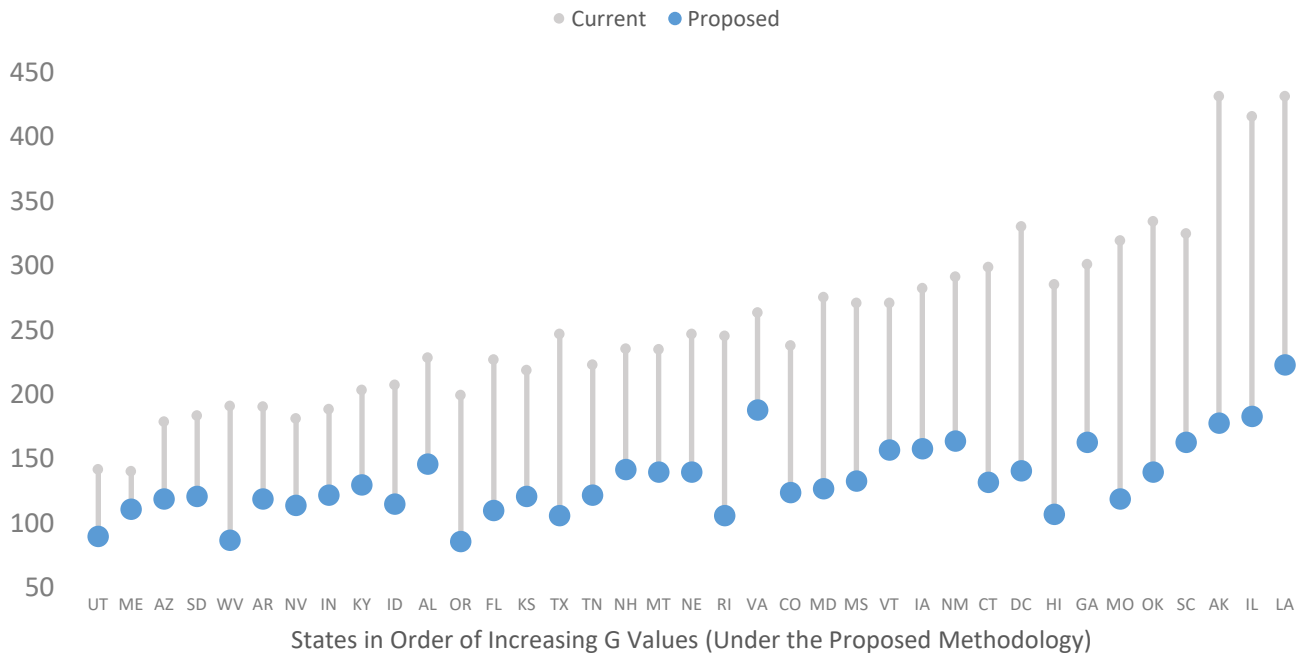
Reflects the SAL applicable to ratings effective 1/1/2018.