MERLINOS actuaries consultants

November 30, 2018

Ms. Julie Lederer, FCAS, MAAA
Missouri Department of Insurance
301 W. High St.
Jefferson City, MO 65102

RE: Workers Compensation Voluntary Advisory Loss Costs and Rating Values
Proposed Effective January 1, 2019

Dear Ms. Lederer:

At your request, we have reviewed the above-referenced rate filing. This memorandum documents our findings and conclusions.

BACKGROUND

The NCCI has submitted a voluntary loss cost filing with a proposed effective date of January 1, 2019. Voluntary loss costs are intended to cover anticipated indemnity and medical benefits, including a provision for loss adjustment expenses.

The overall change proposed by the NCCI is -3.5% for voluntary loss costs, relative to the current approved loss costs which went into effect on January 1, 2018. The proposed voluntary rate decrease consists of a -3.1% change in loss costs due to experience and development, a change of -0.7% due to the change in trend, a +0.4% change due to benefits, and a -0.1% change due to the reduction in loss adjustment expenses. The maximum proposed voluntary rate change by classification is +20.0%, and the minimum proposed change by classification is -26.0%.

We have limited our review to the information provided by the NCCI in the filing, supporting exhibits, and responses to subsequent information requests.

RATE INDICATION: VOLUNTARY LOSS COST CHANGE

We have reviewed the methodology and assumptions used by the NCCI in determining the proposed change in voluntary loss costs, and have concluded that the proposed overall voluntary change is reasonable. Below are our comments on the methodologies and assumptions in the filing.

Experience Period
The NCCI's analysis is based on the two most recent completed policy years of statewide experience, policy years 2015 and 2016. Statewide experience includes premiums and losses

from both the voluntary and assigned risk markets. Policy year losses are stated on a limited basis and loaded with an excess loss provision. An average of the indications using paid losses and reported losses (paid losses plus case reserves) from these two policy years is used as a basis for the ultimate loss projections and loss cost indications.

While the two most recent policy years have considerable credibility, they are still immature for a long-tailed line of insurance like workers compensation. At our request, the NCCI provided three additional years of analysis, policy years 2012-2014. The indicated change including these additional years is -3.0%, compared to the -3.5% proposed change. The table below shows the indicated change, based on experience, trend, and benefit level, by policy year, for the most recent five policy years (this table does not include the -0.1% impact of the change in loss adjustment expenses).

Policy Year	Paid Indication	Reported Indication	Average Paid, Reported
2016	-1.9%	-5.1%	-3.5%
2015	-2.9%	-4.0%	-3.4%
2014	-1.6%	-4.4%	-3.0%
2013	-1.6%	-2.9%	-2.3%
2012	-3.0%	-1.9%	-2.5%

The paid indications from the past four policy years indicate a smaller decrease than the reported loss indications, although the paid and reported indications are within a reasonable range of each other. We note that the average indications for all policy years are generally in line with one another. Given the consistency in the indications for the older policy years compared to the two most recent years, we find the two-year experience period to be reasonable.

<u>Statewide vs. Voluntary Experience</u>

The NCCI develops the voluntary indication by considering both voluntary and assigned risk business, referred to as “statewide” business, throughout the filing. The indicated statewide loss cost change is, in a sense, the required change to voluntary loss cost levels to adequately rate both the voluntary and the assigned risk markets. In Missouri, there is a designated Assigned Risk Plan Administrator carrier, who reports both voluntary and assigned risk business to the NCCI for ratemaking purposes. The NCCI’s position is that since policies move between the voluntary and assigned risk market (as evidenced by their knowledge of individual insureds and usually reflected in the changing percentage of business in the assigned risk market each year), the voluntary loss costs need to be adequate to cover all insureds in the state.

Upon request, the NCCI provided the voluntary indication removing the assigned risk market experience. The resulting indicated voluntary loss cost level change, which excludes the assigned risk experience, is -5.3% using two policy years of experience and -4.8% using five policy years. These would be compared to the filed -3.5% loss cost change.

Based on the information provided, assigned risk premium represents approximately 1.9% of total statewide premium volume over the past two years. We reviewed a large claims listing and note that the two largest claims from policy year 2016, which are both over $10 million on a reported basis, are from assigned risk policies, which appears to be the most significant reason for the difference between the statewide and voluntary indications. (Assigned risk policies did not represent an unusual number of the large claims for policy years 2012-2015, so this difference in the large claim experience is not expected to be persistent.) Based on the limited volume of the assigned risk market and the generally consistent results of the statewide versus voluntary only indications, we have no objections to the use of statewide data for this indication. Given the small size of the assigned risk market, even a relatively large difference in expected costs compared to the voluntary market will have a small impact on the voluntary loss costs (for example, if the assigned risk losses are indicated to be 50% higher than the voluntary market, this would only cause an approximate 1% increase to the loss costs; such an increase would be otherwise reasonable given the data in the filing).

Unlimited vs. Limited Losses

The NCCI employs a large loss procedure in approximately 30 states, including Missouri, which is intended to minimize the impact of large, volatile claims on the voluntary loss cost indication by applying a large loss threshold and subsequently loading in an excess loss provision. The threshold is based on statewide premium volume and varies from one state to another.

Upon request, the NCCI provided us with the indicated statewide change based on two policy years of unlimited statewide losses. The use of unlimited losses results in an indicated change of -2.5%, compared to the filed change of -3.5%. The presence of the two large policy year 2016 claims discussed above is likely the cause of much of the difference between the unlimited and limited indications. Based on our review, and the similarity between the indications, we have concluded that the use of limited losses and an excess provision is reasonable.

On-Level Standard Earned Premiums

Policy year standard earned premium is developed to current loss cost and experience modification levels.

Loss Development

Policy year limited losses are developed to an ultimate basis using both the paid and reported loss development methods. The age-to-age factors are selected using a three-year average for paid losses and a five-year average for reported losses. There appear to be no trends or changes in the development factors that would cause the average of the development factors to be unreasonable.

We requested paid development factors based on an average of five years, and they do not appear to differ significantly from the selected factors, which are based on three years of data.

The paid and reported development methods assume that future loss emergence (i.e., payment, reporting and reserving patterns) will follow historical patterns. To test this assumption, we reviewed the following items provided by the NCCI upon request:

- Average case per open claim triangles for medical and indemnity separately,

- Paid to paid plus case loss ratio triangles for medical and indemnity separately,
- Indemnity claim closure rate triangle, and
- Paid and case losses to standard earned premium triangles for medical and indemnity separately.

We noted no consistent calendar year changes in average case reserve per open claim, which suggests the reported loss development method is not materially distorted by industry wide patterns of case reserve strengthening or weakening. Additionally, our review of diagnostic triangles related to payment patterns and closure rates did not reveal any material changes in paid loss emergence that would distort estimated ultimate losses based on paid or reported loss development.

Based on our review of the projections and the diagnostic data, we have concluded that both the paid and reported loss development methods are reasonable approaches for estimating ultimate losses.

19th to Ultimate Reported Loss Development Tail Factors

In this filing, the reported tail factors are based on a ten-year average of reported losses, and paid tail factors apply a five-year average paid-to-reported ratio at a 19th report. The NCCI also includes an adjustment to reduce the unlimited tail development factors to a limited basis. This procedure is consistent with prior filings.

We would generally recommend using a longer-term average in the paid-to-reported ratios at a 19th report. However, given the relative stability in these ratios shown in Appendix A-II, we do not have any concerns with the use of a five-year period.

Loss Trend

The filing proposes to decrease the prior selected indemnity trend factor of -2.0% to -2.5% and to maintain the medical trend factor of -1.5%. Both selected factors are consistent with exponential fits based on the most recent 4 to 8 years. The table below shows the range of indicated loss cost changes, assuming indemnity and medical trends consistent with the minimum and maximum exponential fits using 4-, 8-, 12- and all years as the basis for the exponential fits.

	Indemnity	Medical	Indicated Loss Cost Change
Minimum Trend	-3.8%	-2.4%	-7.2%
Maximum Trend	-1.9%	-0.8%	-1.3%
Selected Trend	-2.5%	-1.5%	-3.5%

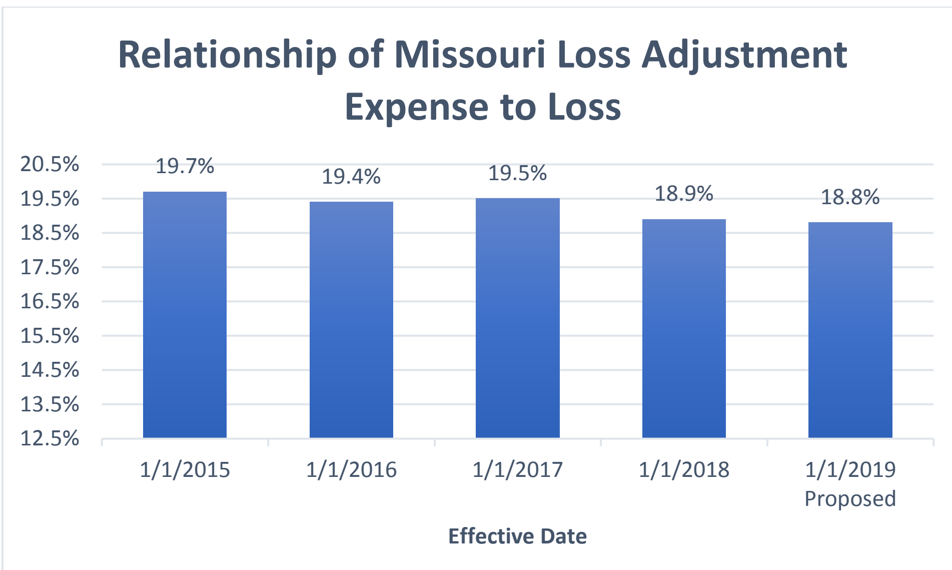
Based on our review of the information provided, we find the selected trend factors for indemnity and medical to be reasonable.

Benefit Level Changes

This filing includes both historical and prospective benefit level adjustments to reflect the estimated impact of changes to the Missouri minimum and maximum weekly benefits. Historical adjustments are reflected in the indemnity loss on-level factors in Appendix A-I, and prospective adjustments are reflected in line 12 in Exhibit I (with additional support found in Appendix C). These benefit level changes do not impact medical losses. We have not reviewed the support for these adjustments; however, the indicated changes are minimal and consistent with similar changes in benefit levels in prior years.

Voluntary Loss Adjustment Expense

The voluntary loss costs proposed by the NCCI include a provision to account for loss adjustment expense (LAE). The LAE load proposed in this filing is 18.8%, compared to the current approved LAE load of 18.9%. The change in this provision results in a -0.1% change to the voluntary loss costs. The bar chart below shows the LAE load included in the five most recent filings in Missouri.



These percentages include a provision for both defense and cost containment expense (DCCE) and adjusting and other expense (AOE), and consider both countrywide and Missouri-specific data for private carriers.

The selected ratio of LAE to loss for private carriers is determined by applying the Missouri-to-countrywide DCCE relativity to the three-year average countrywide DCCE ratio, and then adding this resulting Missouri DCCE ratio to the two-year average countrywide AOE ratio. This private carrier LAE ratio is then weighted with the Missouri State Fund LAE ratio to arrive at the proposed 18.8% LAE load. We have reviewed the underlying private carrier Missouri and countrywide data, and have concluded that the selected LAE ratio of 18.8% appears reasonable.

Individual Class Pure Premiums

After determining the overall -3.5% voluntary rate indication, indicated changes by individual occupational class are determined.

The loss experience of each industry group determines the overall loss cost change for each industry group. The indicated class code loss cost, the current class code loss cost, and the countrywide loss cost (adjusted to state conditions) are credibility-weighted together to calculate the class code loss cost, prior to any limiting. Due to the lower credibility of each class code, individual losses are also limited for the sake of these calculations.

The swing limits for any individual class code loss cost are capped at the industry group loss cost change ±20%, rounded to the nearest 1%, which is consistent with prior filings. We have no objections to these swing limits or methodology.

The NCCI made a significant change to the credibility standard that is used to estimate the proposed loss cost from both the statewide and countrywide experience. The NCCI doubled the indemnity and medical claim counts required for full credibility and increased the exponent from 0.4 to 0.5. Both of these changes result in lower credibility being assigned to the loss experience for each class, which increases the stability of the current loss costs and reduces the likelihood of large annual changes. The NCCI claimed that the change would not only increase stability, but that it would also increase the class equity or accuracy. We reviewed the subsequently-provided results of the NCCI's analysis, which measured the stability and accuracy of the credibility standard using various multiples of the current standard. While raising the credibility threshold will increase the stability, the accuracy in small states declined for credibility standards higher than the proposed credibility standard. It appears as though the proposed change in the credibility standard increases both the stability and accuracy, and strikes a good balance between the two.

Additional Mesothelioma Benefits – SB1

Missouri SB1, effective 1/1/14, expanded mesothelioma benefits within the workers compensation system. Only employers responsible for an employees' last asbestos exposure are subject to these claims. As a result, there are likely many companies that have virtually no exposure to these SB1 claims, due to either the age of the company or the type of business. For employers that privately insure this exposure, any losses flow through the losses reflected in the NCCI loss cost filings as occupational disease ("OD") claims. These claims would likely increase the class code loss costs, even though some employers could not reasonably incur a claim. While the NCCI claims they are unable to identify which claims are mesothelioma claims resulting from SB1 (since both these mesothelioma claims and other OD claims have the same OD identifier), the inclusion of these claims would have the impact of biasing the loss costs for some employers high and some employers low.

When this bill was passed, the NCCI estimated that the provision would have a negligible impact on the system costs. However, we would recommend that the NCCI attempt to estimate or quantify the change in total OD claims for class codes with the potential for asbestos claims.

CONCLUSIONS AND RECOMMENDATIONS

Based on our review of the filing and the underlying methods and assumptions, we conclude that the proposed changes to the voluntary loss costs are reasonable.

We recommend an indicated Missouri voluntary market advisory loss cost change of -3.5%, effective January 1, 2019, consistent with the NCCI's filed change.

Finally, we would recommend that in its next loss cost filing that the NCCI attempt to estimate or quantify the change in total OD claims for class codes with the potential for asbestos claims.

Sincerely,

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