

September 15, 2021

Ms. Sydney Sloan
Mr. David Martinez
Colorado Division of Insurance
1560 Broadway, Suite 850
Denver, Colorado 80202

Re: National Council on Compensation Insurance (“NCCI”)
Colorado Workers Compensation Advisory Loss Costs and Rating Values Filing
Proposed Effective January 1, 2022

Dear Ms. Sloan and Mr. Martinez:

Merlinos & Associates, Inc. (M&A) has completed our review of the above-referenced Workers Compensation Advisory Loss Costs and Rating Values filing. This letter documents our review.

BACKGROUND

The NCCI submitted an advisory loss cost and rating values filing with a proposed effected date of January 1, 2022. The current loss costs and rating values have been in effect since January 1, 2021. The overall proposed average change in advisory loss costs for the voluntary market is -8.3%.

Table 1 below shows historical changes to voluntary loss costs from 2018 to 2021 and the proposed change effected January 1, 2022.

Table 1

Effective Date	Change
1/1/2018	-12.7%
1/1/2019	-16.7%
1/1/2020	-8.5%
1/1/2021	-8.4%
1/1/2022	-8.3%

The annualized average change for the 5-year period, including the proposed change, is -11.0%.

The proposed change in average voluntary loss costs consists of a 7.3% decrease due to experience and development, a 1.1% decrease due to trend, a 0.6% decrease due to benefits, and a 0.7% increase due to change in loss-based expenses. Individual class changes are capped at $\pm 15\%$ and are applied by industry group to which the classification belongs. The primary driver of the indicated reduction to the advisory voluntary loss costs is the continued improvement in the loss experience reflected in the experience period. Specifically, the newest policy year that rolled into

the experience period in this filing had better estimated experience than the oldest policy year that rolled off from the prior filing. This is the fifth straight year that has experienced losses significantly lower than prior policy years.

The NCCI has chosen to exclude all COVID-19 related claims for the purposes of calculating prospective voluntary loss costs. Any future pandemic-related claims will be covered in the Catastrophe (Other Than Certified Acts of Terrorism) provision, as discussed below.

Per the Actuarial Certification included in the filing, the filing was prepared under the direction of Ms. Kelly Briggs, FCAS, MAAA, Executive Director and Actuary. Ms. Briggs certifies that the filing was prepared in accordance with applicable Actuarial Standards of Practice as promulgated by the Actuarial Standards Board.

RATE INDICATION: VOLUNTARY LOSS COST CHANGE

We have reviewed the methodology and assumptions used by the NCCI in calculating the proposed change in voluntary loss costs and have no actuarial objections to the proposed overall change. Below are our comments on the overall methodology, experience period used, premium adjustments, projected ultimate losses, loss-based expenses, trend, and filed indicated loss cost change.

Rating Methodology

NCCI's indications are calculated using a rating methodology similar to most states where the NCCI estimates loss costs. The overall proposed loss cost change is estimated using the state loss and payroll experience. Following that, the loss experience for each of the five industry groups is evaluated to adjust the overall statewide loss cost change to each industry group. Finally, the limited loss experience of each individual class code determines the proposed loss costs for each of the class codes, subject to swing limits around the overall industry group loss cost change. Besides the catastrophic handling of COVID-19 claims and an adjustment to wages when selecting the trend factors, this methodology is consistent with the recent NCCI filings in Colorado. These changes are discussed in more detail in the sections titled "Loss Trend" and "COVID-19" below. This methodology is reasonable.

Ultimate Losses

Unlimited indemnity and medical losses are developed to ultimate values using the reported development method. The selected unlimited loss development factors are set equal to the simple average of the five most recent development factors for all statewide losses. Loss development is performed separately for indemnity and medical.

The reported loss development method assumes 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.

It is likely that the 2019 policy year data contains distortions, relative to all other policy years, based on the impact of COVID-19 on the claims that occurred in 2020. It is also possible that all policy years' calendar year 2020 data could have been impacted for similar reasons. It appears as though there has not been a significant change in the paid loss to paid plus case ratios, for either indemnity and medical losses. The average case reserve diagnostics show an increase in the average case reserves for the 2012-2014 policy years followed by generally lower average case reserves beginning in policy year 2015 and no significant change in more recent years. Additionally, our review of diagnostic triangles related to claim closure rates did not reveal any material changes that would distort estimated ultimate losses based on the reported loss development, although the closure rate for policy year 2019 is slightly lower than previous years at a similar maturity. Based on our review of the projections and the diagnostic data, we have concluded that the reported loss development method is a reasonable approach for estimating ultimate losses.

Experience Period

NCCI's indications are based on two policy years of statewide experience: policy years 2018 and 2019. Reported losses (paid losses plus case reserves) are used as the basis for the loss development projections. This is consistent with the recent NCCI filings in Colorado. Table 2 shows the statewide indications on a policy year basis for the current filing, including the impact of the change in the loss adjustment expense provision.

Table 2

Policy Year	Indicated Change (Reported)
2018	-8.8%
2019	-7.8%

While the two most recent policy years have considerable volume, they are still immature for a long-tailed line of insurance like workers compensation. At our request, NCCI provided three additional years of analysis, policy years 2015-2017. The average indicated change from the reported losses including these additional years is -5.2% compared to the -8.3% proposed change, although the 4-year average of -6.2% is slightly closer to the proposed change. Table 3 below shows the indicated loss cost change by year for the most recent five policy years (these indicated changes also include the impact of the change in the loss adjustment expense provision).

Table 3

Policy Year	Indicated Change (Reported)	Indicated Change (Paid)
2015	-1.1%	-0.6%
2016	-4.1%	-4.8%
2017	-4.2%	-3.9%
2018	-8.8%	-7.3%
2019	-7.8%	-5.1%

Due to the higher estimation error associated with the latest two policy years, the use of a longer experience period may be warranted. Policy year 2019 is indicating a similar loss cost decline to the average of the prior two years. This policy year includes all policies written during 2019, and as a result is the first policy year that includes loss experience during the COVID-19 pandemic, particularly for policies written later in 2019. The pandemic may have contributed to this favorable loss experience, and the NCCI attempted to account for this by adjusting the trend factors that are applied to 2019 and 2018. Overall, the paid loss indications would have indicated a slightly lower loss cost decrease than the reported (paid plus case) losses. The indications for these five policy years (2015-2019), along with the paid vs. reported indications, were considered in our review of the reasonability of the proposed changes. It appears as though the use of the two-year reported experience is reasonable, and reliance on the paid indications would have had a minor impact on the selections.

Unlimited vs. Limited Losses

The NCCI does not limit any claims in the preparation of the statewide loss cost indication. In a number of other states, the NCCI limits large claims based on the impact to the overall indication and replaces the actual excess portion of the losses with a provision for large losses. For small states, this limiting procedure would have the impact of reducing volatility in the statewide indications. However, given the size of Colorado, it is unlikely that large claims significantly distort the statewide indications. The use of unlimited losses in the overall state indication is reasonable and consistent with prior filings.

The NCCI does limit individual claims in the calculation of the individual class code loss costs. The current claim limit is \$500,000, which is consistent with prior filings.

Analysis of Frequency and Severity

At our request, the NCCI has provided information showing the annual change in the lost-time claim frequency and severity. The following table shows this data, including both indemnity and medical severity changes.

Table 4

Policy Year	Frequency Change	Indemnity Severity Change	Medical Severity Change
2015	-7.0%	-11.2%	-15.4%
2016	-8.8%	-1.2%	2.1%
2017	-6.3%	2.5%	0.1%
2018	-2.9%	-2.2%	-10.2%
2019	-3.3%	-1.0%	-0.9%

The data in table 4 suggests negative frequency trends, which is consistent with our expectations given that frequency is measured relative to payroll. The implied policy year severity decreased significantly in 2015, remained at this lower level in 2016, increased slightly in 2017, and decreased in 2018 and 2019. We are unaware of the cause for the lower severity for the past five policy years, and the NCCI is not aware of any systemic reason for the decline which would necessarily continue into future years. The NCCI attributes the decline to fewer large losses. The diagnostics do indicate that the case reserves per open claim for the 2015 through 2019 policy years, for both indemnity and medical losses, are lower than the 2013 and 2014 policy years. This does provide some support for the lower severity in recent policy years.

Statewide vs. Pinnacol Data

The NCCI has estimated the proposed loss costs using all the statewide data, including Pinnacol Assurance (“Pinnacol”). For filings with effective dates between 1/1/2010 and 1/1/2017, loss development was analyzed and applied separately to private carrier and Pinnacol data. The reason for separate analysis related to a change in Pinnacol’s reporting of structured settlements, which has now been reflected in the recent development history. Because Pinnacol’s market share has not changed dramatically (although it has declined from 58.6% in 2016 to 54.5% in 2020 on a written premium basis), which could otherwise bias the loss development factors, we do not have any objection to the overall loss costs rate indication being estimated on a statewide basis.

We reviewed supplemental information to determine if there is a significant difference in loss experience between Pinnacol and the rest of the industry. The data provided suggests that Pinnacol has had on-level loss ratios approximately 10% higher than the private carriers for policy years 2011 through 2019, relative to statewide loss costs. (The actual historical loss ratios are not necessarily different between private carriers and Pinnacol, based on this information.) This experience indicates that the proposed loss costs are higher than if they were determined using only the non-Pinnacol experience and lower than if they were based on the Pinnacol’s experience alone. However, because the current methodology is consistent with past years and represents the total statewide experience, the proposed loss cost change is reasonable. This issue is also discussed below in the “Residual Market” section of this review.

Loss Trend

The NCCI proposes no change to the indemnity loss trend factor and a decrease to the medical loss trend factor. The proposed annual loss trends are shown in Table 5 below:

Table 5

	Current	Proposed
Indemnity	-5.5%	-5.5%
Medical	-4.5%	-5.0%

Given the impact that COVID-19 had on 2020 wages and employment, the NCCI noted unusually large shifts in the average weekly wage (“AWW”) in the state and countrywide. As a result, the NCCI adjusted the methodology used to select the prospective loss trend and trended policy year 2019 differently as a result of the 2020 wage changes, as discussed below.

Based on subsequent information provided by the NCCI, the countrywide AWW increased between 3.3% and 3.4% annually from 2017 through 2019 before increasing 7.0% in 2020. While some of the additional increase reflected changes in the mix of payroll within an industry, 1.6% of the change is attributed to changes in the mix across sectors. The primary cause identified by the NCCI was the significant decline in employment in the hospitality and leisure segment of the economy, which has average wages that are lower than average. Because loss costs and loss trends are relative to payroll, failure to adjust for this abrupt shift would bias the trend and loss cost indications. For the purposes of calculating the trend in Appendix A-III, the NCCI adjusted the 2020 AWW to reflect the impact of COVID-19 on the payroll across sectors by removing the 1.6% change in payroll that is attributed to the change in the mix across sectors. The loss trend indications relied upon in the selection of the trends used this adjusted 2020 AWW. The NCCI has stated the adjustment is expected to be immaterial due to the long period that the NCCI considers in their trend selections, and we have concluded this adjustment is reasonable.

As part of their selection process, the NCCI reviewed the exponential trend fits for periods ranging from 5 to 15 years for the loss ratio, along with the frequency and severity components. The indicated medical trend, along with the selected medical trend, are lower than previous years due to the inclusion of the policy year data from 2018 and 2019. The NCCI has selected both indemnity and medical trends that are consistent with the adjusted longer-term exponential fits and within the range of trend factors we have observed in other states. We have no objection to the selected annual trend rates.

Benefit Level Changes

The NCCI has included the impact of the latest medical fee schedule benefits in the proposed loss costs. The estimated 0.6% decrease to the total loss costs, based on a 1.1% decrease to medical costs, appears reasonable based on the analysis included in the filing.

Loss Adjustment Expenses

In Colorado, the NCCI loss costs include a provision for all loss adjustment expenses (“LAE”), including legal defense (“DCCE”) and Adjusting and Other Expense (“AOE”) costs. The DCCE provision is estimated by developing the ultimate ratio of paid DCCE to paid loss and appears reasonable.

Countrywide data is used for the private carrier AOE provision because the claims adjusting costs are often difficult to allocate out to individual states for national workers compensation insurers. The NCCI then develops Pinnacol claims adjusting data separately to estimate an AOE provision for Pinnacol. Finally, the private carrier and Pinnacol AOE provisions (9.4% and 19.4%, respectively) are weighted together to determine a statewide AOE provision. The NCCI noted that the relatively significant difference in the AOE provision for the private carriers compared to Pinnacol is largely due to the difference in claims handling and accounting practices, with Pinnacol having offsetting, lower DCCE costs than the industry. The NCCI believes the total needed AOE provision is similar for Pinnacol and private carriers. That statewide AOE provision is combined with the DCCE provision to estimate the LAE provision, which is then applied to the losses to calculate the filed loss and LAE costs.

The selected LAE provision of 23.5% is an increase from the 22.7% provision underlying the loss costs effective 1/1/21. This selected LAE provision is consistent with the combined industry and Pinnacol data and appears reasonable. Because much of the LAE provision relates to salaries and overhead, the LAE provision, relative to losses, is likely to increase when loss costs decrease significantly. The difference in the LAE provision is included in the overall loss cost change.

Voluntary Loss Cost Change Summary

Based on the support provided, we have no objections to the proposed -8.3% voluntary loss cost change.

In our evaluation of the reasonability of the proposed changes in loss costs we have considered market conditions. Among other things, we monitor market conditions by reviewing the impact on premium of loss cost deviations, schedule rating, and dividends which, when combined, are referred to as “premium departures” in the table below. Upon request, the NCCI provided this information for Colorado through 2020.

Table 6

Year	Premium Departures
2016	-6.8%
2017	-8.1%
2018	-3.5%
2019	+5.7%
2020	+8.5%

The -6.8%, -8.1% and -3.5% overall downward rate deviations in industry pricing for 2016 through 2018 are consistent with the actual and proposed reductions in loss costs effective 1/1/18, 1/1/19, and 1/1/20 respectively. The industry's average positive premium departure for 2019 and 2020 may indicate that the industry does not anticipate a need for future rate decreases, or that current loss costs are less redundant than they were several years ago.

OTHER CONSIDERATIONS

Class Pure Premiums

After determining the -8.3% statewide loss cost indication, indicated changes by individual occupational class are determined. All class codes are assigned to one of five industry groups. 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 swings in the individual class code loss costs are capped at the industry group loss cost change $\pm 15\%$, rounded to the nearest 1%, which is consistent with prior filings. We have no objections to these swing limits or methodology.

Experience Modification Factors and Off-Balance

The NCCI has provided subsequent information showing the average experience modification of the past five years. The following table shows this data.

Table 7

Rating Year	Average Experience Mod
2016	0.953
2017	0.949
2018	0.948
2019	0.947
2020	0.963

Because the overall premium collected is a function of both the manual proposed loss costs and the average experience modification factor, the NCCI adjusts the loss costs for the change in the experience modification factors. This procedure is consistent with previous filings and appears reasonable.

Experience Rating Parameters

The split point used to allocate both actual and expected losses into primary and excess losses increased from \$18,000 to \$18,500 for this filing. The methodologies used to calculate the

Expected Loss Ratios and D-ratios used in the experience rating formula are unchanged in this filing.

Federal Classification (F-Class) Change

In this filing the NCCI changed the way they calculated loss costs for class codes that are subject to the US Longshore and Harbor Workers Compensation Act (referred to as F-Class). These classifications can have federal and state benefits. These federal benefits apply to all states, and as a result the NCCI has based the federal benefits portion of the total loss costs on a countrywide analysis of 10 policy years. The state benefits still consider a state's individual loss cost relativity in the calculation of the loss cost. The use of this data will increase the stability of the loss costs for these F-Class codes that comprise approximately \$109 thousand of payroll in Colorado, which is well less than 0.1% of the state's payroll. This change in the methodology appears reasonable.

Impact of Colorado House Bill 21-1050

Colorado House Bill 21-1050 was passed by the Colorado in an effort to clarify or modify various aspects of workers compensation benefits and to make several moderate changes to how the workers compensation system runs in the states. Sections of this bill address items such as the prohibition of the reduction in benefits due to apportionment and limitations on employers or insurers requesting an independent medical examination. While making numerous changes, this bill does not appear to represent a material overhaul or reform of the workers compensation system in Colorado.

The bill is effective September 6, 2021 and is expected to slightly increase workers compensation costs in Colorado. However, the NCCI has not estimated the expected impact or included any change in the loss costs due to this bill. In Appendix C-II of the filing, the NCCI did identify and discuss six sections of the bill that may cause increases in loss costs. Three sections of the bill are expected to have a negligible impact (less than 0.1% increase), one section may have a minimal impact (0.2% or less), one section was determined to have an indeterminate impact, and the final section could cause an increase of between 0.2% and 1.0%. In total, these changes may cause an increase of between 0.5% and 1.5%, based on the ranges of projected impacts for each section of the bill by the NCCI.

It will take several years for the impact of these changes to be fully reflected in the NCCI loss cost filing using the standard rating methodology. For example, policy year 2021, which is partially impacted by these changes, will begin to show up in the NCCI proposed loss costs effective January 1, 2024. However, it will not be until the loss costs are effective January 1, 2026 that policy years 2022 and 2023, the first complete policy years impacted by these changes, will likely represent the basis of the loss costs.

Residual Market

Unlike many states, Colorado does not have a separate residual market that covers insureds that are generally not able to secure insurance through the voluntary market. These insureds tend to

have higher expected losses, and are often covered by either a residual market pool or by direct assignment of the risks to voluntary insurers. In many states, the NCCI estimates assigned risk rates that reflect both expenses and the higher loss experience of these insureds.

In Colorado, Pinnacol is required to insure all risks. However, because Pinnacol does not know or note which policyholders would otherwise be “residual market” insureds, it is difficult to estimate the possible impact of these insureds being included in the voluntary loss cost data. We also note that there are insureds who move into and out of the “residual market.” However, based on our understanding of Pinnacol’s structure and the current countrywide residual markets, it is possible that the proposed loss costs would be 2 to 3% lower if the “residual market” insureds could be excluded from the statewide analysis. This result would also appear to be consistent with the historical loss ratios discussed above, showing Pinnacol having higher loss ratios than the rest of the industry. We also understand that the current methodology has always been used, and do not have any current objections to it.

COVID-19

Catastrophic Handling of the COVID-19 Pandemic

The NCCI has chosen to remove all COVID-19 related claims from the data for the purposes of calculating prospective loss costs and rates. As of 12/31/20, \$4.4 million of reported losses were excluded from the policy year 2020 data. Going forward, the NCCI has chosen to treat pandemic related losses under the Catastrophe (other than Certified Acts of Terrorism) Provision. The current charge for this Catastrophe Provision is \$0.01 per \$100 of payroll. While the NCCI is choosing to include pandemic related losses within this provision going forward, they are electing not to change the charge at this time. Considering the relatively small amount of losses from these claims, the proposed Catastrophe Provision appears reasonable.

NCCI COVID-19 Considerations and Adjustments

Following our review of the filing, additional support and clarification was requested from NCCI as to what studies and support they considered. NCCI reviewed the 2019 Policy Year which overlaps with the COVID-19 pandemic (policies written from 1/1/19 to 12/31/19 are earned and incur losses until 12/31/20) and compared it to historical years to determine if the frequency, severity, or development of losses were materially different from prior years. The NCCI found no significant changes in the severity or development of losses in policy year 2019 compared to historical policy years due to any COVID-19 impacts. They did however determine that the state average weekly wage (AWW) for calendar year 2020 has been impacted due to a shift in payroll both within and between industry groups. The NCCI adjusted CY 2020 data to account for this shift as part of their process for determining trend selections, as discussed previously.

At this point, it appears as though COVID-19 will continue to have an uncertain impact on the U.S. economy, payroll by industry, and on the workers compensation market and losses. The increase in employees working from home and the slightly reduced economic activity in some industries should contribute to a decline in injuries, although this could be offset by both a shift of

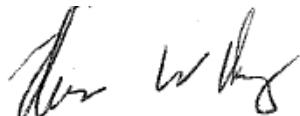
some payroll to class codes with lower loss costs and an increase in the average severity as workers have historically had longer claim durations in a poor economy. Any decline in claims could also be offset to some degree to shift of a portion of payroll to clerical and telecommuter class codes compared to the historical policy years underlying the proposed loss costs and rates. The workers compensation market might also be impacted by changes in return-to-work programs or the ability of claimants to get needed medical services. The duration and severity of these potential changes is also uncertain. We note that these proposed loss costs will be effective January 1, 2022, and could still be in force for some policies through December of 2023, by which point we might expect the impact of COVID-19 to be reduced.

CONCLUSION AND RECOMMENDATIONS

Based on our review of this filing, we have no objections to the proposed voluntary loss cost changes. In our opinion, the proposed changes are reasonable.

Please let me know if you have any questions.

Sincerely,



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