2020

MISSOURI NCCI
LOSS COST ACTUARY REVIEW

Proposed to be Effective January 1, 2021

MISSOURI DEPARTMENT OF COMMERCE & INSURANCE

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Taylor & Mulder
Property and Casualty Consulting Actuaries

October 21, 2020

Ms. LeAnn Cox
Regulatory Compliance Manager
Property and Casualty Section
Missouri Department of Commerce & Insurance
301 W. High St., Room 530
Jefferson City, MO 65101

Dear Ms. Cox:

Enclosed is the report detailing our actuarial review of the Missouri NCCI Advisory Loss Costs and Rating Values Filing proposed to be effective January 1, 2021.

The first section in the text of our report is the **Executive Summary** section. This section presents our **Conclusions**. It also describes the **Purpose and Scope** of our report, explains the **Distribution and Use** of our report, and provides the **Conditions and Limitations** underlying our work.

The second section of our report is a **Summary of the NCCI's Methodology** for determining the indicated voluntary loss costs and rating factors. The third section of our report contains the **Analysis Performed by Taylor & Mulder**.

The last section of the text of our report details our **Review of the NCCI's Response to Interrogatories**.

Please call if you have any questions regarding any aspect of our report.

Sincerely,

Evelyn Toni Mulder, FCAS, MAAA, FCA

Daniel W. Lupton, FCAS, MAAA, CSPA, MBA

Bobby J. Jaggers, ACAS, MAAA
Enclosures

Missouri Department of Commerce and Insurance
Actuarial Review of the
National Council on Compensation Insurance
Missouri Advisory Loss Costs and Rating Values Filing

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Attachment A: NCCI Responses to Objections including Exhibits

Attachment B: Proposed and Current Loss Costs by Class Code

Executive Summary

Purpose and Scope

Taylor & Mulder, Incorporated ("T&M") was retained by the Missouri Department of Commerce and Insurance ("the Department") to provide an actuarial review of the Missouri Loss Costs and Rating Values Filing ("the Filing") filed by the National Council on Compensation Insurance ("NCCI") with a proposed effective date of January 1, 2021. This report contains our summary, conclusions, actuarial aspects raised with the NCCI, and a description of the analysis underlying our conclusions.

The scope of our work consisted of an actuarial review of all the components underlying the calculation of the Missouri advisory loss costs and the allocation of the overall indications to industry group and then to occupational classification. We reviewed each one of the analyses leading to the NCCI indications in order to determine (1) if the factors and the underlying calculations were justified based on the experience and actuarial soundness, (2) if the methodology and judgments were reasonable and (3) if the resulting advisory loss costs comply with Missouri law to the extent that the resulting loss costs are not excessive, inadequate or unfairly discriminatory.

We provided three sets of written interrogatories to the NCCI. Our interrogatories requested additional supporting data and calculations, which were also reviewed in order to reach our conclusions. The NCCI provided T&M with all the requested supporting information and additional schedules in a timely fashion.

The responses to the objections prepared by the NCCI were very thorough and detailed and included a significant number of supporting schedules, data and information that were very helpful.

Conclusions

The NCCI is proposing an overall average increase of 1.0% in voluntary loss, effective January 1, 2021. Among Industry Groups, the 1.0% voluntary loss cost increase is allocated to industry group as follows: a 1.4% increase for manufacturing, a 2.3% increase for office & clerical, a 1.7% increase for goods & services, a 1.1% decrease for contracting, and a 0.9% increase for miscellaneous.

NCCI Proposed Average Loss Cost Level Changes by Industry Group	
Industry Group	Average Change
Manufacturing	1.4%
Contracting	-1.1%
Office & Clerical	2.3%
Goods & Services	1.7%
Miscellaneous	0.9%

T&M has reviewed the methodology, calculations, assumptions, judgments, and selections of the advisory loss costs changes effective January 1, 2021 as filed by the NCCI. T&M concludes that there are several aspects of the filing where we think that different selections are more appropriate. Therefore, we would recommend no change to the loss costs as opposed to the +1.0% recommended by NCCI.

Major Factors Influencing Overall Voluntary Loss Cost Level Change Indication

Although a wide variety of factors affect the overall voluntary loss cost levels, a subset of factors may be seen as having the greatest impact on the indicated loss costs:

- The filing was based on premium and loss experience from the two most recent experience periods. These periods are consistent with periods used in prior filings as can be seen by the modest rate increase and the relatively stable indication over the past two loss cost filings.

- There have been slight increases in indemnity and medical loss ratios during the experience period. The changes in loss ratio for the indemnity and medical coverages combined indicates a slight increase in the average loss ratio in the current filing from 98.5% to 100.5%.

Projected loss Ratio Including Benefit Changes		
Coverage	Effective 1/1/2020	Effective 1/1/2021
Indemnity Prior Policy Year	40.8%	39.1%
Indemnity Current Policy Year	40.0%	41.8%
Medical Prior Policy Year	56.3%	59.8%
Medical Current Policy Year	59.9%	60.2%
Total Prior Policy Period	97.1%	98.9%
Total Current Policy Period	99.9%	102.0%
Average	98.5%	100.5%

The prior and current policy years for the filing effective 1/1/2020 are policy years 2016 and 2017 respectively whereas the prior and current policy years for the filing effective 1/1/2021 are 2017 and 2018, respectively.

- The provision for LAE has increased from 18.7% in the prior filing effective 1/1/2020 to 19.3% for this filing, resulting in a 0.5% loss cost increase.

Indication Excluding Assigned-Risk Experience

As part of our review, we requested that NCCI provide the calculation for the indicated loss cost change after removing the assigned-risk experience. After removing the assigned-risk experience,

there would be minimal changes to the loss development factors and trend assumptions therefore the only changes would be to the premium and losses that were reported to NCCI. The table below shows the percentage of premiums and ultimate losses that were attributable to the assigned risk program for each policy year.

Percentage of Premiums and Ultimate Losses in the Assigned Risk Plan			
Policy Year	Premium	Indemnity Ultimate Losses	Medical Ultimate Losses
2018	1.4%	2.2%	4.0%
2017	1.5%	2.1%	3.2%

As can be seen from the table, the assigned risk plan accounts for a relatively small portion of the premiums and ultimate losses in the experience. However, since there is a higher percentage of losses in the assigned risk plan than premiums, if the associated premiums and losses were to be removed, this would cause the indicated rate change for just the voluntary market to decrease. In the supplementary analysis provided by NCCI, they have calculated that the indicated loss cost change would be 0.993 or -0.7% if the assigned risk experience were to be excluded.

Report Distribution and Use

This report has been prepared solely for internal use by the Missouri Department of Commerce and Insurance to assist the Department with its review of the NCCI filing. This report may be provided to other Missouri state agencies. The Exhibits are integral parts of this report. Other distribution or use of this report by the Department or parties described above is not authorized without the prior written permission of T&M. After approval by T&M, this report may be reproduced only in its entirety.

This report was prepared for use by persons technically competent in insurance financial matters. Persons receiving this report should be made aware of the availability of T&M personnel to answer questions and/or amplify on any matter addressed therein.

Conditions and Limitations

The actuarial review contained in this report was performed in conformance with sound actuarial standards and principles. With regard to projections of ultimate values, it should be understood that the emergence and settlement of claims are subject to uncertainty. While we have used our best professional judgment in all instances, projections of future ultimate losses and loss expenses are inherently uncertain because of the random nature of claims occurrences. They are also dependent upon future contingent events and are affected by many additional factors.

Claim reserving procedures and settlement philosophy, current and perceived social and economic inflation, current and future court and jury attitudes, improvements in medical technology, and many other economic, legal, political, and social factors all can have significant effects on ultimate claim costs. Therefore, we cannot warrant that actual developments will not differ from current projections. Such differences could be upward or downward and could be significant.

In summary, judgments regarding voluntary loss cost and assigned risk rate levels are subject to potential variations in estimation due to:

   (1)   the fact that the ultimate liability of associated claims is subject to the outcome of events yet to occur,

   (2)   the unanticipated changes in the legal, economic, or claims adjudication environments,

(3)   statistical fluctuation in losses around the estimated or expected values when all other factors remain constant; and,

(4)   the fact that the actual future loss and loss payment and reporting patterns may differ from those applied in the determination of the expected losses or there may be unanticipated changes in the loss and expense loss and expense reporting patterns.

Accordingly, no assurance can be given that future loss emergence will not deviate from the estimated ultimate loss and loss adjustment expenses. We performed a detailed review of the major aspects of each section of the ratemaking process. We believe our conclusions are based on a reasonable application of generally accepted actuarial procedures and techniques applied to the data and information provided by the NCCI.

T&M relied without audit or verification on historical loss, loss adjustment expense, exposure data, and other information compiled by the NCCI. T&M has relied upon the data provided and on the written statements made regarding the quality, accuracy, and completeness of the data and information supplied. Any inaccuracies or inconsistencies in the data or the written statements could have a significant effect on the conclusions drawn.

Summary of the NCCI's Methodology

The NCCI calculates proposed advisory loss cost changes by first calculating an overall proposed change in advisory loss cost level for new and renewal voluntary market policies. From this point,

the overall proposed change is allocated to industry group and then to occupational classification within each industry group and ultimately to each class.

Calculation of the Overall Voluntary Advisory Loss Cost Level Change

Overall voluntary advisory loss cost level change is calculated based on both voluntary and assigned risk market data combined for the two most recent policy years.

In this filing, policy years are 2017 and 2018 are evaluated as of December 31, 2019. The indicated changes in loss and loss adjustment expenses are calculated separately for each policy year and then combined in order to obtain the overall indicated change in advisory loss costs.

The change in loss costs excluding expenses is calculated first. This calculation involves adjusting historical earned premiums to current rate levels and removing the portion expected to cover loss adjustment expenses. The limited losses are developed to ultimate loss levels, trended and then compared to the portion of the on-level premiums available for payment of such benefits (i.e., excluding added expenses and profits). This calculation is performed separately for indemnity losses and medical losses, and the resulting ratios are added together. A final ratio of 1.000 would indicate that the portion of premiums available for the payment of benefits was exactly equal to the cost of such benefits. A ratio greater than 1.000 would indicate that the cost of the benefits exceeded the premium available to pay for such, and as a result, an increase in loss costs is indicated. A ratio lower than 1.000 indicates that a decrease in loss costs is indicated.

The specific steps involved in calculation of this ratio are as follows:

1. Standard earned premiums for each policy year are developed to ultimate and multiplied by an on-level factor. This factor includes placing the premium on level to reflect approved loss cost and rate level changes as well as statutory benefit levels for all years in the experience period. The factor also removes premium related to loss-based expenses because the purpose is to derive loss costs, which exclude expenses.

2. Ultimate limited medical and indemnity losses are multiplied by an on-level factor to obtain on-level ultimate limited medical and indemnity losses separately for both medical and indemnity.

3. The results are divided by the on-level ultimate standard earned premium to produce the loss cost.

4. The resulting loss cost ratio is next multiplied by trend factors which are calculated based on an exponential trend of indemnity and medical loss ratios for Policy Years 2004 to 2018 (See Appendix A-III). The following chart shows current approved and selected annual loss ratio trend factors for medical and indemnity:

Annual Trend Factors		
	Indemnity	Medical
Current Approved Annual Loss Ratio Trend Factor	0.980	0.990
Selected Annual Loss Ratio Trend Factor	0.980	0.990

The selected trend factor is then applied based on the length of the trend period calculated from the midpoint of each policy year to the midpoint of the effective period. For policy years 2017 and 2018, this is 4.001 and 3.001 years, respectively. So, for example, the indemnity trend factor for policy year 2017 is calculated as $0.980^{4.001} = 0.922$.

5. The trended loss cost ratio is then multiplied by a factor for the adjustment of limited losses to unlimited. Losses are initially limited to exclude large losses that may increase the

volatility of loss cost change experience from year to year. A factor is then used to add back a provision for such large losses as a way of spreading such risk over a longer time-frame to achieve greater stability in loss costs. A threshold for large losses is selected based on a projection of losses at the midpoint of the loss cost effective period. The threshold for this filing is $9,919,089 and it was determined that 1.1% of the statewide losses are expected to exceed this threshold. Therefore, a factor of 1.011 is multiplied by the ultimate loss ratio to adjust losses from a limited to an unlimited basis.

6. Finally, the unlimited trended loss cost ratio is multiplied by a factor representing proposed changes in both medical and indemnity benefits. The results for medical and indemnity are summed to obtain the indicated change in loss costs excluding expenses.

The indicated ratios are calculated separately for Policy Years 2017 and 2018 and then averaged to determine the indicated change in advisory loss costs on Exhibit I. The following table shows the results of these calculations:

Indicated Loss Cost Level Change by Policy Year		
Term	Factor	Percent Change
Policy Year 2018	1.020	+2.0%
Policy Year 2017	0.989	-1.1%
Indicated Change	1.005	+0.5%

Finally, a provision is made for changes in loss-based expenses. Loss-based expenses are made up of two components: defense and cost containment expenses ("DCCE") and adjusting and other expenses ("AOE"). For the DCCE expenses, the NCCI calculates the developed ratio of expenses to losses for policy years 2014 to 2018 based on Missouri data. From these indications, a statewide average is selected. An AOE provision is selected by analyzing the AOE expense ratio for accident years 2015 to 2019 countrywide. A provision of 8.9% was selected for the countrywide provision

and, after credibility weighting with Missouri data, an AOE provision of 9.1% was selected for the Missouri provision. The adjusted selected DCCE ratio and the selected AOE ratio are summed to obtain the Missouri selected loss adjustment expense ("LAE") ratio. This ratio is compared to the prior year ratio to obtain a proposed change in LAE provision.

The following table shows the results of these calculations:

Indicated LAE Provision Change	
Current Missouri LAE Provision	18.7%
Proposed Missouri LAE Provision	19.3%
Indicated Change Factor	1.005

The calculated 1.005 factor is equal to (1 + 18.7%) / (1 + 19.3%). This 1.005 factor is applied to the previously calculated average loss cost factor of 1.005 to obtain the overall indicated loss-cost level change reflecting the change in loss-based expenses of 1.005 x 1.005 = 1.010, or 1.0% on Exhibit I.

Changes to Loss Adjustment Expense Methodology

With this filing, NCCI is modifying how it handles AOE expenses provided to them in Financial Call 19. During their analysis, NCCI noticed that there were some carriers that would have Third-Party Administrator (TPA) agreements, but they would report no AOE expenses. In this filing, if a carrier is associated with a TPA agreement and there is no AOE reported to NCCI, NCCI will exclude the losses and AOE associated with that carrier (i.e., remove the data from both the numerator and denominator of the AOE ratio calculation).

Allocation of Overall to Industry Group

Each of the five industry groups has unique experience over the five-year experience period. Because the overall rate change of 1.0% represents the aggregated experience of all of the industry groups, it will only be accurate on average, i.e. for some industry groups the change of 1.0% will be inadequate whereas for some it will be excessive. For this reason, the 1.0% must be allocated to the five industry groups to determine the relative change for each group. This is done by applying industry group differentials to the overall loss cost level change factor to obtain indicated loss cost level change factors by industry group.

Industry group differentials are calculated based on the ratio of prior five years actual losses to prior five years expected losses. Actual losses are trended, brought to current levels, developed to ultimate and include adjustments for wage trend and the off-balance factor (which is the ratio of standard premium to manual premium). Expected losses are based on underlying pure premiums multiplied by associated payrolls (in hundreds) and are adjusted for off-balance. Indicated ratios are normalized, adjusted for wage trend, credibility weighted, and re-normalized before being applied to the overall loss cost level change to obtain final level changes by industry group.

The following table from Exhibit I shows the results of this calculation:

	Indicated Industry Group Loss Cost Level Change		
Industry Group	**(1)** **Overall** **Loss Cost** **Level Change**	**(2)** **Industry** **Group** **Differential**	**(3) = (1) x (2)** **Final Loss Cost** **Level Change** **by Industry Group**
Manufacturing	1.010	1.004	1.014
Contracting	1.010	0.979	0.989
Office & Clerical	1.010	1.013	1.023
Goods & Services	1.010	1.007	1.017
Miscellaneous	1.010	0.999	1.009
Overall	1.010	1.000	1.010

Allocation to Occupational Classifications

To allocate the overall rate change to individual occupational classifications, the allocated rate change level factor by industry group is applied to occupational classifications using a three-way credibility weighting approach to obtain proposed advisory loss costs by class code.

For each occupational classification, three pure premiums are credibility weighted together:

1. Indicated Pure Premium
2. Pure Premium Indicated by National Relativity
3. Pure Premium Present on Rate Level

Weighting all of the pure premiums together results in the adjusted loss costs. The adjusted loss costs are limited to swing limits, and loaded for disease, catastrophe, and/or miscellaneous additional costs. The result is the final loaded loss cost.

Analysis Performed by Taylor & Mulder

Our review of the filing consisted an evaluation of the methodologies and assumptions underlying the determination of the indicated loss cost change. T&M reviewed all aspects of the filing, applying particular scrutiny and testing to the assumptions and selections that were used in the loss development method, trend determinations, and loss adjustment expense provisions.

Loss Development Method

When developing losses to an ultimate level, NCCI chose to use a loss development factor that was equal to the two-year average of the link ratios for the paid loss development method. They used a five-year average of the link ratios for the paid plus case loss development method. In our tests, we did not use a single prescribed average for a particular cohort of claims. For example, for

the first to second loss development factor for the medical paid loss development method, we could select the three-year average of the link ratios in that period whereas for the next development period, the second to third year, we could select a different average, such as the five-year average. When making these selections, we considered trends in the link ratios as well as the stability of the link ratios over time with the goal of maximizing both stability and responsiveness. Since the NCCI used a single prescribed average without actuarial judgment, there are some cases where the selections were not always the best selection based on historical loss development.

After selecting loss development factors for the paid and paid plus case losses for medical and indemnity coverages, the cumulative loss development factors were applied to losses to bring them to an ultimate level. Although these newly calculated ultimate losses did not differ materially from the ultimate losses derived from the method used by NCCI, the net result was to lower the indication.

Trend

The next step in the ratemaking process that we tested was the trend factors that are used to bring losses and premiums to the projected level. In our tests, we reviewed how the premium, frequency, and severity for each year have changed from one policy period to the next over different time periods. Our review primarily focused on the selection of the frequency and severity trends. Our analysis consisted of fitting an exponential curve to the frequency and severity then selecting the trend provision that maximized the R-squared value[1].

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[1] The R^2 value is known as the "coefficient of determination" and is a measure of the proportion of the variance that is explained by the prediction. A higher R^2 value is indicative of a model that "fits" the data better. Mathematically, the R^2 value is defined as one minus the ratio of the sum of the squared error (between the model and the dependent variable) and the variance in the dependent variable. An R-squared value close to 1.0 would indicate a strong fit whereas a value close to 0 would suggest the model is not fitting well to the data.

As can be seen from the following chart, the frequency is consistently decreasing, with minimal volatility beginning in policy year 2010. We have selected a frequency trend of -3.1%, which coincides with an exponential fit of the data from policy year 2010 to 2018.

Claim Frequency
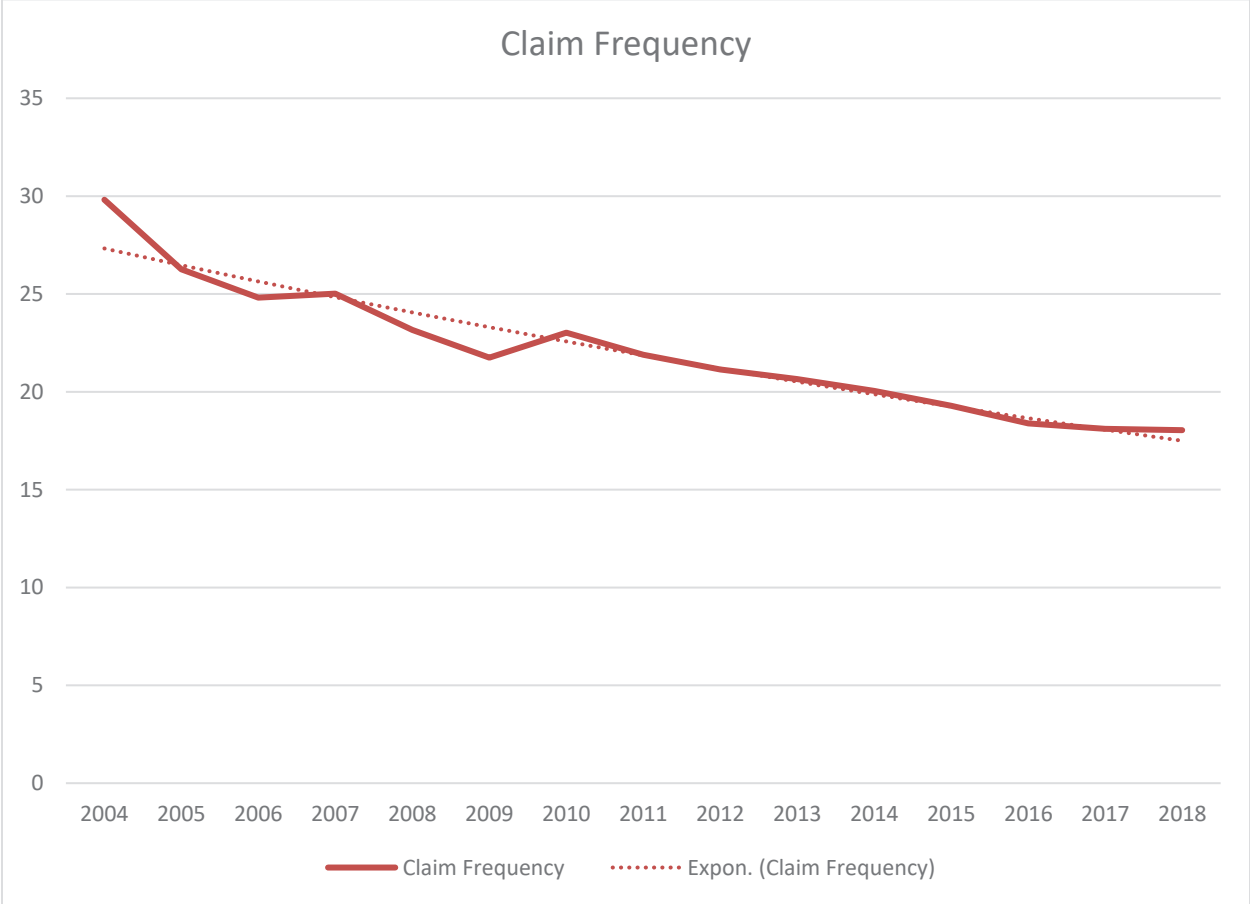
After selecting the frequency trend provision, we then analyzed the indemnity and medical severity trends. It is important to note that the loss development factors discussed in the prior section will have a direct effect on the severities, since ultimate losses are divided by the number of claims to calculate the ultimate severities.

The chart below shows the impact of our loss development factor selections on ultimate severities. Additionally, it shows how the ultimate indemnity severity changes from year to year. As can be seen from the chart, our loss development factor selections generated ultimate severities that were very similar to those calculated based on the NCCI's loss development factors (i.e., the solid red (NCCI) and solid blue (T&M) lines are very close for each policy year.) The dotted blue line shows the fitted severity trend based on our selection. We selected an indemnity severity trend provision of 1.0%, which had the highest R-squared value. This trend reflects a consistent moderate increase in indemnity severity over time.
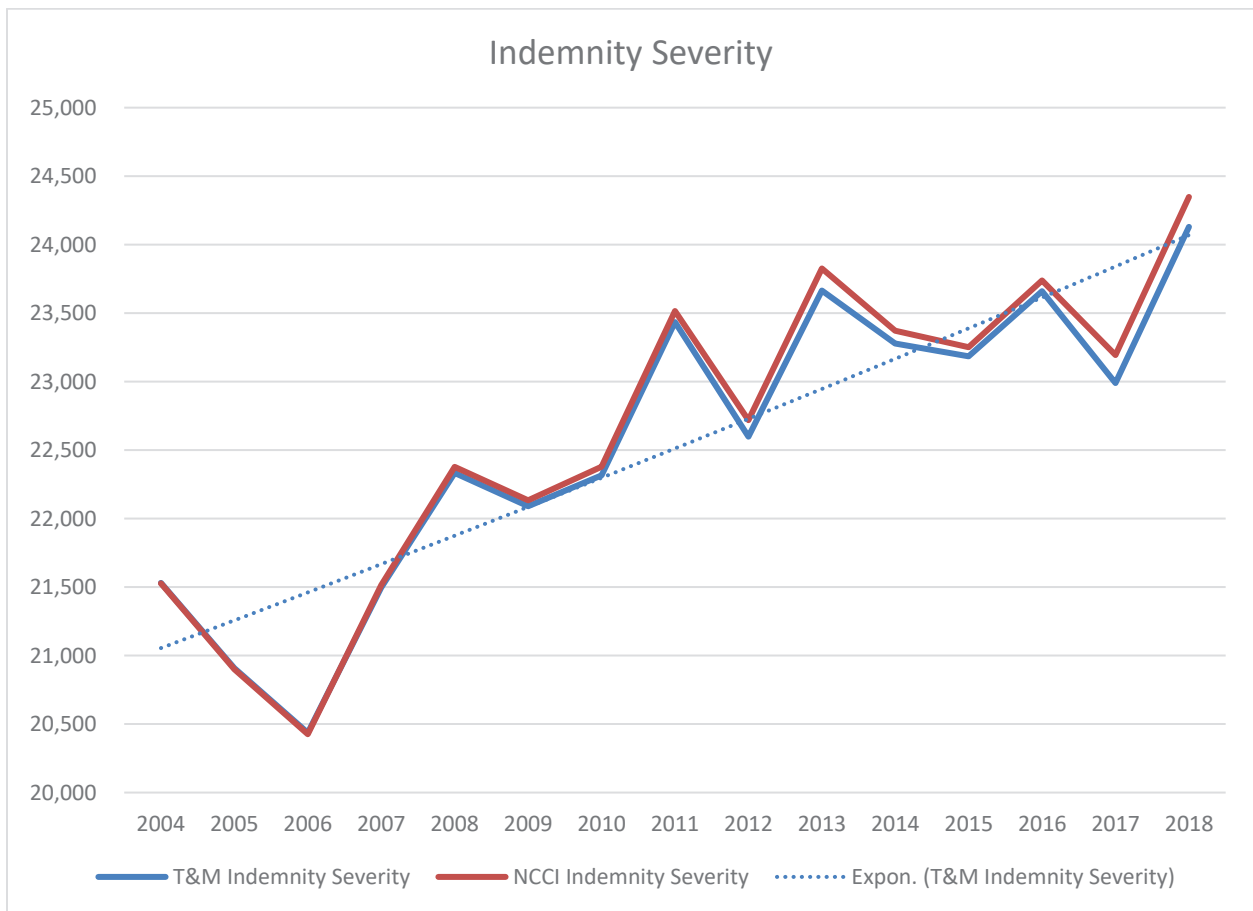
The medical trend procedure is similar to that of the indemnity trend procedure. We calculated the ultimate severities, and then analyzed them over time. Medical severities have been steadily

increasing over time. Similar to the indemnity severity chart above, Taylor & Mulder's loss development factor selections generated similar medical severities to NCCI's selections. The dotted blue line shows the line of best fit. We selected the trend provision balancing the highest R-squared value with the longest time period, resulting in a medical severity trend of 2.1%. The following chart shows the medical severities over time. The dotted blue line shows the fitted medical severity trend based on our selection.
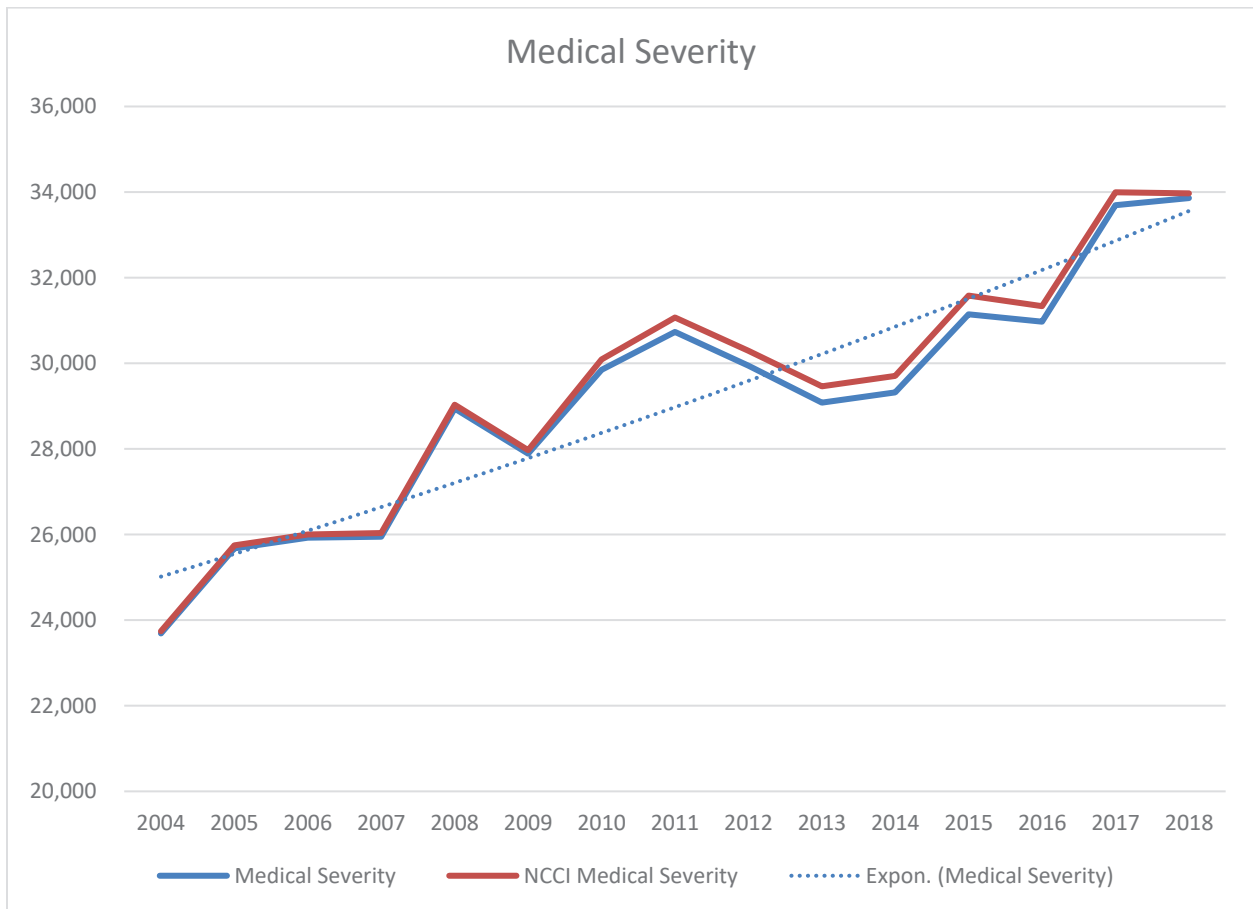
In order to compare our trend selections with those of NCCI, we multiplied the frequency and severity trend factors together to determine a net trend. This yields a net indemnity trend of -2.1% (= (1 − 0.031) * (1 + 0.010)), which is slightly lower than the NCCI net indemnity trend selection.

Repeating this same calculation for the net medical trend results in a net trend of -1.1% (= (1 − 0.031) * (1 + 0.021)), which differs slightly from the NCCI medical net trend of -1.0%.

Loss Adjustment Expenses

NCCI used a five-year average of the ultimate paid DCCE to paid losses ratio to determine the DCCE provision to be applied to losses. Their selection of 10.2% for the DCCE provision appears reasonable.

To determine the AOE provision, NCCI uses a weighted average of countrywide AOE paid divided by paid losses and State specific AOE paid divided by paid losses. NCCI applies a weight of 71% to the countrywide AOE ratio and a weight of 29% to the Missouri AOE to paid loss provision to calculate an AOE provision of 9.1%. These weights reflect the respective shares of ultimate projected losses.

The DCCE and AOE provisions are added together to determine a proposed LAE ratio of 19.3% which is 0.5% higher than the prior year's LAE provision of 18.7%. To account for this, NCCI applies a factor of 1.005 to the indicated rate changed based on experience, trend, and benefits. The selections and methods used to determine this provision appear reasonable.

Review of the NCCI's Response to Interrogatories

The scope of our work includes (1) a review of the Filing and (2) a review of the answers, attachments and supporting documentation provided in response to the T&M interrogatories. During the course of our review, we were provided with additional information, supporting data

and calculations underlying certain portions of the filing that were not included within the filing. Therefore, our conclusions are based on the totality of the information we received from the NCCI.

Review of Responses to Interrogatories Dated September 28, 2020

This section contains a review of the responses provided by NCCI to the objections issued on September 28, 2020.

Question 1: DATA

NCCI has confirmed that there have been no changes to the underlying data used in this filing when compared to the previous filing.

Question 2: IMPACTS OF CHANGES

The indicated loss cost changes are being impacted by two changes made in the NCCI methodology for this filing, including (1) changing the selected loss development factor selection for paid losses to a 2-year average instead of a 3-year average and (2) changing the methodology for determining the AOE provision. The change in selected loss development factors resulted in a decrease in the indication of 0.3% and the change in AOE methodology resulted in an increase of 0.7% in the indicated loss cost change.

Question 3: TERRORISM

NCCI confirmed that there have been no changes to the methodology or assumptions used to determine the terrorism loss cost.

Question 4: LOSS DEVELOPMENT TRIANGLES

NCCI provided loss development triangles with 10 years of loss development factors for indemnity and medical coverages as well as DCCE. Paid and Paid + Case triangles were provided for both

the medical and indemnity coverages. We used this data to evaluate trends and make selections of loss development factors by period to test NCCI's selections.

Question 5: LOSS DEVELOPMENT FACTORS

A two-year average loss development factor was utilized for paid loss development as opposed to a three-year average that was used in the prior filing because the three-year average was meant to be a temporary selection due to irregular experience in the calendar year ending December 31, 2016. By only using two-years, these atypical results are eliminated. Taylor & Mulder tested this method of selecting a two-year average as opposed to a three-year average and we tested both the two year and the three year averages against T&M's selections. It appears that NCCI's selected two-year average does not always provide the best answer for each evaluation.

Question 6: FACTOR TO ADJUST LOSSES FOR PRIOR POLICY YEARS

It was requested that NCCI provide detailed calculations of how the factor to adjust losses for prior policy years was determined in Appendix A-II column 6. A spreadsheet showing how this was calculated was provided. T&M reviewed the calculations and determined that the calculation and methodology are appropriate.

Question 7: FACTOR TO ADJUST TAIL FACTOR TO A LIMITED BASIS

We requested support for the factor to adjust the 19th-to-ultimate development factor to a limited basis since this information was not provided in the filing. This calculation was provided as a response to this interrogatory. NCCI uses a countrywide unlimited loss development factor and the expected percentage of losses about the large loss threshold to determine the countrywide limited tail factor. The countrywide limited tail factor minus one is then divided by the countrywide unlimited tail factor minus one to determine the factor to adjust the tail factor to a limited basis.

After reviewing the calculations and supporting documentation, this calculation appears reasonable.

Question 8: AOE ANALYSIS

NCCI provided a description of the new AOE process and how agreements from TPAs (third-party administrators) were accounted for in the AOE calculation. NCCI further explained that the Missouri AOE provision was derived by taking a weighted average of the countrywide AOE provision and the indicated provision for the Missouri state fund. The weights applied to each of these were 71% and 29% for the countrywide AOE provision and the indicated provision for the Missouri state fund, respectively. This response did not show how the indicated provision for the Missouri state fund was derived. Taylor & Mulder requested the underlying data and calculations for the Missouri state fund AOE provision in a subsequent set of objections. We reviewed the calculations and selections, which appear reasonable.

Question 9: DCCE

NCCI explained their position that the two-year average loss development factor for DCCE provides a balance between stability and responsiveness. T&M reviewed the impact of this change and concluded that this change appears appear reasonable.

Question 10: DCCE

NCCI expanded the table in Exhibit II Section C – Selection of DCCE provision to include policy years 2009 through 2013. This additional information was used in T&M's analysis of the DCCE provision, and it was determined that the NCCI selected provision is reasonable.

Question 11: AOE

NCCI determined that there were no biases with how AOE and DCCE were reported due to TPA agreements. The rationale provided by NCCI appears reasonable.

Question 12: INDUSTRY GROUP DIFFERENTIALS

This question asks for the calculations underlying certain factors in the determination of the industry group factors in Appendix A-IV, Section I, Columns (4) and (5). NCCI provided these calculations in Exhibit 12 of their response. Taylor & Mulder reviewed these calculations, and they appear reasonable.

Question 13: OCCUPATIONAL CLASSES

We requested the underlying calculations for factors used in the distribution of loss cost level changes to occupational classifications in Appendix B-1, Section A.1.1. These were provided in Exhibit 13 of the NCCI responses. Taylor & Mulder reviewed these calculations, and concluded that the calculations are appropriate.

Question 14: TREND

The question asks for underlying data, fits, assumptions, calculation, selections and rationale that went into the selection of the indemnity and medical trend factors. NCCI provided Exhibit 14, "Supplemental Loss Development and Trend Information", as support for these calculations.

Question 15: ASSIGNED RISK PLAN

This question asked for the indicated loss cost change when assigned risk experience was removed from the analysis. An overall average loss cost level indication of -0.7% would result if the assigned risk experience was removed from the filing. The details of this calculation were provided

in Exhibit 15, "Voluntary Only Indication". Taylor & Mulder reviewed the calculation and assumptions determined that they were appropriate.

Question 16: CAPPING

This question asked about the possibility of disparate impacts to classes with low loss costs and whether applying a cap to loss cost increases and decreases would prohibit changes to those loss costs. NCCI indicated that they review cases where the upper bound and lower bound are equal to the current loss cost and if the indicated industry group change and the indicated class change is in the same direction then they will change the loss cost by $0.01 in the direction of the change. This method is reasonable as it will adequately modify occupational classes with low loss costs.

Question 17: CLASS RATEMAKING

An update was requested for the class ratemaking research to which NCCI provided as Exhibit 17 two presentations: "Class Ratemaking Research: Status and Results" presented on February 23, 2017 and "Class Ratemaking Research: Final Wrap-Up" presented on February 22, 2018. Taylor & Mulder reviewed these documents which are referenced below.

Question 18: CLASSIFICATIONS

T&M requested information pertaining to the loss cost changes and payrolls by class code. NCCI provided an excel spreadsheet with this information in Exhibit 18 in the responses to the objections. We evaluated the data and calculated several statistics based on the history of rate changes, including:

1. Coefficient of Variation of Loss Costs from loss costs that are effective from January 1, 2018 to January 1, 2021.

2. Absolute Percent Change in loss costs from changes effective from January 1, 2018 to January 1, 2021 (i.e., the total amount of rate change over time. For example, if a class code had a 10% increase and a 10% decrease, the absolute change would be 21% ($= (1+|.1|)$ $\times (1+|-.1|) - 1) = ((1.1 \times 1.1) - 1.0))$.

3. Total "Swing" (i.e. the maximum change minus the minimum change in loss costs from loss cost changes effective from January 1, 2018 to January 1, 2021).

Attachment B displays loss costs and changes in loss costs by individual class codes. The data is sorted in three ways; (1) by dollar amount of payroll written in each class, (2) by absolute change percent of changes effective from January 1, 2018 to January 1, 2021 and (3) by swing. We searched for class codes that had particularly high payrolls and unusual or unstable loss cost change history, which would indicate potential issues with the classification rate making algorithm. We also reviewed the class codes with the largest amount of change and the widest swings in rate change history to see if similar stability issues could be detected.

One class code, number 3574, has a somewhat unusual rate change history. Class code 3574 received a 16.1% increase in 2019, a 17.7% decrease in 2020, and a 20.9% increase in 2021. This swinging back and forth implies that the class code's claims history may be receiving excessive credibility, causing an excessive impact on the loss cost from year to year.

Of the remaining 509 class codes with payrolls greater than $0 in 2017 or 2018, we observe several other classes that have swings that are over 20%. The highest seventeen swing classes have swings that are greater than 20%. However, the remainder of the classes are under 20% for the three years of changes. Since most of the class codes have swings that are less than 20% over this period, the

new classification methodology appears to be achieving the goal of less volatility in class ratemaking.

The NCCI implemented a new classification ratemaking methodology effective January 1, 2019. If we look at the classification information sorted by payroll, we observe that the smaller classes do not appear to have a higher absolute value of rate changes from 2018 to 2021 than the higher payroll classes.

In our interrogatories, Taylor & Mulder asked for any updates on class ratemaking research, status and results, or stability performance results on tests of the performance of the recently implemented small class ratemaking project intended to address the stability of the small classes.

The response included two studies that dated 2017 and 2018, before this change was implemented. It would be helpful to have an update of those studies to understand if the classification ratemaking has improved the volatility in the small class ratemaking. Our methodology was an attempt to test the new classification methodology but the NCCI has much more information available to do a more detailed evaluation.

Question 19: INDICATION DATA

NCCI confirmed that the data that the indication in Exhibit I was combined for the voluntary and assigned risk markets.

Review of Responses to Interrogatories Dated October 13, 2020

This section contains a review of the responses provided by NCCI to the objections issued on October 13, 2020.

Question 1: AOE PROVISION

NCCI provided an exhibit which showed the calculation of the selected AOE ratio on both a countrywide and Missouri only basis. This exhibit also showed how these values were weighted together to obtain the weighted-average AOE ratio of 9.1%.

Review of Responses to Interrogatories Dated October 20, 2020

This section contains a review of the responses provided by NCCI to the objections issued on October 20, 2020.

Question 1: AOE PROVISION

It was noticed that the exhibit provided with the responses to the objections dated October 13, 2020 did not reconcile with the AOE provisions on page 43 of the filing. NCCI provided a discussion of why this was the case, and it was determined that these values were acceptable.

Determination of Loss Cost Level Change

		Policy Year	
Premium		2018	2017
(1)	Standard Earned Premium Developed to Ultimate	634,026,730	656,818,816
(2)	Premium On-level Factor	0.799	0.76
(3)	Pure Premium Available for Benefit Costs = (1) x (2)	506,587,357	499,182,300

Indemnity Benefit Cost:			
(4)	Limited Indemnity Losses Developed to Ultimate	220,520,982	207,657,021
(5)	Indemnity Loss On-level Factor	1.000	1.000
(6)	Adjusted Limited Indemnity Losses = (4) x (5)	220,520,982	207,657,021
(7)	Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.435	0.416
(8)	Factor to Reflect Indemnity Trend	0.938	0.918
(9)	Projected Limited Indemnity Cost Ratio = (7) x (8)	0.408	0.382
(10)	Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis	1.011	1.011
(11)	Projected Indemnity Cost Ratio = (9) x (10)	0.413	0.386
(12)	Factor to Reflect Proposed Changes in Indemnity Benefits	1.000	1.000
(13)	Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.413	0.386
NCCI Indemnity Benefit Cost		0.418	0.391
Medical Benefit Cost:			
(14)	Limited Medical Losses Developed to Ultimate	309,448,124	304,351,681
(15)	Medical Loss On-level Factor	1.000	1.000
(16)	Adjusted Limited Medical Losses = (14) x (15)	309,448,124	304,351,681
(17)	Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.611	0.610
(18)	Factor to Reflect Medical Trend	0.969	0.959
(19)	Projected Limited Medical Cost Ratio = (17) x (18)	0.592	0.584
(20)	Factor to Adjust Medical Cost Ratio to an Unlimited Basis	1.011	1.011
(21)	Projected Medical Cost Ratio = (19) x (20)	0.598	0.591
(22)	Factor to Reflect Proposed Changes in Medical Benefits	1.000	1.000
(23)	Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.598	0.591
NCCI Medical Benefit Cost		0.602	0.598
Total Benefit Cost:			
(24)	Indicated Change Based on Experience, Trend, and Benefits = (13) + (23)	1.011	0.977
NCCI Indicated Change Based on Experience, Trend, and Benefits		1.020	0.989

Total Indicated Change

(25)	PY 2018 Indicated Change Based on Experience, Trend and Benefits	1.011
(26)	PY 2017 Indicated Change Based on Experience, Trend and Benefits	0.977
(27)	Indicated Change Based on Experience, Trend, and Benefits = Average of (25) and (26)	0.994
(28)	Effect of Change in Loss-Based Expenses	1.005
(29)	Indicated Change Modified to Reflect the Change in Loss-Based Expenses = (27) * (28)	1.000
NCCI Indicated Chagne Modified to Reflect the Change in Loss-Based Expenses		1.010

Missouri Department of Commerce and Insurance   Exhibit II
Review of 2021 NCCI Loss Cost Filing   Page 1
Determination of Change in LAE Provision

Missouri Provisions	Current		Proposed	
(1) AOE		8.4%		9.1%
(2) DCCE		10.3%		10.2%
(3) Total LAE = (1) + (2)		18.7%		19.3%

(4) Proposed Change in MO LAE Provision   1.005
 = [1 + (3 Proposed)] / [1 + (3 Current)]

Accident Year	CW Ult AOE Ratio
2015	7.2%
2016	7.7%
2017	8.1%
2018	7.9%
2019	8.9%
T&M CW Selected	8.9%
NCCI CW Selected	8.9%
T&M MO Selected	9.1%
NCCI MO Selected	9.1%

(5) Policy Year	(6) Reported Ratio of Paid DCCE to Paid Losses	(7) Age to Ult Development Factor	(8) = (6) * (7) Ultimate DCCE Ratio
2014	11.3%	0.965	10.9%
2015	10.5%	0.967	10.2%
2016	10.4%	0.977	10.2%
2017	9.7%	1.006	9.8%
2018	9.2%	1.101	10.1%
		T&M Selected	10.2%
		NCCI Selected	10.2%

AOE Provision

	Private Carriers			State Fund		
Accident Year	Ultimate AOE Ratio Based on Paid Data	Ultimate AOE Ratio Based on Incurred Data	Average Ultimate AOE Ratio	Ultimate AOE Ratio Based on Paid Data	Ultimate AOE Ratio Based on Incurred Data	Average Ultimate AOE Ratio
2015	7.8%	7.8%	7.8%	10.6%	9.9%	10.3%
2016	8.3%	8.2%	8.3%	9.7%	9.1%	9.4%
2017	8.9%	8.8%	8.9%	9.3%	8.5%	8.9%
2018	8.8%	8.8%	8.8%	9.6%	9.3%	9.5%
2019	9.0%	8.8%	8.9%	10.5%	10.5%	10.5%

T&M Selected AOE Povision	8.9%	T&M Selected AOE Povision	9.7%
NCCI Selected AOE Provision	8.9%	NCCI Selected AOE Provision	9.7%
T&M Weights	71.0%		29.0%
NCCI Weights	71.0%		29.0%
T&M Weighted Average AOE Ratio	9.13%		
NCCI Weighted Average AOE Ratio	9.13%		

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Policy	Claim	Fitted		T&M Indemnit	Fitted		Medical	Fitted	
Year	Frequency	Trend	R²	Severity	Trend	R²	Severity	Trend	R²
2004	29.815	-3.1%	94.5%	21,530	1.0%	76.9%	23,689	2.1%	86.0%
2005	26.260	-2.9%	96.6%	20,908	1.0%	77.4%	25,676	1.9%	83.8%
2006	24.816	-2.8%	95.9%	20,436	1.0%	72.1%	25,928	1.9%	80.0%
2007	25.019	-2.8%	95.0%	21,497	0.8%	68.9%	25,949	1.8%	74.6%
2008	23.158	-2.7%	94.1%	22,333	0.7%	59.6%	28,941	1.5%	67.6%
2009	21.750	-2.7%	92.8%	22,090	0.7%	53.3%	27,890	1.7%	67.6%
2010	23.023	-3.1%	97.8%	22,316	0.5%	37.9%	29,849	1.5%	56.9%
2011	21.892	-3.0%	97.5%	23,435	0.3%	17.3%	30,734	1.8%	59.1%
2012	21.137	-2.9%	96.2%	22,598	0.6%	30.6%	29,945	2.6%	79.8%
2013	20.648	-2.9%	94.1%	23,664	0.2%	6.0%	29,082	3.4%	91.6%
2014	20.044	-2.7%	89.7%	23,278	0.6%	27.3%	29,321	3.7%	89.6%
2015	19.281	-2.1%	81.9%	23,184	0.9%	29.4%	31,143	3.4%	79.4%
2016	18.382	-0.9%	88.5%	23,660	1.0%	16.3%	30,971	4.6%	79.1%
2017	18.104	-0.4%	100.0%	22,989	5.0%	100.0%	33,694	0.5%	100.0%
2018	18.040			24,130			33,860		

(11) T&M Selected		-3.1%			1.0%			2.1%	
(12) T&M Net Trend					-2.1%			-1.1%	
(13) Current NCCI Net Trend					-2.0%			-1.0%	
(14) Selected NCCI Net Trend					-2.0%			-1.0%	

(15)	(16)	(17) = [1 + (12 Indemnity)] ^ (16)	+ (12 Medical)] ^ (16)
Policy		Trend Factor	
Year	Years	Indemnity	Medical
2017	4.001	0.9185	0.9586
2018	3.001	0.9382	0.9688

Indemnity Ultimate Losses

(1)	(2)	(3)	(4)	(5) = 1 - (3)	(6) = (2) * (3) + (4)
	Paid	Paid Ult	Paid + Case	Paid + Case Ult	Selected
	On-Level	Loss	On-Level	Loss	On-Level
Policy Year	Ult. Losses	Weight	Ult. Losses	Weight	Ult. Losses
2004	200,530,387	50%	206,561,780	50%	203,546,084
2005	184,215,706	50%	185,977,366	50%	185,096,536
2006	183,962,545	50%	184,737,390	50%	184,349,968
2007	212,274,366	50%	215,145,040	50%	213,709,703
2008	196,325,408	50%	199,237,085	50%	197,781,246
2009	178,427,762	50%	176,220,170	50%	177,323,966
2010	198,952,367	50%	197,508,140	50%	198,230,254
2011	204,991,294	50%	199,505,333	50%	202,248,313
2012	192,249,778	50%	185,589,335	50%	188,919,556
2013	199,879,914	50%	196,424,099	50%	198,152,007
2014	201,125,369	50%	197,193,882	50%	199,159,626
2015	203,977,823	50%	199,615,563	50%	201,796,693
2016	212,003,817	50%	199,140,698	50%	205,572,257
2017	214,554,232	50%	200,759,809	50%	207,657,021
2018	223,892,081	50%	217,149,884	50%	220,520,982

Medical Ultimate Losses

(1)	(2)	(3)	(4)	(5) = 1 - (3)	(6) = (2) * (3) + (4)
	Paid	Paid Ult	Paid + Case	Paid + Case Ult	Selected
	On-Level	Loss	On-Level	Loss	On-Level
Policy Year	Ult. Losses	Weight	Ult. Losses	Weight	Ult. Losses
2004	222,886,754	50%	228,189,786	50%	225,538,270
2005	224,288,184	50%	233,527,547	50%	228,907,866
2006	235,541,265	50%	235,508,214	50%	235,524,739
2007	260,266,675	50%	259,292,629	50%	259,779,652
2008	254,308,985	50%	261,882,565	50%	258,095,775
2009	227,436,201	50%	223,468,516	50%	225,452,359
2010	269,104,000	50%	264,904,507	50%	267,004,254
2011	268,211,851	50%	265,989,475	50%	267,100,663
2012	252,904,339	50%	251,265,951	50%	252,085,145
2013	247,850,863	50%	241,131,845	50%	244,491,354
2014	255,124,200	50%	246,598,640	50%	250,861,420
2015	270,638,725	50%	271,497,713	50%	271,068,219
2016	273,743,678	50%	264,443,235	50%	269,093,457
2017	304,009,133	50%	304,694,230	50%	304,351,681
2018	313,338,142	50%	305,558,107	50%	309,448,124

Missouri Department of Commerce and Insurance   Exhibit IV
Review of 2021 NCCI Loss Cost Filing   Page 2
Selected Wage Adjusted On-Level Ultimate Losses

Indemnity Ultimate Losses

(1)	(2)	(3)	(4)	(5) = 1 - (3)	(6) = (2) * (3) + (4)
	Paid		Paid + Case		Selected
	Wage Adj	Paid Ult	Wage Adj	Paid + Case Ult	Wage Adj
	On-Level	Loss	On-Level	Loss	On-Level
Policy Year	Ult. Losses	Weight	Ult. Losses	Weight	Ult. Losses
2004	283,299,104	50%	291,819,949	50%	287,559,526
2005	253,754,925	50%	256,181,589	50%	254,968,257
2006	245,271,374	50%	246,304,451	50%	245,787,913
2007	271,261,803	50%	274,930,189	50%	273,095,996
2008	245,543,009	50%	249,184,627	50%	247,363,818
2009	223,338,208	50%	220,574,963	50%	221,956,586
2010	244,621,287	50%	242,845,541	50%	243,733,414
2011	245,647,217	50%	239,073,226	50%	242,360,221
2012	225,345,193	50%	217,538,168	50%	221,441,680
2013	229,777,952	50%	225,805,216	50%	227,791,584
2014	223,651,410	50%	219,279,597	50%	221,465,504
2015	221,927,872	50%	217,181,732	50%	219,554,802
2016	226,632,080	50%	212,881,406	50%	219,756,743
2017	222,278,184	50%	207,987,163	50%	215,132,673
2018	223,892,081	50%	217,149,884	50%	220,520,982

Medical Ultimate Losses

(1)	(2)	(3)	(4)	(5) = 1 - (3)	(6) = (2) * (3) + (4)
	Paid		Paid + Case		Selected
	Wage Adj	Paid Ult	Wage Adj	Paid + Case Ult	Wage Adj
	On-Level	Loss	On-Level	Loss	On-Level
Policy Year	Ult. Losses	Weight	Ult. Losses	Weight	Ult. Losses
2004	312,672,225	50%	320,111,478	50%	316,391,851
2005	306,800,219	50%	319,438,595	50%	313,119,407
2006	311,856,634	50%	311,812,876	50%	311,834,755
2007	330,278,411	50%	329,042,346	50%	329,660,378
2008	315,851,759	50%	325,258,145	50%	320,554,952
2009	282,703,198	50%	277,771,365	50%	280,237,282
2010	328,575,984	50%	323,448,403	50%	326,012,194
2011	319,172,103	50%	316,527,475	50%	317,849,789
2012	294,380,651	50%	292,473,567	50%	293,427,109
2013	283,789,238	50%	276,095,962	50%	279,942,600
2014	283,698,110	50%	274,217,688	50%	278,957,899
2015	294,454,932	50%	295,389,512	50%	294,922,222
2016	292,631,992	50%	282,689,818	50%	287,660,905
2017	314,953,462	50%	315,663,222	50%	315,308,342
2018	313,338,142	50%	305,558,107	50%	309,448,124

Policy Year	Losses	Ultimate Development Factor	Ultimate Losses	Wage Adj On-Level Ult. Losses
2004	191,089,182	1.049	200,530,387	283,299,104
2005	174,669,269	1.055	184,215,706	253,754,925
2006	173,044,868	1.063	183,962,545	245,271,374
2007	198,584,246	1.069	212,274,366	271,261,803
2008	182,314,748	1.077	196,325,408	245,543,009
2009	164,053,820	1.088	178,427,762	223,338,208
2010	180,044,278	1.105	198,952,367	244,621,287
2011	182,498,057	1.123	204,991,294	245,647,217
2012	167,415,689	1.148	192,249,778	225,345,193
2013	168,141,609	1.189	199,879,914	229,777,952
2014	161,030,427	1.249	201,125,369	223,651,410
2015	151,497,436	1.346	203,977,823	221,927,872
2016	136,706,428	1.551	212,003,817	226,632,080
2017	108,058,588	1.986	214,554,232	222,278,184
2018	62,656,894	3.573	223,892,081	223,892,081

Indemnity Limited Statewide Paid Loss Development through @12/19

PY	1/2	2/3	3/4	4/5	5/6	6/7	7/8	8/9	9/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
1991																		1.003
1992																	1.004	1.004
1993																1.005	1.002	1.004
1994															1.005	1.004	1.004	1.001
1995														1.008	1.004	1.007	1.004	1.002
1996													1.005	1.004	1.005	1.005	1.004	1.002
1997												1.006	1.004	1.004	1.002	1.003	1.002	1.004
1998											1.007	1.007	1.005	1.005	1.004	1.005	1.004	1.007
1999										1.015	1.006	1.006	1.008	1.007	1.001	1.007	1.002	1.002
2000									1.008	1.008	1.003	1.013	1.006	1.006	1.004	1.003	1.004	1.001
2001								1.010	1.010	1.010	1.007	1.004	1.012	1.003	1.005	1.004	1.002	
2002							1.028	1.018	1.008	1.009	1.008	1.007	1.003	1.004	1.003	1.005		
2003						1.034	1.023	1.016	1.016	1.005	1.006	1.005	1.007	1.007	1.005			
2004					1.050	1.032	1.021	1.020	1.014	1.014	1.007	1.006	1.012	1.005				
2005				1.081	1.046	1.036	1.022	1.012	1.014	1.010	1.008	1.006	1.004					
2006			1.117	1.068	1.040	1.032	1.026	1.016	1.009	1.008	1.010	1.005						
2007		1.271	1.125	1.077	1.054	1.036	1.018	1.016	1.021	1.013	1.006							
2008	1.793	1.248	1.159	1.092	1.047	1.041	1.019	1.020	1.020	1.009								
2009	1.799	1.292	1.141	1.091	1.059	1.026	1.023	1.017	1.012									
2010	1.872	1.289	1.152	1.092	1.051	1.033	1.020	1.016										
2011	1.789	1.295	1.161	1.092	1.060	1.045	1.024											
2012	1.801	1.308	1.155	1.087	1.052	1.031												
2013	1.747	1.328	1.182	1.073	1.040													
2014	1.869	1.268	1.117	1.074														
2015	1.806	1.282	1.144															
2016	1.781	1.291																
2017	1.812																	
2 Yr Avg	1.797	1.287	1.131	1.074	1.046	1.038	1.022	1.017	1.016	1.011	1.008	1.006	1.008	1.006	1.004	1.005	1.003	1.002
3 Yr Avg	1.800	1.280	1.148	1.078	1.051	1.036	1.022	1.018	1.018	1.010	1.008	1.006	1.008	1.005	1.004	1.004	1.003	1.003
5 Yr Avg	1.803	1.295	1.152	1.084	1.052	1.035	1.021	1.017	1.015	1.011	1.007	1.006	1.008	1.005	1.004	1.005	1.003	1.003
5 Yr Avg (Ex. Hi Lo)	1.800	1.294	1.153	1.084	1.054	1.035	1.021	1.016	1.015	1.011	1.007	1.006	1.008	1.005	1.004	1.005	1.003	1.003
5 Yr Median	1.806	1.291	1.155	1.087	1.052	1.033	1.020	1.016	1.014	1.010	1.007	1.006	1.007	1.005	1.004	1.005	1.002	1.002
7 Yr Avg	1.801	1.294	1.150	1.086	1.050	1.035	1.022	1.017	1.015	1.010	1.007	1.007	1.007	1.005	1.003	1.005	1.003	1.003
All Yr Avg	1.807	1.287	1.145	1.083	1.050	1.035	1.022	1.016	1.013	1.010	1.007	1.007	1.007	1.005	1.004	1.005	1.003	1.003
T&M Selected	1.800	1.280	1.152	1.078	1.051	1.035	1.022	1.017	1.016	1.010	1.007	1.006	1.008	1.005	1.004	1.005	1.003	1.002
Cumulative	3.573	1.986	1.551	1.346	1.249	1.189	1.148	1.123	1.105	1.088	1.077	1.069	1.063	1.055	1.049	1.045	1.041	1.037

Tail
1.036

Policy Year	Losses	Ultimate Development Factor	Ultimate Losses	Wage Adj On-Level Ult. Losses
2004	203,458,379	1.015	206,561,780	291,819,949
2005	183,000,226	1.016	185,977,366	256,181,589
2006	181,381,062	1.019	184,737,390	246,304,451
2007	210,604,449	1.022	215,145,040	274,930,189
2008	195,032,228	1.022	199,237,085	249,184,627
2009	172,156,767	1.024	176,220,170	220,574,963
2010	192,376,734	1.027	197,508,140	242,845,541
2011	193,740,816	1.030	199,505,333	239,073,226
2012	179,508,872	1.034	185,589,335	217,538,168
2013	188,356,236	1.043	196,424,099	225,805,216
2014	187,407,732	1.052	197,193,882	219,279,597
2015	184,362,713	1.083	199,615,563	217,181,732
2016	179,088,737	1.112	199,140,698	212,881,406
2017	169,924,533	1.181	200,759,809	207,987,163
2018	162,652,397	1.335	217,149,884	217,149,884

Indemnity Limited Statewide Paid+Case Loss Development through @12/19

PY	1/2	2/3	3/4	4/5	5/6	6/7	7/8	8/9	9/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
1991																		1.002
1992																	1.002	1.002
1993																1.001	1.002	1.003
1994															1.001	1.000	1.000	1.001
1995														0.998	1.000	1.000	1.000	1.001
1996													0.996	1.000	1.001	1.001	1.001	1.002
1997												1.001	0.999	0.999	0.998	0.998	1.004	1.003
1998											1.002	1.005	1.001	1.006	0.999	1.003	1.003	1.000
1999										1.001	0.999	1.002	1.003	0.999	1.001	1.001	1.001	1.003
2000									0.998	1.003	1.003	1.004	1.001	1.001	1.000	1.000	0.996	1.002
2001								1.002	1.007	0.997	1.004	1.001	1.002	0.999	1.002	1.000	0.998	
2002							1.004	1.005	1.005	1.002	0.995	0.999	1.003	0.999	1.002	1.002		
2003						1.016	1.005	1.005	1.007	1.000	1.000	1.008	0.998	1.004	1.001			
2004					1.014	0.996	1.001	1.001	1.008	1.002	1.000	1.011	1.006	1.002				
2005				1.016	1.017	1.005	1.005	0.999	1.006	0.998	1.004	1.004	1.002					
2006			1.027	1.013	1.017	1.004	1.009	1.002	1.002	1.001	0.998	1.002						
2007		1.045	1.024	1.009	1.021	1.001	1.007	1.014	1.012	1.002	1.002							
2008	1.116	1.041	1.055	1.029	1.028	1.013	1.009	1.008	1.002	1.003								
2009	1.119	1.063	1.028	1.041	1.005	1.002	1.014	1.001	1.004									
2010	1.125	1.059	1.043	1.029	1.015	1.014	1.005	1.000										
2011	1.095	1.051	1.072	1.033	1.017	1.003	1.003											
2012	1.136	1.078	1.038	1.019	1.008	1.009												
2013	1.128	1.089	1.074	1.040	1.002													
2014	1.135	1.054	1.021	1.028														
2015	1.123	1.063	1.033															
2016	1.140	1.062																
2017	1.127																	

	1/2	2/3	3/4	4/5	5/6	6/7	7/8	8/9	9/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	Tail
2 Yr Avg	1.134	1.063	1.027	1.034	1.005	1.006	1.004	1.001	1.003	1.003	1.000	1.003	1.004	1.003	1.002	1.001	0.997	1.003	
3 Yr Avg	1.130	1.060	1.043	1.029	1.009	1.009	1.007	1.003	1.006	1.002	1.001	1.006	1.002	1.002	1.002	1.001	0.998	1.002	
5 Yr Avg	1.131	1.069	1.048	1.030	1.009	1.008	1.008	1.005	1.005	1.001	1.001	1.005	1.002	1.001	1.001	1.001	1.000	1.002	
5 Yr Avg (Ex. Hi Lo)	1.130	1.068	1.048	1.030	1.009	1.008	1.007	1.004	1.004	1.002	1.001	1.005	1.002	1.001	1.001	1.001	1.001	1.002	
5 Yr Median	1.128	1.063	1.038	1.029	1.008	1.009	1.007	1.002	1.004	1.002	1.000	1.004	1.002	1.001	1.001	1.001	1.001	1.002	
7 Yr Avg	1.126	1.065	1.044	1.031	1.014	1.007	1.007	1.004	1.006	1.001	1.000	1.004	1.002	1.001	1.000	1.001	1.000	1.002	
All Yr Avg	1.124	1.061	1.042	1.026	1.014	1.006	1.006	1.004	1.005	1.001	1.001	1.004	1.001	1.001	1.001	1.001	1.001	1.002	
T&M Selected	1.130	1.063	1.027	1.029	1.009	1.009	1.004	1.003	1.003	1.002	1.000	1.003	1.002	1.001	1.001	1.001	1.000	1.002	
Cumulative	1.335	1.181	1.112	1.083	1.052	1.043	1.034	1.030	1.027	1.024	1.022	1.022	1.019	1.016	1.015	1.014	1.013	1.012	1.010

Policy Year	Losses	Ultimate Development Factor	Ultimate Losses	Wage Adj On-Level Ult. Losses
2004	211,339,248	1.055	222,886,754	312,672,225
2005	211,820,789	1.059	224,288,184	306,800,219
2006	221,709,319	1.062	235,541,265	311,856,634
2007	243,958,128	1.067	260,266,675	330,278,411
2008	237,376,770	1.071	254,308,985	315,851,759
2009	211,152,984	1.077	227,436,201	282,703,198
2010	248,677,098	1.082	269,104,000	328,575,984
2011	246,423,414	1.088	268,211,851	319,172,103
2012	230,149,982	1.099	252,904,339	294,380,651
2013	223,317,998	1.110	247,850,863	283,789,238
2014	227,011,063	1.124	255,124,200	283,698,110
2015	237,140,307	1.141	270,638,725	294,454,932
2016	233,403,448	1.173	273,743,678	292,631,992
2017	244,076,116	1.246	304,009,133	314,953,462
2018	205,729,460	1.523	313,338,142	313,338,142

Medical Limited Statewide Paid Loss Development through @12/19

PY	1/2	2/3	3/4	4/5	5/6	6/7	7/8	8/9	9/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
1991																		1.002
1992																	1.002	1.001
1993																1.003	1.004	1.003
1994															1.004	1.008	1.004	1.004
1995														1.005	1.005	1.003	1.004	1.003
1996													1.006	1.004	1.000	1.001	1.003	1.001
1997												1.007	1.005	1.006	1.004	1.006	1.005	1.011
1998											1.011	1.012	1.009	1.003	1.003	1.001	1.001	1.002
1999										1.007	1.008	1.007	1.010	1.006	1.002	1.009	1.001	1.001
2000									1.012	1.006	1.007	1.007	1.004	1.017	1.001	1.002	1.003	1.001
2001								1.004	1.007	1.007	1.007	1.004	1.003	1.004	1.005	1.003	1.003	
2002							1.012	1.011	1.006	1.007	1.005	1.005	1.007	1.004	1.003	1.011		
2003						1.015	1.014	1.008	1.009	1.005	1.005	1.004	1.002	1.004	1.002			
2004					1.010	1.015	1.012	1.007	1.012	1.009	1.004	1.004	1.004	1.006				
2005				1.028	1.026	1.022	1.016	1.006	1.006	1.005	1.004	1.005	1.004					
2006			1.032	1.017	1.014	1.009	1.015	1.008	1.004	1.003	1.005	1.003						
2007		1.062	1.036	1.009	1.012	1.011	1.009	1.004	1.004	1.005	1.003							
2008	1.221	1.064	1.033	1.023	1.022	1.019	1.012	1.004	1.012	1.005								
2009	1.226	1.059	1.036	1.017	1.013	1.010	1.006	1.006	1.003									
2010	1.243	1.059	1.036	1.016	1.012	1.010	1.009	1.007										
2011	1.218	1.058	1.036	1.020	1.018	1.013	1.012											
2012	1.226	1.066	1.030	1.019	1.015	1.009												
2013	1.219	1.064	1.027	1.016	1.005													
2014	1.241	1.061	1.021	1.015														
2015	1.237	1.059	1.035															
2016	1.205	1.060																
2017	1.212																	

	1/2	2/3	3/4	4/5	5/6	6/7	7/8	8/9	9/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	Tail
2 Yr Avg	1.209	1.060	1.028	1.016	1.010	1.011	1.011	1.007	1.008	1.005	1.004	1.004	1.004	1.005	1.003	1.007	1.003	1.001	
3 Yr Avg	1.218	1.060	1.028	1.017	1.013	1.011	1.009	1.006	1.006	1.004	1.004	1.004	1.003	1.005	1.003	1.005	1.002	1.001	
5 Yr Avg	1.223	1.062	1.030	1.017	1.013	1.012	1.010	1.006	1.006	1.005	1.004	1.004	1.004	1.007	1.003	1.005	1.003	1.003	
5 Yr Avg (Ex. Hi Lo)	1.223	1.062	1.031	1.017	1.013	1.011	1.010	1.006	1.005	1.005	1.004	1.004	1.004	1.005	1.002	1.005	1.002	1.001	
5 Yr Median	1.219	1.061	1.030	1.016	1.013	1.010	1.009	1.006	1.004	1.005	1.004	1.004	1.004	1.004	1.002	1.003	1.003	1.001	
7 Yr Avg	1.223	1.061	1.032	1.018	1.014	1.012	1.011	1.006	1.007	1.006	1.005	1.005	1.005	1.006	1.003	1.005	1.003	1.003	
All Yr Avg	1.225	1.061	1.032	1.018	1.015	1.013	1.012	1.007	1.008	1.006	1.006	1.006	1.005	1.006	1.003	1.005	1.003	1.003	
T&M Selected	1.223	1.062	1.028	1.016	1.013	1.010	1.010	1.006	1.005	1.005	1.004	1.004	1.003	1.004	1.002	1.005	1.002	1.001	1.043
Cumulative	1.523	1.246	1.173	1.141	1.124	1.110	1.099	1.088	1.082	1.077	1.071	1.067	1.062	1.059	1.055	1.052	1.047	1.044	1.043

Policy Year	Losses	Ultimate Development Factor	Ultimate Losses	Wage Adj On-Level Ult. Losses
2004	224,583,369	1.016	228,189,786	320,111,478
2005	229,698,950	1.017	233,527,547	319,438,595
2006	231,879,024	1.016	235,508,214	311,812,876
2007	254,660,269	1.018	259,292,629	329,042,346
2008	256,946,988	1.019	261,882,565	325,258,145
2009	220,211,159	1.015	223,468,516	277,771,365
2010	262,003,845	1.011	264,904,507	323,448,403
2011	263,868,538	1.008	265,989,475	316,527,475
2012	248,814,550	1.010	251,265,951	292,473,567
2013	239,292,083	1.008	241,131,845	276,095,962
2014	245,453,529	1.005	246,598,640	274,217,688
2015	271,050,130	1.002	271,497,713	295,389,512
2016	264,095,314	1.001	264,443,235	282,689,818
2017	305,208,978	0.998	304,694,230	315,663,222
2018	299,251,383	1.021	305,558,107	305,558,107

Medical Limited Statewide Paid+Case Loss Development through @12/19

PY	1/2	2/3	3/4	4/5	5/6	6/7	7/8	8/9	9/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
1991																		0.997
1992																	1.003	1.002
1993																1.001	1.002	1.002
1994															0.996	1.001	0.996	1.006
1995														1.001	1.004	1.003	0.998	1.001
1996													0.999	0.991	1.004	1.008	1.001	1.002
1997												1.002	0.993	1.002	0.990	0.999	1.013	0.990
1998											1.014	1.009	1.004	0.989	1.008	1.004	1.000	1.000
1999										1.000	1.002	1.000	1.005	1.002	1.000	1.004	0.999	0.999
2000									1.011	1.003	1.011	1.005	1.003	0.990	0.997	1.000	1.001	1.003
2001								1.009	1.001	1.017	1.007	1.002	0.999	1.003	0.993	1.000	0.996	
2002							1.002	1.001	1.008	1.002	0.999	1.005	1.003	1.003	1.001	1.002		
2003						1.009	1.000	0.999	0.995	1.004	0.993	1.004	0.999	1.009	1.001			
2004					0.995	1.005	1.001	1.035	1.005	0.997	1.001	1.005	0.994	0.998				
2005				1.008	0.989	1.002	1.004	1.001	1.023	0.997	1.010	1.002	1.000					
2006			0.996	0.997	1.002	0.985	1.006	0.998	1.001	1.006	1.001	1.003						
2007		1.010	1.001	1.000	0.997	0.998	1.003	1.004	1.002	0.996	1.001							
2008	1.071	1.025	1.010	0.983	1.010	1.007	0.996	1.007	0.990	0.985								
2009	1.043	1.013	0.999	1.003	0.998	1.007	1.007	0.996	0.997									
2010	1.050	1.002	0.994	0.993	1.010	1.001	0.997	0.998										
2011	1.022	0.998	0.972	0.993	1.024	0.992	1.006											
2012	1.031	1.005	1.004	0.998	0.986	0.995												
2013	1.013	0.993	1.000	1.000	0.981													
2014	1.034	0.993	0.992	1.008														
2015	1.035	1.006	1.007															
2016	1.007	0.966																
2017	1.025																	

	1/2	2/3	3/4	4/5	5/6	6/7	7/8	8/9	9/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	
2 Yr Avg	1.016	0.986	1.000	1.004	0.984	0.994	1.002	0.997	0.994	0.991	1.001	1.003	0.997	1.004	1.001	1.001	0.999	1.001	
3 Yr Avg	1.022	0.988	1.000	1.002	0.997	0.996	1.003	1.000	0.996	0.996	1.004	1.003	0.998	1.003	0.998	1.001	0.999	1.001	
5 Yr Avg	1.023	0.993	0.995	0.998	1.000	1.000	1.002	1.001	1.003	0.996	1.001	1.004	0.999	1.001	0.998	1.002	1.002	0.999	
5 Yr Avg (Ex. Hi Lo)	1.024	0.997	0.999	0.997	0.998	1.001	1.002	1.000	1.000	0.997	1.001	1.004	0.999	1.001	0.999	1.002	1.000	1.000	
5 Yr Median	1.025	0.993	1.000	0.998	0.998	1.001	1.003	0.998	1.001	0.997	1.001	1.004	0.999	1.003	1.000	1.002	1.000	1.000	
7 Yr Avg	1.024	0.995	0.995	0.997	1.001	0.998	1.003	1.006	1.002	0.998	1.002	1.004	1.000	0.999	0.999	1.002	1.001	1.000	
All Yr Avg	1.033	1.001	0.998	0.998	0.999	1.000	1.002	1.005	1.003	1.001	1.004	1.004	1.000	0.999	0.999	1.002	1.001	1.000	
T&M Selected	1.023	0.997	1.000	0.997	0.997	0.998	1.002	0.997	0.996	0.996	1.001	1.003	0.999	1.001	0.998	1.001	0.999	1.001	Tail
Cumulative	1.021	0.998	1.001	1.002	1.005	1.008	1.010	1.008	1.011	1.015	1.019	1.018	1.016	1.017	1.016	1.018	1.017	1.018	1.017

Factor to Adjust Limited Losses to an Ultimate Bases

(1) Threshold at the Midpoint of the Loss Cost Effective Period   9,919,089
(2) Statewide Excess Ratio   0.011
(3) Market Share for Carriers Missing from Large Loss and Catastrophe Call   0.000
(4) Factor to Adjust Limited Losses to an Unlimited Bases = 1 / [1 - [(2) * [1 - (3   1.011

Policy Year	Indemnity Paid/Paid+Case 19th Report	Medical Paid/Paid+Case 19th Report
1996	0.972	0.953
1997	0.975	0.981
1998	0.973	0.975
1999	0.968	0.986
2000	0.989	0.959
T&M Selected	0.975	0.975
NCCI Selected	0.975	0.975

	Indemnity	Medical
(1) Paid + Case 19th-to-Ultimate Loss Development Factor	1.012	1.020
(2) Factor to Adjust 19th-to-Ultimate Development Factor to a Limited Basis	0.859	0.859
(3) Limited Paid + Case 19th-to-Ultimate Loss Development Factor = [(1) - 1] * (2) + 1	1.010	1.017
(4) Limited Paid to Paid + Case Ratio	0.975	0.975
(5) Limited Paid 19th-to-Ultiamte Loss Development Factor = (3) / (4)	1.036	1.043

Indemnity Paid + Case Tail Factor Analysis

(1)	(2)	(3)	(4)	(5)	(6)	(7) = [1 + (3) - (2) + ((5) - (4)) / (6)] / (2)
					Factor to	Indicated
	Losses for Policy Year		Losses for All Prior Policy Years		Adjust Losses	19th-to-Ult Development
Policy Year	19th Report	20th Report	Previous	Current	for Prior Policy Years	for Policy Year
1990	227,070,139	227,101,992	1,740,222,671	1,741,179,800	0.551	1.008
1991	225,355,332	225,327,519	1,968,281,782	1,970,265,933	0.630	1.014
1992	200,549,303	200,679,586	2,195,087,537	2,198,064,275	0.787	1.020
1993	183,188,006	183,535,361	2,399,277,237	2,401,159,473	0.934	1.013
1994	163,726,551	163,870,863	2,566,044,372	2,568,255,311	1.098	1.013
1995	141,313,490	141,545,926	2,727,688,854	2,729,411,452	1.309	1.011
1996	147,966,426	148,885,395	2,870,128,232	2,872,051,105	1.256	1.017
1997	154,311,500	154,746,190	3,017,196,317	3,016,590,277	1.201	1.000
1998	182,540,288	182,664,069	3,169,160,582	3,171,144,364	1.008	1.011
1999	178,274,607	178,699,133	3,218,869,043	3,221,136,033	0.987	1.015

T&M 19th-to-Ultimate Loss Development Factor	1.012
NCCI Indemnity 19th-to-Ultimate Loss Development Factor	1.012

Medical Paid + Case Tail Factor Analysis

(1)	(2)	(3)	(4)	(5)	(6)	(7) = [1 + (3) - (2) + ((5) - (4)) / (6)] / (2)
					Factor to	Indicated
	Losses for Policy Year		Losses for All Prior Policy Years		Adjust Losses	19th-to-Ult Development
Policy Year	19th Report	20th Report	Previous	Current	for Prior Policy Years	for Policy Year
1990	182,510,617	182,123,647	1,210,755,402	1,209,584,537	0.502	0.985
1991	191,573,815	192,847,310	1,391,708,184	1,391,806,331	0.551	1.008
1992	165,486,131	165,432,240	1,584,603,674	1,590,881,650	0.723	1.052
1993	169,737,364	170,485,300	1,756,367,002	1,757,043,235	0.775	1.010
1994	151,270,232	149,612,389	1,915,056,614	1,916,008,300	0.935	0.996
1995	134,266,425	134,657,354	2,061,176,436	2,065,782,021	1.111	1.034
1996	128,546,172	128,496,716	2,199,686,714	2,200,950,027	1.194	1.008
1997	152,933,798	153,607,274	2,327,361,810	2,327,688,399	1.021	1.006
1998	156,288,073	155,917,719	2,480,377,273	2,483,028,345	1.011	1.014
1999	162,855,364	162,873,779	2,532,868,394	2,541,713,451	0.946	1.058

T&M 19th-to-Ultimate Loss Development Factor	1.020
NCCI Indemnity 19th-to-Ultimate Loss Development Factor	1.020

Missouri Department of Commerce and Insurance   Exhibit XI
Review of 2021 NCCI Loss Cost Filing   Page 1
Derivation of the Factor to Adjust Losses for Prior Policy Years for Valuation Year 2019

Indemnity Paid + Case Data

(1)	(2)		(3)		(4) = (3) / (2)	(5) = 1 / (4)	(6)
	Older Year		Newer Year		Growth	Inverse Growth	Upward Cum.
Policy Year	Evaluation Date	Paid + Case Losses	Evaluation Date	Paid + Case Losses	Ratio	Ratio	Prod of (5)
1986/1985	PY 1985@2004	140,568,476	PY 1986@2005	157,871,301	1.123	0.890	0.717
1987/1986	PY 1986@2005	157,871,301	PY 1987@2006	179,756,406	1.139	0.878	0.805
1988/1987	PY 1987@2006	177,454,320	PY 1988@2007	198,950,113	1.121	0.892	0.916
1989/1988	PY 1988@2007	198,505,376	PY 1989@2008	220,882,644	1.113	0.899	1.027
1990/1989	PY 1989@2008	219,039,126	PY 1990@2009	232,456,428	1.061	0.942	1.143
1991/1990	PY 1990@2009	227,189,268	PY 1991@2010	225,498,511	0.993	1.007	1.213
1992/1991	PY 1991@2010	225,498,511	PY 1992@2011	200,835,736	0.891	1.123	1.204
1993/1992	PY 1992@2011	200,811,854	PY 1993@2012	183,496,440	0.914	1.094	1.072
1994/1993	PY 1993@2012	183,545,036	PY 1994@2013	165,007,399	0.899	1.112	0.980
1995/1994	PY 1994@2013	163,997,293	PY 1995@2014	141,633,259	0.864	1.158	0.881
1996/1995	PY 1995@2014	141,608,646	PY 1996@2015	148,254,038	1.047	0.955	0.761
1997/1996	PY 1996@2015	148,247,760	PY 1997@2016	154,914,525	1.045	0.957	0.796
1998/1997	PY 1997@2016	154,914,525	PY 1998@2017	182,906,839	1.181	0.847	0.832
1999/1998	PY 1998@2017	192,061,279	PY 1999@2018	195,440,205	1.018	0.983	0.983

| | | | | | | T&M Selected | 0.987 |
| | | | | | NCCI Factor to Adjust Losses for Prior Years - 10-Year Average | | 0.987 |

Medical Paid + Case Data

(1)	(2)		(3)		(4) = (3) / (2)	(5) = 1 / (4)	(6)
	Older Year		Newer Year		Growth	Inverse Growth	Upward Cum.
Policy Year	Evaluation Date	Paid + Case Losses	Evaluation Date	Paid + Case Losses	Ratio	Ratio	Prod of (5)
1986/1985	PY 1985@2004	94,696,424	PY 1986@2005	108,101,402	1.142	0.876	0.537
1987/1986	PY 1986@2005	108,101,402	PY 1987@2006	140,700,501	1.302	0.768	0.613
1988/1987	PY 1987@2006	139,423,344	PY 1988@2007	152,395,769	1.093	0.915	0.798
1989/1988	PY 1988@2007	152,292,010	PY 1989@2008	169,069,844	1.110	0.901	0.872
1990/1989	PY 1989@2008	167,794,520	PY 1990@2009	186,527,540	1.112	0.900	0.968
1991/1990	PY 1990@2009	182,662,813	PY 1991@2010	191,692,398	1.049	0.953	1.076
1992/1991	PY 1991@2010	191,692,398	PY 1992@2011	166,012,660	0.866	1.155	1.129
1993/1992	PY 1992@2011	166,008,493	PY 1993@2012	170,212,510	1.025	0.975	0.978
1994/1993	PY 1993@2012	170,220,623	PY 1994@2013	152,705,754	0.897	1.115	1.003
1995/1994	PY 1994@2013	151,577,681	PY 1995@2014	134,631,701	0.888	1.126	0.900
1996/1995	PY 1995@2014	134,623,547	PY 1996@2015	128,910,066	0.958	1.044	0.799
1997/1996	PY 1996@2015	128,897,172	PY 1997@2016	153,272,672	1.189	0.841	0.765
1998/1997	PY 1997@2016	153,272,672	PY 1998@2017	156,640,785	1.022	0.978	0.910
1999/1998	PY 1998@2017	164,679,784	PY 1999@2018	177,106,284	1.075	0.930	0.930

| | | | | | | T&M Selected | 0.946 |
| | | | | | NCCI Factor to Adjust Losses for Prior Years - 10-Year Average | | 0.946 |

Missouri Department of Commerce and Insurance   Exhibit XI
Review of 2021 NCCI Loss Cost Filing   Page 2
Derivation of the Factor to Adjust Losses for Prior Policy Years for Valuation Year 2018

Indemnity Paid + Case Data

(1)	(2)		(3)		(4) = (3) / (2)	(5) = 1 / (4)	(6)
	Older Year		Newer Year		Growth	Inverse Growth	Upward Cum.
Policy Year	Evaluation Date	Paid + Case Losses	Evaluation Date	Paid + Case Losses	Ratio	Ratio	Prod of (5)
1985/1984	PY 1984@2003	117,747,967	PY 1985@2004	141,498,461	1.202	0.832	0.607
1986/1985	PY 1985@2004	140,568,476	PY 1986@2005	157,871,301	1.123	0.890	0.729
1987/1986	PY 1986@2005	157,871,301	PY 1987@2006	179,756,406	1.139	0.878	0.819
1988/1987	PY 1987@2006	177,454,320	PY 1988@2007	198,950,113	1.121	0.892	0.932
1989/1988	PY 1988@2007	198,505,376	PY 1989@2008	220,882,644	1.113	0.899	1.045
1990/1989	PY 1989@2008	219,039,126	PY 1990@2009	232,456,428	1.061	0.942	1.163
1991/1990	PY 1990@2009	227,189,268	PY 1991@2010	225,498,511	0.993	1.007	1.234
1992/1991	PY 1991@2010	225,498,511	PY 1992@2011	200,835,736	0.891	1.123	1.225
1993/1992	PY 1992@2011	200,811,854	PY 1993@2012	183,496,440	0.914	1.094	1.091
1994/1993	PY 1993@2012	183,545,036	PY 1994@2013	165,007,399	0.899	1.112	0.997
1995/1994	PY 1994@2013	163,997,293	PY 1995@2014	141,633,259	0.864	1.158	0.896
1996/1995	PY 1995@2014	141,608,646	PY 1996@2015	148,254,038	1.047	0.955	0.774
1997/1996	PY 1996@2015	148,247,760	PY 1997@2016	154,914,525	1.045	0.957	0.811
1998/1997	PY 1997@2016	154,914,525	PY 1998@2017	182,906,839	1.181	0.847	0.847

					T&M Selected	1.008
				NCCI Factor to Adjust Losses for Prior Years - 10-Year Average	1.008

Medical Paid + Case Data

(1)	(2)		(3)		(4) = (3) / (2)	(5) = 1 / (4)	(6)
	Older Year		Newer Year		Growth	Inverse Growth	Upward Cum.
Policy Year	Evaluation Date	Paid + Case Losses	Evaluation Date	Paid + Case Losses	Ratio	Ratio	Prod of (5)
1985/1984	PY 1984@2003	77,605,188	PY 1985@2004	95,327,411	1.228	0.814	0.470
1986/1985	PY 1985@2004	94,696,424	PY 1986@2005	108,101,402	1.142	0.876	0.577
1987/1986	PY 1986@2005	108,101,402	PY 1987@2006	140,700,501	1.302	0.768	0.659
1988/1987	PY 1987@2006	139,423,344	PY 1988@2007	152,395,769	1.093	0.915	0.858
1989/1988	PY 1988@2007	152,292,010	PY 1989@2008	169,069,844	1.110	0.901	0.938
1990/1989	PY 1989@2008	167,794,520	PY 1990@2009	186,527,540	1.112	0.900	1.041
1991/1990	PY 1990@2009	182,662,813	PY 1991@2010	191,692,398	1.049	0.953	1.157
1992/1991	PY 1991@2010	191,692,398	PY 1992@2011	166,012,660	0.866	1.155	1.215
1993/1992	PY 1992@2011	166,008,493	PY 1993@2012	170,212,510	1.025	0.975	1.052
1994/1993	PY 1993@2012	170,220,623	PY 1994@2013	152,705,754	0.897	1.115	1.078
1995/1994	PY 1994@2013	151,577,681	PY 1995@2014	134,631,701	0.888	1.126	0.968
1996/1995	PY 1995@2014	134,623,547	PY 1996@2015	128,910,066	0.958	1.044	0.859
1997/1996	PY 1996@2015	128,897,172	PY 1997@2016	153,272,672	1.189	0.841	0.823
1998/1997	PY 1997@2016	153,272,672	PY 1998@2017	156,640,785	1.022	0.978	0.978

					T&M Selected	1.011
				NCCI Factor to Adjust Losses for Prior Years - 10-Year Average	1.011

ATTACHMENT A
NCCI RESPONSES TO OBJECTIONS INCLUDING EXHIBITS

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

MISSOURI ADVISORY LOSS COSTS AND RATING VALUES FILING—JANUARY 1, 2021

RESPONSES TO THE DEPARTMENT OF COMMERCE AND INSURANCE'S REQUESTS
DATED SEPTEMBER 28, 2020

1. **Have any of the data sources used in determining the Missouri Advisory Loss Costs and Rating Values Filing changed since the previous filing? For example, using data from a different data call to develop expenses.**

    There have not been any changes in the underlying data sources between this and last year's filings.

2. **Please provide the estimated overall impact for each change in methodology from the previous filing.**

    Two changes to Missouri's aggregate ratemaking methodology have been included in this year's filing.

    - In last year's filing, the most recent three-year average of historical paid loss development factors through a 19th report was utilized. In this year's filing, a two-year average of paid loss development factors was incorporated—lowering the otherwise-calculated overall average loss cost level change by 0.3%.

    - The change to the current AOE provision in this year's filing (+0.7%) is primarily driven by the proposed update to the AOE methodology, as described on page 19 of the filing.

3. **Page 27 of 98: Please provide the updated calculation for the terrorism advisory lost cost if any of the underlying assumptions and/or data have changed.**

    There have not been any changes to the methodology or assumptions used in determining the terrorism advisory loss cost between this and last year's filings.

4. **Please provide loss development triangles with at least 10 diagonals for both the voluntary and assigned risk markets separated by indemnity, medical, and DCCE for the past 19 years. In the prior year, this was submitted as NCCI response to ATSI Interrogatories for MO 1-1-2020.xlsx. An updated version of this file will suffice for these purposes.**

    Please see the attached Exhibit 4 for the available loss development triangles.

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

MISSOURI ADVISORY LOSS COSTS AND RATING VALUES FILING—JANUARY 1, 2021

RESPONSES TO THE DEPARTMENT OF COMMERCE AND INSURANCE'S REQUESTS
DATED SEPTEMBER 28, 2020

5. **Please explain your reasoning and provide detailed support for using a 2-year average of the paid LDFs in this filing when last year a 3-year average was used.**

Prior to the January 1, 2018 filing, the most recent two-year average of historical paid loss development factors through a 19th report was utilized in Missouri's annual loss cost filings. In response to atypical indemnity paid link ratios observed at early maturities (1:2 and 2:3) on the @12/16 diagonal, a temporary shift to a three-year average was incorporated into the January 1, 2018 Missouri filing to temper the influence that these link ratios would otherwise have on the overall aggregate loss cost level indication. In this year's filing, reliance on two-year average paid loss development (unimpacted by suspected outlier link ratios) was once again incorporated as being both actuarially appropriate and responsive to Missouri's workers compensation environment.

6. **Please provide an Excel file with the specific calculations used to determine Appendix A-II, Section G, column (6).**

Please see the attached Exhibit 6 for the requested information. The calculations are provided for the most recent two valuations separately for indemnity and medical.

7. **Please provide an excel file spreadsheet with the specific calculations that provide the derivation of the 0.859 factor in Appendix A-II, Section H, line 2.**

A countrywide unlimited tail factor (ULDF) is determined based on financial data for NCCI states. Then a countrywide limited tail factor ($CLDF_T$) is calculated based on Missouri's large loss threshold, T.

$$CLDF_T = (1 - XS_T) / (1/ULDF - XS_T/ELDF_T), \text{ where}$$

XS_T is the excess loss ratio for threshold T
$ELDF_T$ is the excess loss development factor for threshold T

F_T, the factor to adjust the loss development factor to a limited basis, is then calculated. This is the ratio of limited-to-unlimited countrywide tail factors.

$$F_T = (CLDF_T - 1.0) / (ULDF - 1.0)$$

2

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

MISSOURI ADVISORY LOSS COSTS AND RATING VALUES FILING—JANUARY 1, 2021

RESPONSES TO THE DEPARTMENT OF COMMERCE AND INSURANCE'S REQUESTS
DATED SEPTEMBER 28, 2020

Appendix A-II, Section K, Line 1 shows the large loss threshold used in this year's Missouri filing ($9,919,089). Using the terminology above, the ULDF is 1.025, the $CLDF_T$ at a threshold of $9M is 1.0210, and the $CLDF_T$ at a threshold of $10M is 1.0215. Using the above-referenced formula for F_T at each of the $9M and $10M thresholds and then interpolating between those results produces the 0.859 factor corresponding to Missouri's large loss threshold.

8. **Exhibit II Section B Page 43 of 98:**

   a) **Please provide in excel an additional 5 years of Countrywide AOE Ultimate AOE Ratios.**
   b) **Please provide the underlying data and calculations to bring AOE to an ultimate level including the development factors, AOE, losses, and any other values used to determine the Ultimate AOE ratios.**
   c) **Please provide the Ultimate AOE Ratios for MO only data.**
   d) **Please provide your reasoning and support for the selected Countrywide AOE ratio of 8.9% when all other accident years aside from 2019 are below 8.9%.**
   e) **Please provide the underlying data and calculations for the MO Selected AOE ratio.**

As a result of Third-Party Administrator (TPA) agreements, some carriers report losses on Financial Call 19 without associated AOE. Beginning with this filing, for policies associated with TPA agreements where the AOE is not reported to NCCI, the associated losses were excluded from the AOE analysis so that they did not impact the ultimate AOE ratios. The detailed data required to make this adjustment was only collected from the carriers for the most recent five experience years in response to an NCCI data request. As the AOE ratios are based on data collected on countrywide Financial Call 19, ultimate AOE ratios by individual state are not available.

It should be noted that only the losses without associated AOE were removed from this year's AOE analysis, rather than entire carrier Call 19 data submissions.

Please see the attached Exhibit 8 for the requested calculations underlying the new AOE methodology proposed with this year's filing. Note that the historical countrywide AOE values shown for years 2015 through 2018 on page 43 of the filing are based on the current AOE methodology. The countrywide selected AOE provision of 8.9% shown on page 43 of the filing is based on the five years of AOE indications shown in Exhibit 8.

The Missouri selected AOE provision is based on a weighted average (71% / 29%, respectively) of the countrywide private carrier AOE provision and the indicated provision for the Missouri state fund.

9. **Page 45 of 98: Exhibit II Section E: Please explain the rationale of only using the average of 2 years to select the DCCE loss development factor. Why weren't more years considered or a geometric average?**

   A two-year average was selected as a balance between stability and responsiveness as well as consistency with the two-year average paid loss development factors utilized in the determination of the overall average loss cost level change.

10. **Page 44 of 98: Exhibit II Section C: Please provide an excel file that expands this section to include years 2009 through 2013.**

    The requested information is as follows:

Policy Year	(1) Reported Ratio of Paid DCCE to Paid Losses	(2) Age to Ultimate Development Factor	(3) = (1)x(2) Ultimate DCCE Ratio
2009	0.111	0.985	0.109
2010	0.110	0.979	0.108
2011	0.109	0.976	0.106
2012	0.109	0.972	0.106
2013	0.109	0.966	0.105

11. **Page 44 of 98: Companies that did not report AOE may be including expenses typically considered to be AOE in DCCE expenses, potentially inflating the DCCE provision for the same reasons that this error would reduce the AOE provision. Were companies that did not report AOE excluded from the calculation of the DCCE provision as well? If not, please provide a revised DCCE provision excluding DCCE and losses from companies that did not report AOE.**

Instances of carriers reporting losses on Call 19 without associated AOE is unlikely to affect DCCE reporting. As a result of TPA agreements, some carriers report losses on Call 19 without associated AOE. These TPA contracts typically involve AOE payments only—and exclude the handling of DCCE costs. As such, carriers are able to account for and fully report their DCCE payments to NCCI.

It should be noted that only the losses without associated AOE were removed from this year's AOE analysis, rather than entire carrier Call 19 data submissions.

12. **Appendix A-IV Section I Page 62 of 98: Please show the calculations underlying the factors in Col (4) and Col (5).**

Please see the attached Exhibit 12 for the requested information.

13. **Appendix B-I Section I Page 65 of 98: Please provide underlying data and calculations for how the Likely-to-Develop and Not-Likely-to-Develop columns are calculated.**

Please see the attached Exhibit 13 for the requested information.

14. **Page 61 of 98 (Appendix A-III). Provide the underlying data, fits, assumptions, calculations, selections, and rationale of the selection of the indemnity and medical trend factors. Please include an update of the excel file provided last year entitled Supplemental Loss Development and Trend Information. Please include fifteen years of information including Lost-Time claim frequency and severity based on data in excess of wage inflation, claim counts, premium, limited indemnity losses, and limited medical losses.**

Please see the attached Exhibit 14 for the requested trend information.

The filing proposes no changes to the annual loss ratio trend factors that have been in effect since January 1, 2020. Underlying the proposed loss ratio trend factors in this year's filing are historically observed declines in lost-time claim frequency, relatively flat year-to-year changes in indemnity claim severity, and a moderately increasing pattern of medical lost-time claim severities.

Consideration of the trend component in this year's filing included a review of loss ratio patterns observed over an extended period of time. This allows one to review trends over an entire underwriting cycle and smooth out year-to-year fluctuations. The proposed annual loss ratio trend factors utilized in this filing were selected based on actuarial judgment. Results of exponential trends fit to a varying number of policy year loss ratios are provided below.

Policy Year Loss Ratio Exponential Trend Fits

	Indemnity	Medical
8-point	-2.6%	-1.3%
10-point	-2.0%	-1.1%
12-point	-2.0%	-1.0%
15-point	-2.1%	-1.0%

15. **Please provide the indication as of 1/1/2021 if all assigned risk experience was excluded. Please provide these calculations in an excel file and include all the underlying components that will change because they are based on only voluntary experience, such as loss development, trend, LAE, etc.**

All else equal, an overall average loss cost level indication of −0.7% results after excluding the assigned risk premium and loss experience reported to NCCI by Missouri's designated assigned risk plan administrator from the filing's experience period. Please see the attached Exhibit 15 for additional detail.

16. **Page 72 of 98 (Appendix B-II). Please explain how these impacts are not having a disparate effect on classes with low loss costs. For example, a company with a loss cost of $0.05 would never decrease for several of the industry groups since the cap from below is less than 20%.**

NCCI recently analyzed the impact of the swing limit bound calculations for classifications with significantly low loss costs. In these cases, the multiplicative bound calculation may result in the upper and lower bounds for a classification being equal to the current loss cost for that classification. Prior to the January 1, 2020 Missouri filing, this may have restricted a classification's proposed loss cost to its present value, eliminating any possible responsiveness to a change indicated by the underlying data.

In last year's Missouri filing, NCCI implemented a modification to the calculation of the loss cost bounds by classification when both the upper and lower bounds are equal to the current loss cost. In these cases, NCCI reviews the change indicated by the classification and the corresponding industry group. If the direction of these two indications are aligned, NCCI adjusts the upper or lower bound so that the proposed loss cost may change by one cent from its current value in the direction of the change indicated for the classification.

17. **Please provide any updates on class ratemaking research, status and results, or stability performance results on tests of the performance of the recently implemented small class ratemaking project intended to address the stability of the small classes.**

   Please see the attached Exhibit 17 which contains the most recent NCCI research related to the stability of small classes in NCCI ratemaking. The following NCCI Actuarial Committee presentations are contained in Exhibit 17:

   - "Class Ratemaking Research: Status and Results" presented February 23, 2017
   - "Class Ratemaking Research: Final Wrap-Up" presented February 22, 2018

18. **Please provide an Excel file with seven columns of information. The first column should be the class code, the second column should be the exposures by class code, the third column should be the current advisory loss cost, the fourth column should be the proposed advisory loss cost by class code and the last three columns should be the percentage loss cost changes effective 2021, 2020, and 2019 by class code. Include totals in columns 5, 6, and 7 and please exclude discontinued classes.**

   Please see the attached Exhibit 18 for the requested information.

19. **Please confirm that the indication provided in Exhibit I is an indication for the voluntary market but that the data upon which it is based is on combined voluntary and assigned risk plan losses. If not, please explain. Please confirm that although the voluntary indications are based on combined voluntary and assigned risk plan data, that you are not providing loss costs or rates for the assigned risk market.**

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

MISSOURI ADVISORY LOSS COSTS AND RATING VALUES FILING—JANUARY 1, 2021

RESPONSES TO THE DEPARTMENT OF COMMERCE AND INSURANCE'S REQUESTS
DATED SEPTEMBER 28, 2020

The voluntary market advisory loss cost level indication determined in the filing's Exhibit I is based on combined voluntary and assigned risk premium and loss experience reported to NCCI. NCCI's role in Missouri does not include the filing of loss costs or rates for the state's assigned risk market.

Exhibit 8

NATIONAL COUNCIL ON COMPENSATION INSURANCE
2020 ANNUAL COUNTRYWIDE ADJUSTING AND OTHER EXPENSE REVIEW

Each year, NCCI calculates a countrywide (CW) adjusting and other expense (AOE) provision. This file provides the CW AOE provision that will be filed as applicable during the 2020–2021 filing season.

NCCI calculates ultimate AOE ratios by accident year, separately for both paid and incurred data (paid plus unpaid). The selected AOE ratio for an individual year is calculated as the average of the paid and incurred AOE ratio indications. The AOE ratios by year as well as the selected provision is shown in Exhibit 1.

Exhibit 1: Ultimate AOE Ratios and Countrywide Selection

Accident Year	Ultimate AOE Ratio Based on Paid Data	Ultimate AOE Ratio Based on Incurred Data	Ultimate AOE Ratio Based on Avg. of Paid and Incurred Data
2015	7.8%	7.8%	7.8%
2016	8.3%	8.2%	8.3%
2017	8.9%	8.8%	8.9%
2018	8.8%	8.8%	8.8%
2019	9.0%	8.8%	8.9%
	Selected AOE Provision		**8.9%**

Exhibit 8

NATIONAL COUNCIL ON COMPENSATION INSURANCE
2020 ANNUAL COUNTRYWIDE ADJUSTING AND OTHER EXPENSE REVIEW

Data Used

NCCI uses private carrier data reported on NCCI Call 19 to calculate the ultimate AOE ratios. Call 19 is a CW Call in which data is reported for the most recent 10 individual accident years, in addition to an aggregated "prior line" in which data is reported for all years older than the most recent 10. The data reported includes losses and AOE on both a paid and unpaid (i.e., case plus IBNR reserves) basis. Further, the Call 19 data is reported for all policy types—including that for large deductible policies.

Methodology Overview

To determine the ultimate AOE ratios, NCCI uses the following methodology for each accident year:

- After developing AOE and losses separately to a 10th report, calculate the ratio of AOE-to-losses at that age of maturity
- Apply a 10th-to-ultimate (tail) factor to the AOE ratios at a 10th report
- Apply the adjustment for AOE below the deductible limit
    - The purpose of this adjustment is to account for carriers that treat reimbursements of AOE below a deductible limit as a credit to their total AOE. The adjustment reverses this credit, increasing the AOE dollars as a percentage of losses.
- Apply the adjustment for losses associated with Third-Party Administrator (TPA) Agreements (new for the 2020 Annual CW AOE Review):
    - As a result of TPA agreements, some carriers report losses on Call #19 without associated AOE. The purpose of this adjustment is to remove these losses from the analysis.
- Apply the adjustment to convert losses from a net-of-deductible to a gross-of-deductible basis
    - Up to this point in the calculation, the data used includes losses from large deductible policies, net of the deductible. The purpose of this adjustment is to convert the data to a full coverage basis, allowing the AOE provision to be on the same basis as the losses used in individual state experience filings.

Exhibit 8

NATIONAL COUNCIL ON COMPENSATION INSURANCE
2020 ANNUAL COUNTRYWIDE ADJUSTING AND OTHER EXPENSE REVIEW

Exhibit 2: Calculation of Ultimate AOE Ratios—Paid Data

Accident Year	(1) Paid AOE at Current Report	(2) Cumulative Paid AOE Development Factors	(3)=(1)x(2) Estimated Paid AOE Developed to a 10th Report	(4) Paid Losses at Current Report	(5) Cumulative Paid Loss Development Factors	(6)=(4)x(5) Estimated Paid Losses Developed to a 10th Report
2015	1,762,405,982	1.088	1,917,497,708	15,877,014,233	1.141	18,115,673,240
2016	1,798,537,405	1.137	2,044,937,029	14,769,511,806	1.223	18,063,112,939
2017	1,796,408,238	1.221	2,193,414,459	13,260,201,068	1.391	18,444,939,686
2018	1,647,154,595	1.393	2,294,486,351	10,872,410,528	1.800	19,570,338,950
2019	1,181,971,666	2.069	2,445,499,377	5,088,736,249	3.956	20,131,040,601

Accident Year	(7) 10th Report-to-Ultimate Paid AOE Tail Factor	(8)=(3)/(6)x(7) Estimated Ultimate AOE Ratio Before Adjustments	(9) Adjustment for AOE Below the Deductible Limit	(10) Adjustment for Losses Associated with TPA Agreements	(11) Adjustment to Convert From Net to Gross of Deductible	(12)= [(8)+(9)]x(10)x(11) Estimated Ultimate AOE Ratio After Adjustments
2015	0.910	9.6%	0.009	1.059	0.70	7.8%
2016	0.910	10.3%	0.010	1.057	0.70	8.3%
2017	0.910	10.8%	0.011	1.065	0.70	8.9%
2018	0.910	10.6%	0.011	1.067	0.70	8.8%
2019	0.910	11.0%	0.009	1.078	0.70	9.0%

Exhibit 8

NATIONAL COUNCIL ON COMPENSATION INSURANCE
2020 ANNUAL COUNTRYWIDE ADJUSTING AND OTHER EXPENSE REVIEW

Exhibit 3: Calculation of Ultimate AOE Ratios—Incurred Data

Accident Year	(1) Incurred AOE at Current Report	(2) Cumulative Incurred AOE Development Factors	(3)=(1)x(2) Estimated Incurred AOE Developed to a 10th Report	(4) Incurred Losses at Current Report	(5) Cumulative Incurred Loss Development Factors	(6)=(4)x(5) Estimated Incurred Losses Developed to a 10th Report
2015	2,096,541,259	1.018	2,134,279,002	22,876,301,959	0.976	22,327,270,712
2016	2,232,668,241	1.014	2,263,925,596	23,387,611,726	0.956	22,358,556,810
2017	2,389,604,132	1.008	2,408,720,965	24,148,808,712	0.933	22,530,838,528
2018	2,474,282,050	0.989	2,447,064,947	25,582,304,982	0.906	23,177,568,314
2019	2,515,285,647	0.967	2,432,281,221	25,457,147,440	0.886	22,555,032,632

Accident Year	(7) 10th Report-to-Ultimate Incurred AOE Tail Factor	(8)=(3)/(6)x(7) Estimated Ultimate AOE Ratio Before Adjustments	(9) Adjustment for AOE Below the Deductible Limit	(10) Adjustment for Losses Associated with TPA Agreements	(11) Adjustment to Convert From Net to Gross of Deductible	(12)= [(8)+(9)]x(10)x(11) Estimated Ultimate AOE Ratio After Adjustments
2015	1.000	9.6%	0.009	1.059	0.70	7.8%
2016	1.000	10.1%	0.010	1.057	0.70	8.2%
2017	1.000	10.7%	0.011	1.065	0.70	8.8%
2018	1.000	10.6%	0.011	1.067	0.70	8.8%
2019	1.000	10.8%	0.009	1.078	0.70	8.8%

Exhibit 8

NATIONAL COUNCIL ON COMPENSATION INSURANCE
2020 ANNUAL COUNTRYWIDE ADJUSTING AND OTHER EXPENSE REVIEW

Exhibit 4: AOE Tail Factor Selection—Paid

Valuation Date	(1) Paid AOE 10th-to-Ultimate	(2) Paid Losses 10th-to-Ultimate	(3) = (1)/(2) Paid AOE-to-Losses 10th-to-Ultimate Tail Factor
12/31/2014	1.089	1.233	0.883
12/31/2015	1.057	1.214	0.871
12/31/2016	1.081	1.198	0.902
12/31/2017	1.073	1.192	0.900
12/31/2018	1.115	1.138	0.980
12/31/2019	1.060	1.158	0.915
	Selected Paid AOE Tail Factor		**0.910**

Exhibit 5: AOE Tail Factor Selection—Incurred

Valuation Date	(1) Incurred AOE 10th-to-Ultimate	(2) Incurred Losses 10th-to-Ultimate	(3) = (1)/(2) Incurred AOE-to-Losses 10th-to-Ultimate Tail Factor
12/31/2014	1.027	1.033	0.994
12/31/2015	0.999	1.017	0.982
12/31/2016	1.004	0.995	1.009
12/31/2017	1.000	0.997	1.003
12/31/2018	1.041	0.960	1.084
12/31/2019	1.008	0.976	1.033
	Selected Incurred AOE Tail Factor		**1.000**

5

Exhibit 12

Missouri
1/1/2021

	Policy Period	(1) PY Standard Earned Premiums	(2) Premiums @ PY Manual Rates	Current Manual to Standard Ratio (2)/(1)		Policy Period	(3) PY Standard Earned Premiums	(4) Premiums @ PY Manual Rates	Proposed Manual to Standard Ratio (4)/(3)
Manufacturing	7/12-6/13	206,101,988	254,604,484			7/13-6/14	222,009,841	279,735,283	
	7/13-6/14	221,660,970	279,320,440			7/14-6/15	232,439,158	293,702,567	
	7/14-6/15	231,180,027	292,524,702			7/15-6/16	230,982,906	290,874,238	
	7/15-6/16	230,471,772	290,774,960			7/16-6/17	232,289,469	292,288,442	
	7/16-6/17	227,348,695	285,543,962			7/17-6/18	243,593,444	304,607,697	
	5 Yr Totals	1,116,763,452	1,402,768,548	1.256		5 Yr Totals	1,161,314,818	1,461,208,227	1.258
Contracting	7/12-6/13	257,822,601	284,485,780			7/13-6/14	289,061,775	322,364,855	
	7/13-6/14	289,087,844	322,391,681			7/14-6/15	320,850,952	361,899,314	
	7/14-6/15	320,915,832	362,043,612			7/15-6/16	340,894,092	385,033,841	
	7/15-6/16	341,109,948	385,286,524			7/16-6/17	332,663,066	374,203,093	
	7/16-6/17	332,575,463	373,772,569			7/17-6/18	326,282,342	366,416,407	
	5 Yr Totals	1,541,511,688	1,727,980,166	1.121		5 Yr Totals	1,609,752,227	1,809,917,510	1.124
Office & Clerical	7/12-6/13	149,427,073	167,176,402			7/13-6/14	160,292,725	181,260,989	
	7/13-6/14	160,250,256	181,216,993			7/14-6/15	164,879,374	187,499,859	
	7/14-6/15	165,260,213	188,839,126			7/15-6/16	164,730,413	188,779,696	
	7/15-6/16	164,472,196	188,480,244			7/16-6/17	163,704,664	188,456,926	
	7/16-6/17	163,568,438	188,609,954			7/17-6/18	162,731,149	184,635,343	
	5 Yr Totals	802,978,176	914,322,719	1.139		5 Yr Totals	816,338,325	930,632,813	1.140
Goods & Services	7/12-6/13	355,977,622	372,368,517			7/13-6/14	380,262,527	406,138,517	
	7/13-6/14	380,249,298	406,142,870			7/14-6/15	399,768,337	431,570,412	
	7/14-6/15	399,754,655	432,366,639			7/15-6/16	406,789,502	442,937,456	
	7/15-6/16	405,888,700	442,100,791			7/16-6/17	405,376,712	441,612,061	
	7/16-6/17	405,924,012	441,449,336			7/17-6/18	415,150,286	451,003,468	
	5 Yr Totals	1,947,794,287	2,094,428,153	1.075		5 Yr Totals	2,007,347,364	2,173,261,914	1.083
Miscellaneous	7/12-6/13	203,332,899	217,506,139			7/13-6/14	236,942,977	255,230,302	
	7/13-6/14	237,457,616	255,850,336			7/14-6/15	252,433,172	274,166,456	
	7/14-6/15	252,765,195	274,496,554			7/15-6/16	264,304,824	282,728,323	
	7/15-6/16	262,692,469	281,034,443			7/16-6/17	267,650,506	286,788,896	
	7/16-6/17	265,871,319	284,632,274			7/17-6/18	277,589,330	293,160,800	
	5 Yr Totals	1,222,119,498	1,313,519,746	1.075		5 Yr Totals	1,298,920,809	1,392,074,777	1.072

Exhibit 13

LIMITED INDEMNITY LOSS
DEVELOPMENT
Likely

Missouri

01/01/21

| | | **1st Report Start:** | 7/1/2017 |
| | | **1st Report End:** | 6/30/2018 |

PY Data	1st Report	2nd Report	3rd Report	4th Report	5th Report	6th Report	7th Report	8th Report	9th Report	10th Report
7/04-6/05	85,873,459	99,509,003	107,909,762	115,044,355	118,736,234	121,084,306	123,258,576	125,144,384	124,601,154	125,313,571
7/05-6/06	76,947,671	91,690,283	101,288,877	107,913,115	112,385,948	114,492,756	116,431,008	117,483,461	118,047,324	119,013,915
7/06-6/07	76,140,429	88,429,315	97,122,490	102,414,309	106,329,085	108,223,440	110,895,382	111,665,771	112,488,047	113,668,298
7/07-6/08	77,323,191	93,390,680	101,811,778	107,897,799	111,698,789	116,127,037	117,726,530	118,428,820	119,979,745	120,041,004
7/08-6/09	60,056,111	72,230,419	81,623,268	86,439,771	91,063,778	93,644,828	95,068,921	96,622,964	96,975,915	97,418,302
7/09-6/10	62,432,683	75,716,217	83,041,098	89,872,100	96,755,700	100,059,558	101,365,950	103,351,929	103,561,726	
7/10-6/11	59,888,929	74,026,989	84,952,779	90,496,513	96,111,776	98,305,247	100,992,857	100,757,698		
7/11-6/12	58,046,953	71,695,986	80,407,538	86,924,668	91,885,132	95,617,340	96,634,807			
7/12-6/13	54,691,428	69,112,366	80,098,174	87,268,920	90,842,514	94,194,212				
7/13-6/14	57,664,827	75,172,794	87,427,261	94,363,108	100,107,214					
7/14-6/15	64,412,870	81,164,415	92,404,595	99,602,937						
7/15-6/16	62,621,184	79,331,522	89,100,650							
7/16-6/17	61,505,210	78,362,395								
7/17-6/18	63,426,320									

Link Ratios	1:2	2:3	3:4	4:5	5:6	6:7	7:8	8:9	9:10
7/04-6/05	1.159	1.084	1.066	1.032	1.020	1.018	1.015	0.996	1.006
7/05-6/06	1.192	1.105	1.065	1.041	1.019	1.017	1.009	1.005	1.008
7/06-6/07	1.161	1.098	1.054	1.038	1.018	1.025	1.007	1.007	1.010
7/07-6/08	1.208	1.090	1.060	1.035	1.040	1.014	1.006	1.013	1.001
7/08-6/09	1.203	1.130	1.059	1.053	1.028	1.015	1.016	1.004	1.005
7/09-6/10	1.213	1.097	1.082	1.077	1.034	1.013	1.020	1.002	
7/10-6/11	1.236	1.148	1.065	1.062	1.023	1.027	0.998		
7/11-6/12	1.235	1.122	1.081	1.057	1.041	1.011			
7/12-6/13	1.264	1.159	1.090	1.041	1.037				
7/13-6/14	1.304	1.163	1.079	1.061					
7/14-6/15	1.260	1.138	1.078						
7/15-6/16	1.267	1.123							
7/16-6/17	1.274								

AVERAGE DEV.	1:2	2:3	3:4	4:5	5:6	6:7	7:8	8:9	9:10
5 Year Averages	1.274	1.141	1.079	1.060	1.033	1.016	1.009	1.006	1.006

AVG DEV. TO ULT.	1:U	2:U	3:U	4:U	5:U	6:U	7:U	8:U	9:U	10:U
5 Year Averages	1.880	1.476	1.294	1.199	1.131	1.095	1.078	1.068	1.062	1.056

Exhibit 13

LIMITED INDEMNITY LOSS
DEVELOPMENT
Not-Likely

Missouri
01/01/21

1st Report Start: 7/1/2017
1st Report End: 6/30/2018

PY Data	1st Report	2nd Report	3rd Report	4th Report	5th Report	6th Report	7th Report	8th Report	9th Report	10th Report
7/04-6/05	153,963,719	162,850,099	168,125,804	170,244,621	171,229,670	171,878,571	172,360,979	173,273,486	173,472,044	173,113,149
7/05-6/06	147,478,853	157,943,608	164,060,221	166,495,078	169,362,459	169,315,079	170,012,167	169,695,199	169,884,450	169,487,780
7/06-6/07	151,819,694	164,230,930	169,498,764	173,131,217	174,361,556	175,769,718	175,355,137	175,604,930	175,916,976	175,564,477
7/07-6/08	147,714,143	159,379,477	167,941,265	172,880,371	173,571,859	174,182,814	175,146,585	175,184,872	175,009,255	175,171,636
7/08-6/09	139,687,182	154,274,723	162,009,873	164,259,555	164,639,976	166,277,817	167,130,375	167,879,518	167,598,132	167,979,672
7/09-6/10	134,849,777	146,367,706	154,581,843	157,837,138	159,961,330	159,773,503	160,005,401	162,026,809	162,057,075	
7/10-6/11	140,932,549	156,264,774	164,524,689	167,377,524	170,170,342	172,853,654	173,049,123	172,496,364		
7/11-6/12	140,534,996	153,244,036	163,114,120	166,105,999	168,444,626	169,151,181	170,515,393			
7/12-6/13	154,144,594	169,409,769	178,194,006	183,150,705	185,249,028	187,776,460				
7/13-6/14	155,583,072	172,095,640	181,798,724	187,657,938	189,659,306					
7/14-6/15	161,357,202	180,964,323	191,666,936	198,343,835						
7/15-6/16	164,852,431	182,224,185	192,427,327							
7/16-6/17	166,631,144	183,620,053								
7/17-6/18	177,311,890									

Link Ratios	1:2	2:3	3:4	4:5	5:6	6:7	7:8	8:9	9:10
7/04-6/05	1.058	1.032	1.013	1.006	1.004	1.003	1.005	1.001	0.998
7/05-6/06	1.071	1.039	1.015	1.017	1.000	1.004	0.998	1.001	0.998
7/06-6/07	1.082	1.032	1.021	1.007	1.008	0.998	1.001	1.002	0.998
7/07-6/08	1.079	1.054	1.029	1.004	1.004	1.006	1.000	0.999	1.001
7/08-6/09	1.104	1.050	1.014	1.002	1.010	1.005	1.004	0.998	1.002
7/09-6/10	1.085	1.056	1.021	1.013	0.999	1.001	1.013	1.000	
7/10-6/11	1.109	1.053	1.017	1.017	1.016	1.001	0.997		
7/11-6/12	1.090	1.064	1.018	1.014	1.004	1.008			
7/12-6/13	1.099	1.052	1.028	1.011	1.014				
7/13-6/14	1.106	1.056	1.032	1.011					
7/14-6/15	1.122	1.059	1.035						
7/15-6/16	1.105	1.056							
7/16-6/17	1.102								

AVERAGE DEV.	1:2	2:3	3:4	4:5	5:6	6:7	7:8	8:9	9:10
5 Year Averages	1.107	1.057	1.026	1.013	1.009	1.004	1.003	1.000	0.999

AVG DEV. TO ULT.	1:U	2:U	3:U	4:U	5:U	6:U	7:U	8:U	9:U	10:U
5 Year Averages	1.243	1.123	1.062	1.035	1.022	1.013	1.009	1.006	1.006	1.007

Exhibit 13

LIMITED MEDICAL LOSS DEVELOPMENT
Likely

Missouri

01/01/21

| | | | | | | | | **1st Report Start:** | 7/1/2017 |
| | | | | | | | | **1st Report End:** | 6/30/2018 |

PY Data	1st Report	2nd Report	3rd Report	4th Report	5th Report	6th Report	7th Report	8th Report	9th Report	10th Report
7/04-6/05	102,901,807	109,548,383	112,018,719	113,313,720	115,348,918	115,484,370	114,888,543	116,326,595	116,168,539	115,965,251
7/05-6/06	99,323,294	106,494,451	110,979,108	114,405,386	114,845,328	114,274,953	114,483,824	115,053,323	114,218,196	114,214,813
7/06-6/07	100,854,536	105,262,138	108,886,106	110,393,045	111,390,966	111,011,418	112,211,487	113,066,299	113,408,269	114,173,457
7/07-6/08	100,533,090	106,442,753	110,879,923	114,192,455	114,978,382	114,979,764	115,149,833	115,033,467	114,769,376	114,524,663
7/08-6/09	81,308,701	88,082,227	89,043,099	90,604,958	91,445,358	90,922,546	90,663,811	90,810,422	90,696,941	90,496,918
7/09-6/10	88,550,954	96,355,353	96,689,851	97,648,134	97,963,684	97,419,312	97,202,420	97,107,599	96,812,573	
7/10-6/11	88,012,598	94,354,748	98,107,243	98,594,642	98,566,068	98,666,248	98,597,511	98,322,752		
7/11-6/12	87,546,132	92,904,216	95,374,686	95,879,380	96,297,478	96,713,871	96,114,484			
7/12-6/13	80,516,677	89,567,460	91,821,694	92,549,749	92,021,619	91,856,696				
7/13-6/14	85,660,592	92,602,473	95,520,106	95,957,001	97,743,978					
7/14-6/15	91,353,233	98,679,653	100,438,313	100,156,100						
7/15-6/16	92,766,074	97,522,946	98,512,254							
7/16-6/17	90,990,246	98,233,688								
7/17-6/18	92,887,496									

Link Ratios	1:2	2:3	3:4	4:5	5:6	6:7	7:8	8:9	9:10
7/04-6/05	1.065	1.023	1.012	1.018	1.001	0.995	1.013	0.999	0.998
7/05-6/06	1.072	1.042	1.031	1.004	0.995	1.002	1.005	0.993	1.000
7/06-6/07	1.044	1.034	1.014	1.009	0.997	1.011	1.008	1.003	1.007
7/07-6/08	1.059	1.042	1.030	1.007	1.000	1.001	0.999	0.998	0.998
7/08-6/09	1.083	1.011	1.018	1.009	0.994	0.997	1.002	0.999	0.998
7/09-6/10	1.088	1.003	1.010	1.003	0.994	0.998	0.999	0.997	
7/10-6/11	1.072	1.040	1.005	1.000	1.001	0.999	0.997		
7/11-6/12	1.061	1.027	1.005	1.004	1.004	0.994			
7/12-6/13	1.112	1.025	1.008	0.994	0.998				
7/13-6/14	1.081	1.032	1.005	1.019					
7/14-6/15	1.080	1.018	0.997						
7/15-6/16	1.051	1.010							
7/16-6/17	1.080								

AVERAGE DEV.	1:2	2:3	3:4	4:5	5:6	6:7	7:8	8:9	9:10
5 Year Averages	1.081	1.022	1.004	1.004	0.998	0.998	1.001	0.998	1.000

AVG DEV. TO ULT.	1:U	2:U	3:U	4:U	5:U	6:U	7:U	8:U	9:U	10:U
5 Year Averages	1.179	1.091	1.068	1.064	1.060	1.062	1.064	1.063	1.065	1.065

Exhibit 13

LIMITED MEDICAL LOSS
DEVELOPMENT
Not-Likely

Missouri

01/01/21

1st Report Start: 7/1/2017
1st Report End: 6/30/2018

PY Data	1st Report	2nd Report	3rd Report	4th Report	5th Report	6th Report	7th Report	8th Report	9th Report	10th Report
7/04-6/05	220,323,177	222,181,247	224,103,020	223,283,193	223,427,182	223,859,953	223,269,624	223,246,842	222,765,592	222,809,420
7/05-6/06	229,660,457	231,894,531	232,046,284	231,763,368	231,264,814	231,053,325	231,442,581	231,216,653	231,009,339	231,007,234
7/06-6/07	241,306,088	243,502,966	245,021,830	246,691,026	245,444,289	245,542,135	244,872,395	244,090,067	244,259,979	243,719,247
7/07-6/08	243,699,208	247,359,165	249,999,730	249,947,774	249,328,811	248,757,192	248,888,610	249,613,161	249,912,879	249,675,120
7/08-6/09	235,382,638	240,558,389	243,160,990	242,547,891	241,434,652	241,906,796	241,753,544	241,726,384	241,760,628	242,002,224
7/09-6/10	240,958,854	244,822,641	245,982,044	244,390,674	243,563,947	243,158,152	243,611,923	243,554,766	244,123,607	
7/10-6/11	259,480,693	263,990,360	264,036,079	264,425,414	265,265,677	265,048,153	265,180,263	265,337,372		
7/11-6/12	258,173,684	259,475,257	259,957,587	260,239,592	260,515,446	260,597,290	260,692,346			
7/12-6/13	280,870,657	282,209,512	280,674,474	279,690,603	279,146,571	278,920,375				
7/13-6/14	288,917,634	290,063,212	290,890,174	290,762,417	290,331,292					
7/14-6/15	295,580,762	298,382,730	298,753,651	298,112,255						
7/15-6/16	314,385,521	316,836,577	319,445,775							
7/16-6/17	319,226,767	320,749,188								
7/17-6/18	342,270,269									

Link Ratios	1:2	2:3	3:4	4:5	5:6	6:7	7:8	8:9	9:10
7/04-6/05	1.008	1.009	0.996	1.001	1.002	0.997	1.000	0.998	1.000
7/05-6/06	1.010	1.001	0.999	0.998	0.999	1.002	0.999	0.999	1.000
7/06-6/07	1.009	1.006	1.007	0.995	1.000	0.997	0.997	1.001	0.998
7/07-6/08	1.015	1.011	1.000	0.998	0.998	1.001	1.003	1.001	0.999
7/08-6/09	1.022	1.011	0.997	0.995	1.002	0.999	1.000	1.000	1.001
7/09-6/10	1.016	1.005	0.994	0.997	0.998	1.002	1.000	1.002	
7/10-6/11	1.017	1.000	1.001	1.003	0.999	1.000	1.001		
7/11-6/12	1.005	1.002	1.001	1.001	1.000	1.000			
7/12-6/13	1.005	0.995	0.996	0.998	0.999				
7/13-6/14	1.004	1.003	1.000	0.999					
7/14-6/15	1.009	1.001	0.998						
7/15-6/16	1.008	1.008							
7/16-6/17	1.005								

AVERAGE DEV.	1:2	2:3	3:4	4:5	5:6	6:7	7:8	8:9	9:10
5 Year Averages	1.006	1.002	0.999	1.000	1.000	1.000	1.000	1.001	1.000

AVG DEV. TO ULT.	1:U	2:U	3:U	4:U	5:U	6:U	7:U	8:U	9:U	10:U
5 Year Averages	1.013	1.007	1.005	1.006	1.006	1.006	1.006	1.006	1.005	1.005

Exhibit 17

Exhibit 6-1
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**Class Ratemaking Research:
Status and Results**

Presented by:

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Director & Senior Actuary

NCCI Actuarial Committee Meeting
February 23, 2017
Boca Raton, Florida

Agenda

- Background
- Decisions to Date
- Methodology
- Stability Performance Results
- Accuracy Performance Results
- Remaining Work
- Timeline
- Appendix

Committee members and meeting participants are prohibited from discussing any matter pertaining specifically and directly to rates or loss costs in any particular state or states.

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Background

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Background

- The new class ratemaking methodology was implemented with loss cost/rate filings effective October 1, 2009 and subsequent

- As reported at recent Actuarial Committee (AC) meetings, staff is in the process of reviewing class ratemaking, with particular emphasis on credibility and small classes

- This is a large multi-year project that is nearing completion

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Background

- We've presented analysis over the past two years, including a summary at the last meeting
- Feedback has been received and considered
- Some final decisions have been made
- Some additional items are still being studied

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Decisions to Date

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Decisions to Date

- Decisions that have been made:
  - Keep National Pure Premiums (NPPs) rather than adopting Group Pure Premiums (GPPs)
  - Update credibility for Indicated Pure Premiums (IPPs) and NPPs with the following parameters:
    - Exponent of 0.5
    - Double today's Full Standards
    - Continue separate computations for indemnity and medical
- Performance results have been updated to reflect the proposed credibility selections

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Decisions to Date

Rationale for favoring NPP component over GPP:

- Performance results show NPP in combination with updated credibility is much improved over current
- While additional stability can be achieved using GPPs, updated credibility alone captures the majority of the potential improvement*
- There would be significant changes in Formula Pure Premiums (FPPs) for the first two years+ if GPPs were implemented
- Testing shows that even if swing limits were removed in the initial year of implementation, more than twice as many classes would hit swings in Year 2 under GPPs than under NPPs

* as measured by the number of classes exceeding 10%, 15%, 20% or 25%

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Decisions to Date

Continued …

Rationale for favoring NPP component over GPP:

- In addition, there would likely be periodic, ongoing changes whenever the GPP groupings are reviewed (e.g. if groups are reviewed every 5-10 years, some classes may then shift into a different group)
- Testing shows significant GPP annual changes may occur in the highest cluster in small states
- While fewer clusters would likely be used in small states, it may then be difficult to precisely span the wide range of FPPs
- Preference for fewer changes over more: less disruption, less costly, etc.

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Decisions to Date
Rationale for Credibility parameters:

- The revised '93 method indicates an increased exponent, but the exact value is less clear*
  - Difficult to determine the exact coefficient of variation (CV) since it is greatly impacted by the assumed (unknowable) distribution of FPPs
  - The slope of the fitted line used in deriving the exponent is significantly impacted by the exclusion of the smallest classes and to a lesser extent by the exclusion of the largest classes
  - The choice of fitting a single line, rather than a more complex shape, also impacts the results
- Assuming an underlying lognormal distribution for the FPPs, analysis was presented showing exponents of 0.79 with no exclusions, 0.48 with some small class exclusions, and 0.53 when small and large classes are removed
- An exponent of 0.5 (square root rule) has significant historical precedence** and seems to be a reasonable selection given the range of results

* See "Class Ratemaking Research: Credibility, Part 2" from Nov 2, 2016 AC meeting
** See Longley-Cook, L.H., "An Introduction to Credibility Theory", *PCAS* XLIX, 1962

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Decisions to Date

Continued ...

Rationale for Credibility parameters:

- Determination of the Full Standard (FS) also requires judgment
  - Selecting the point where the slope of the fitted line flattens seems reasonable since that indicates further increases in class size does not significantly reduce the CV
  - As already noted, the CV is heavily dependent on the assumed (unknowable) distribution of FPPs
  - In addition, defining a "flat" slope requires judgment (slope <0.05?, <0.01?, etc.)
- Using performance results can aid in the selection of the FS:
  - While increasing the FS will increase stability, the law of diminishing returns applies
  - Accuracy results using an exponent of 0.5 show 2xCurFS does as well or better than other multiples of the CurFS
- The overwhelming majority of analyses indicated increases in the FS, and generally for at least double the current amounts

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Decisions to Date

Continued ...

Rationale for Credibility parameters:

- Increasing the exponent and FS achieve the project goal of stabilizing small classes

- Excellent performance results were achieved with the selected values

- Complicating the credibility formula with a "dual slope" approach added only marginal improvements

- Combined (indemnity+medical) credibility did not have a significant impact on performance and might be less precise under significant law changes

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Methodology

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Methodology: Yr1-to-Yr1 vs YrX-to-YrX+1

- At the October 2015 AC meeting, staff discussed the use of two different methodologies to compute current and alternative FPPs:
  - Yr1-to-Yr1
  - Yr1-to-Yr2 … generalized as YrX-to-YrX+1
- A recap of these two approaches will be provided on the next two slides

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Methodology: Yr1-to-Yr1

- Due to testing constraints, the Present on Rate Level (PORL) components initially underlying the alternatives for each year use the *current methodology*

- Because the PORL components underlying all alternatives for every year use the current methodology, this produces FPPs that are similar to what would be expected under *Year 1* of a new alternative, including the swing limits

- Directly comparing an alternative FPP from one year to the next year could then be viewed as comparing a "Year 1" value to a "Year 1" value; this is the Yr1-to-Yr1 approach

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Methodology: YrX-to-YrX+1

- The YrX-to-YrX+1 approach simulates changes in the PORL by *replacing* the current-method PORLs with the alternative's FPPs from the prior year, to mimic the production process

- Unlike the actual production process, the FPPs used in this approach are *prior to* the application of swing limits … so this removes the impact of swing limits from our testing (for both Cur and Alts)

- This approach is referred to as YrX-to-YrX+1

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Stability Performance Results

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Stability Performance Results

- New stability results have been produced using the YrX-to-YrX+1 approach*

- Several FPPs are shown:
  - Current
  - Alts that use NPPs with a 0.5 exponent and various multiples of the CurFS
  - GPPs (7 clusters) with a 0.5 exponent and 2xCurFS

- Using 2010 as the year of initial implementation, the change from 2014 to 2015 (Yr5-to-Yr6) is shown because it is closer to a steady state result than earlier years

- While average changes and other metrics are of interest, large changes are the primary focus

* The Appendix provides the rationale for this methodology

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Stability Performance Results
Boxplot Defined

75th percentile + 1.5 IQR →

75th percentile →
Mean →
Median →
25th percentile →
IQR = Interquartile Range

25th percentile - 1.5 IQR →
(y-axis caps value at 0%)

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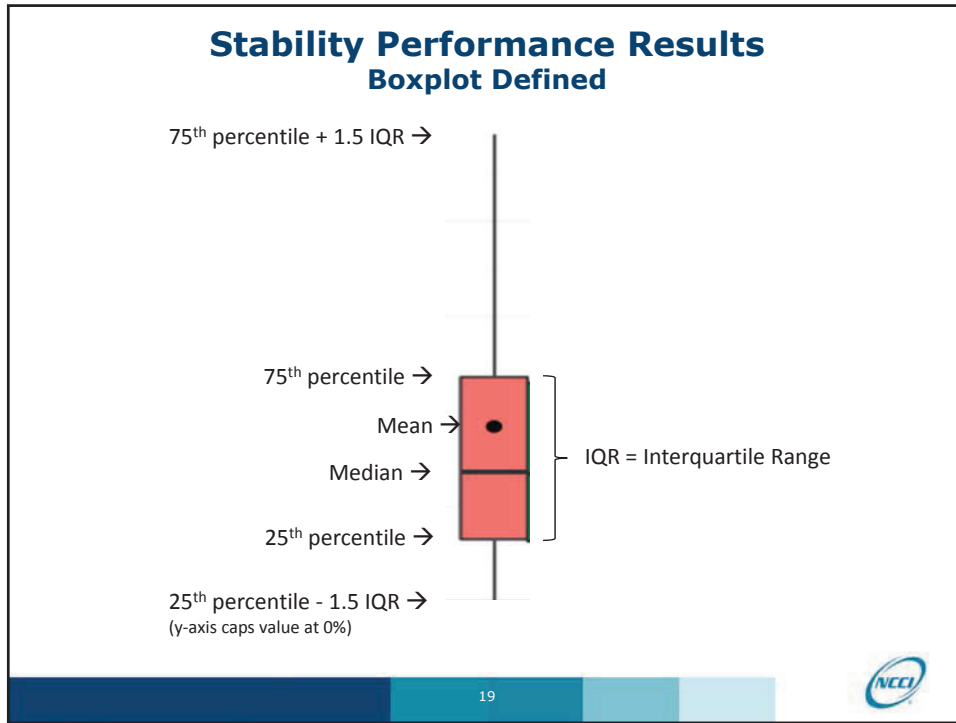
Stability Tests – Cur vs Various Alts
Absolute % Changes
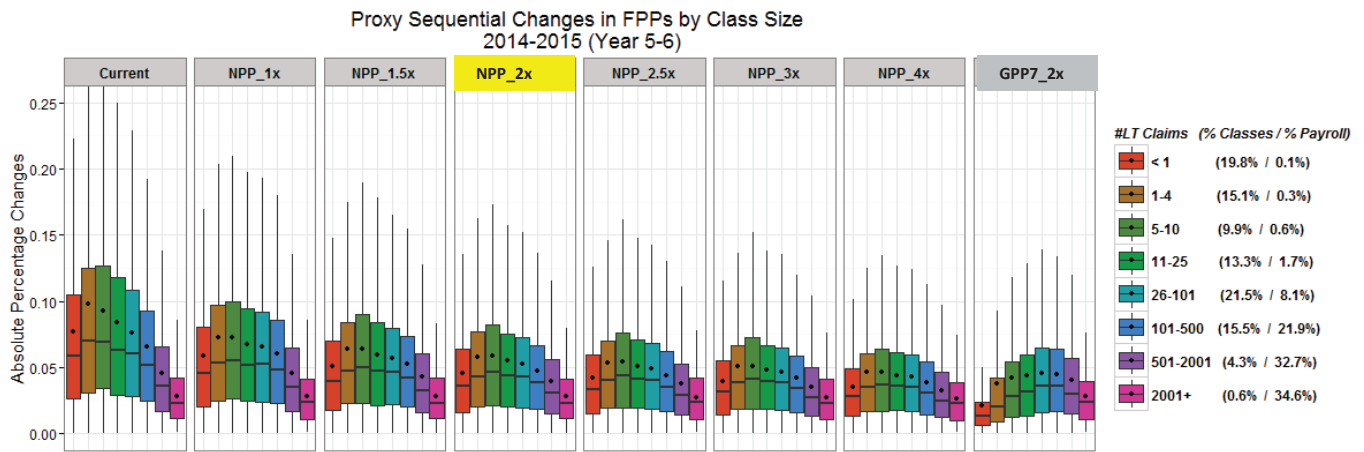
Proxy Sequential Changes in FPPs by Class Size
2014-2015 (Year 5-6)

All of the Alts use an exponent of 0.5 and a multiple of the CurFS as labeled

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Stability Tests – Cur vs Various Alts

Number of Codes Exceeding % Threshold (2014-2015 / Year 5-6)

	+5%	-5%	+10%	-10%	+15%	-15%	+20%	-20%	+25%	-25%	Total
Current	3,889	4,482	2,056	2,140	1,036	869	564	352	327	144	14,915
NPP_1x	3,489	3,930	1,520	1,496	632	466	293	149	127	58	14,915
NPP_1.5x	3,117	3,522	1,150	1,137	426	296	171	83	75	30	14,915
NPP_2x	2,838	3,220	932	900	305	205	110	68	57	14	14,915
NPP_2.5x	2,600	2,995	761	754	235	147	82	46	38	6	14,915
NPP_3x	2,393	2,777	650	636	183	123	65	33	33	4	14,915
NPP_4x	2,112	2,442	503	469	122	88	49	24	23	3	14,915
GPP7_2x	1,922	2,005	565	567	198	196	74	66	39	19	14,915

Percentage of Codes within +/-X% (2014-2015 / Year 5-6)

	+/- 5%	+/-10%	+/-15%	+/-20%	+/-25%
Current	43.9%	71.9%	87.2%	93.9%	96.8%
NPP_1x	50.3%	79.8%	92.6%	97.0%	98.8%
NPP_1.5x	55.5%	84.7%	95.2%	98.3%	99.3%
NPP_2x	59.4%	87.7%	96.6%	98.8%	99.5%
NPP_2.5x	62.5%	89.8%	97.4%	99.1%	99.7%
NPP_3x	65.3%	91.4%	97.9%	99.3%	99.8%
NPP_4x	69.5%	93.5%	98.6%	99.5%	99.8%
GPP7_2x	73.7%	92.4%	97.4%	99.1%	99.6%

All of the Alts use an exponent of 0.5 and a multiple of the CurFS as labeled

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Stability Performance Results

- Stability performance results show that NPP with updated (2x) credibility is much improved over current

- The number of classes with annual changes of 10%, 15%, 20% and 25% is reduced significantly with updated (2x) credibility

- While additional stability can be achieved using GPPs, updated (2x) credibility alone captures the majority of the potential improvement

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Accuracy Performance Results

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Focus on Underwriting Test Results

- Consistent with prior meetings, the focus of our accuracy testing is on the Underwriting (U/W) test

- Because the U/W test divides the data into the fewest possible groups (two), it mitigates some of the "noise" inherent in the actual data underlying all of our statistical tests

- The following slides provide a refresher of the U/W test methodology

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Recap: The Underwriting Test

- Cur and Alt FPPs are balanced (in total) to actual emerged experience

- The test divides classes into two groups*:
  - Group 1: Cur FPPs < Alt FPPs
  - Group 2: Cur FPPs > Alt FPPs

- Loss ratios (ratios of actual losses to FPPs) are then computed for Cur and Alt for each group
  - Loss ratios close to 1.00 indicate FPPs that are appropriate (in total) for that group
  - If Alt yields loss ratios that are closer to 1.00 for each group than does Cur, it suggests Alt is more accurate than Cur

* Due to the precision of the calculation, Cur FPPs = Alt FPPs does not occur

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Recap: The Underwriting Test

- Note that the two groups used in the U/W test are far from random
- Random groups would typically yield loss ratios near 1.00 for any set of reasonable FPPs
- It is the construction of the groups that gives the test its power
- Note that Group 1 could be interpreted as a head-to-head matchup of Cur and Alt, where:
  - The Cur set of FPPs are indicating that the Alt set of FPPs are too high for that set of classes
  - The Alt set of FPPs are indicating that the Cur set of FPPs are too low for that set of classes
- And vice versa for Group 2

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Recap: The Underwriting Test

- Assume we have the following hypothetical U/W test results:

		Group 1	Group 2	Total
1	# of Classes	500	500	1,000
2	Actual Loss	10,000,000	10,000,000	20,000,000
3	Cur Loss Costs: Expected Loss	9,500,000	10,500,000	20,000,000
4	Alt Loss Costs: Expected Loss	10,200,000	9,800,000	20,000,000
5	Cur Loss Ratio = (2) / (3)	1.053	0.952	1.000
6	Alt Loss Ratio = (2) / (4)	0.980	1.020	1.000

- These results suggest that:
  - Cur is off by approximately 5% for each group
  - Alt is off by approximately 2% for each group
  - Thus, Alt is more accurate than Cur by approximately 3%

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U/W Accuracy Test – Graphical Depiction
Hypothetical Example

Difference in Actual Emerged vs Expected

* (Cur abs avg diff) − (Alt abs avg diff)

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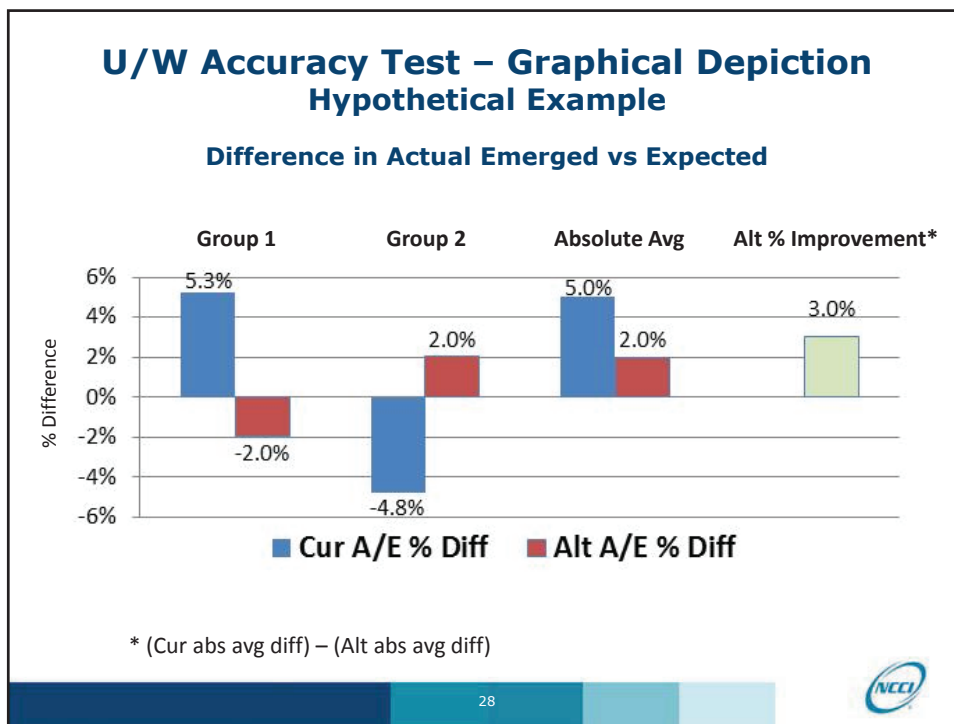
New Underwriting Test Results

- New U/W test results have also been produced using the YrX-to-YrX+1 approach
- The same FPPs used in the stability testing are shown:
  - Current
  - Alts that use NPPs with a 0.5 exponent and various multiples of the CurFS
  - GPPs (7 clusters) with a 0.5 exponent and 2xCurFS
- In addition, U/W results have been produced for the following subsets:
  - Select small states
  - Large classes
- The new U/W results have been computed on a countrywide (all-states combined) basis
- Policy Years 2010, 2011 and 2012 are included

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U/W Accuracy Test – Current vs Proposed (2x)
Difference in Actual Emerged vs Expected

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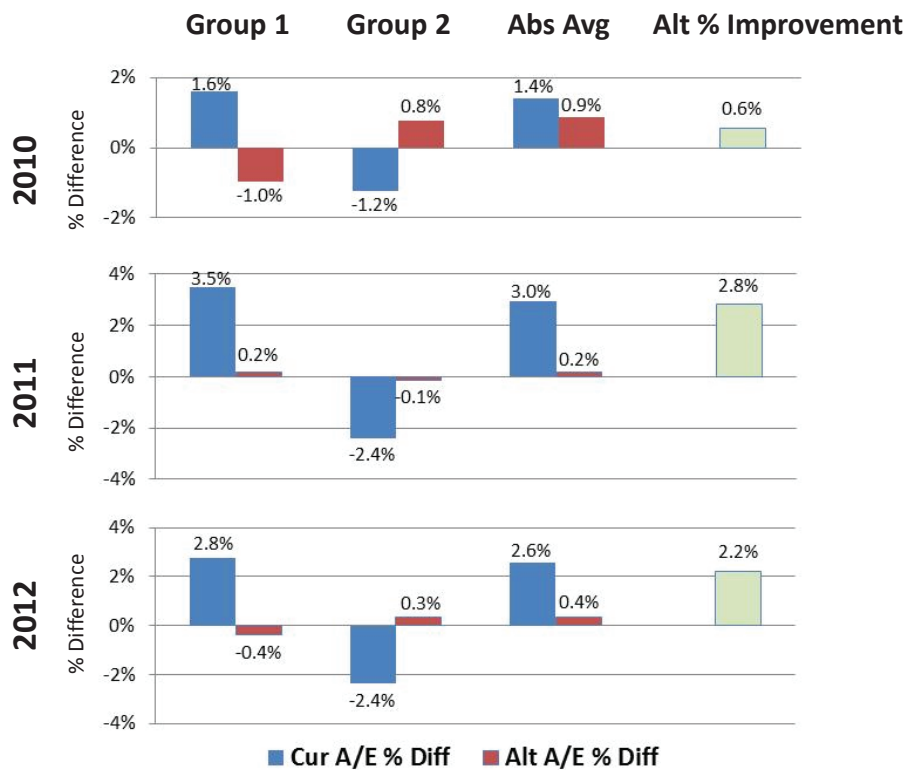
U/W Accuracy Test – Current vs Proposed (2x)
Difference in Actual Emerged vs Expected

			Group 1	Group 2	Total
	1	# of State-Classes	7,483	5,770	13,253
	2	Actual Losses	$7,731,220,430	$9,743,716,161	$17,474,936,591
2010	3	Current FPPs: Expected Losses	$7,609,319,770	$9,865,616,821	$17,474,936,591
	4	Proposed FPPs: Expected Losses	$7,805,856,769	$9,669,079,822	$17,474,936,591
	5	Current Loss Ratio = (2)/(3)	1.016	0.988	1.000
	6	Proposed Loss Ratio = (2)/(4)	0.990	1.008	1.000
			Group 1	Group 2	Total
	1	# of State-Classes	7,416	5,901	13,317
	2	Actual Losses	$7,304,633,086	$9,948,046,252	$17,252,679,338
2011	3	Current FPPs: Expected Losses	$7,058,416,512	$10,194,262,826	$17,252,679,338
	4	Proposed FPPs: Expected Losses	$7,291,588,521	$9,961,090,817	$17,252,679,338
	5	Current Loss Ratio = (2)/(3)	1.035	0.976	1.000
	6	Proposed Loss Ratio = (2)/(4)	1.002	0.999	1.000
			Group 1	Group 2	Total
	1	# of State-Classes	7,401	5,895	13,296
	2	Actual Losses	$8,184,748,532	$9,138,176,619	$17,322,925,151
2012	3	Current FPPs: Expected Losses	$7,964,239,076	$9,358,686,075	$17,322,925,151
	4	Proposed FPPs: Expected Losses	$8,216,485,708	$9,106,439,443	$17,322,925,151
	5	Current Loss Ratio = (2)/(3)	1.028	0.976	1.000
	6	Proposed Loss Ratio = (2)/(4)	0.996	1.003	1.000

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U/W Accuracy Test – Current vs Various Alts
% Improvement of Alt vs Cur

Alt % Improvement
(Cur abs avg diff) – (Alt abs avg diff)

	2010	2011	2012
1x	0.4%	0.9%	1.0%
1.5x	0.8%	2.0%	2.2%
2x	0.6%	2.8%	2.2%
2.5x	0.5%	2.7%	2.8%
3x	0.6%	2.4%	2.6%
4x	0.7%	2.3%	1.8%
GPP7_2x	3.2%	4.0%	4.3%

All of the Alts use an exponent of 0.5 and a multiple of the CurFS as labeled

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Accuracy Performance Results:
Select Small States

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U/W Accuracy Test – Current vs Various Alts
*Select Small States**
% Improvement of Alt vs Cur

Alt % Improvement

(Cur abs avg diff) – (Alt abs avg diff)

	2010	**2011**	**2012**
1x	-1.3%	-0.9%	0.9%
1.5x	-2.7%	1.1%	0.2%
2x	-3.6%	1.1%	1.0%
2.5x	-3.5%	0.4%	-0.4%
3x	-4.2%	-0.8%	-1.7%
4x	-5.2%	-1.1%	-3.2%
GPP7_2x	1.9%	6.0%	1.6%

All of the Alts use an exponent of 0.5 and a multiple of the CurFS as labeled

* Small states were reviewed since they have a higher proportion of small classes

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Accuracy Performance Results:
Large Class Test Sets

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Definitions of Large Class Test Sets

Two definitions of large classes will be used:

1. 400-850 LT claims in the state class
   - 400 LT claims underlie the cur IPP medical FS (100% medical credibility and 74% indemnity credibility)
   - 850 LT claims underlie the cur IPP indemnity FS and correspond to slightly more than the proposed IPP medical FS

2. 850-1700 LT claims in the state class
   - 850 LT claims underlie the cur IPP indemnity FS
   - 1700 LT claims underlie the proposed IPP indemnity FS

Classes with more than 1700 LT claims in a state are generally fully credible at the state level (IPP) under both current and proposed

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U/W Accuracy Test – Current vs Various Alts
Large Class Test Sets
% Improvement of Alt vs Cur

400-850 LT claims in the state class	Alt % Improvement (Cur abs avg diff) – (Alt abs avg diff)		
	2010	**2011**	**2012**
1.5x	1.1%	1.2%	1.1%
2x	1.9%	2.1%	2.0%
2.5x	2.6%	2.8%	2.7%

850-1700 LT claims in the state class	Alt % Improvement (Cur abs avg diff) – (Alt abs avg diff)		
	2010	**2011**	**2012**
1.5x	0.5%	0.4%	0.1%
2x	0.9%	0.9%	0.0%
2.5x	1.2%	1.3%	0.1%

All of the Alts use an exponent of 0.5 and a multiple of the CurFS as labeled

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Accuracy Performance Results

- Improved stability with no loss of accuracy is the primary goal of this project

- The prior slides reveal significant improvement in accuracy under updated credibility: exponent of 0.5 and 2xCurFS

- 2xCurFS generally does as well or better than other multiples of the CurFS

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Remaining Work

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Remaining Work

Some additional class ratemaking items are still being reviewed/considered:

- Industry Group Differentials
- Harwayne factors which adjust each state to the reviewed state's level when computing NPPs
- Balancing NPPs and PORLs to IPPs
- Potentially reseeding some small classes
- F-Classes, Maritimes and other special classes
  - These classes will benefit from the updated credibility changes
  - In addition, there is a separate joint project with Regulatory Services underwriting to further explore these classes

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Timeline

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Timeline

Action	Time Frame
Finalize all methodology changes for industrial classes	2017
F-Class/Maritime/FELA* analysis	2017
Include updated credibility and industrial class changes in filings	Filings eff 10/1/18 - 7/1/19
Include F-Class/Maritime/FELA changes in filings	Filings eff 10/1/19 - 7/1/20

* FELA = Federal Employers Liability Act

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Questions?

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Methodology: Yr1-to-Yr1 vs YrX-to-YrX+1

- While the Yr1-to-Yr1 approach was shown to be very close to YrX-to-YrX+1 in prior work, this was dependent on the alts being reviewed

- It is the PORL component under Yr1-to-Yr1 that uses the old method … and this causes the underestimation of any improvement or deterioration of an alt

- When the PORL components are assigned the same credibility under two competing alts, the amount of underestimation is approx the same for the two alts

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Methodology: Yr1-to-Yr1 vs YrX-to-YrX+1

- When comparing alts using NPPs with alts using GPPs:
  - The residual credibility assigned to the PORL component is larger for many classes under the NPP alts than under the GPP alts
  - If IPP and NPP credibility are both small for a given class, then PORL will receive a large weight
  - GPPs are deemed to be at least 50% credible and would always receive a weight of $(1-IPP_z)/2$
- Because of this, the improvements under NPP alts are underestimated a bit more than those under GPP alts when using Yr1-to-Yr1

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Methodology: Yr1-to-Yr1 vs YrX-to-YrX+1

- Today's updated performance results use the YrX-to-YrX+1 approach
  - Yr1-to-Yr1 approach tends to underestimate the improved stability of alts that use NPP more so than alts that use GPP
  - YrX-to-YrX+1 approach treats both equally
- Stability results under the YrX-to-YrX+1 approach bring NPP alts closer to the GPP alts
- Consistent with prior analyses, the Industry Group changes within a state (from one year to the next) have been balanced/normalized to 0%

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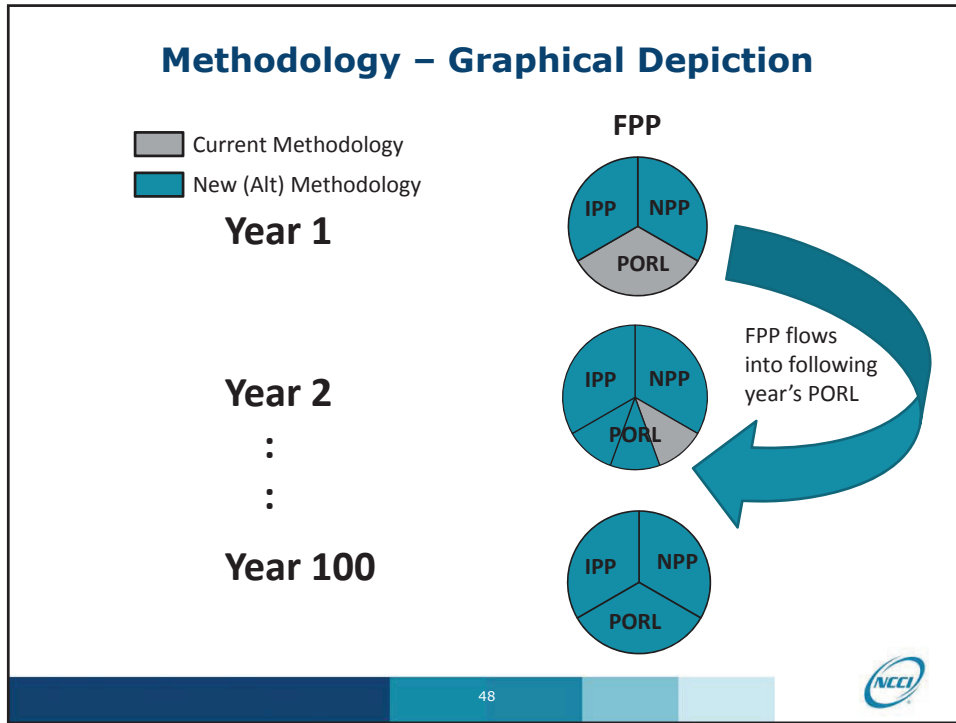
Class Ratemaking Research: Final Wrap-Up

Presented by:

Tony DiDonato, FCAS, MAAA
Director & Senior Actuary

NCCI Actuarial Committee Meeting
February 22, 2018
Boca Raton, Florida

Agenda

- Background

- What's Changing

- Considered/Reviewed but Not Changing

- Federal Classes

- Summary

Committee members and meeting participants are prohibited from discussing any matter pertaining specifically and directly to rates or loss costs in any particular state or states.

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Background

- As reported at Actuarial Committee (AC) meetings over the past three years, staff has engaged in an extensive review of class ratemaking, with particular emphasis on credibility and small classes

- The research portion of this project has been completed

- This presentation will provide a high-level wrap-up

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Class Ratemaking Changes

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What's Changing

- Credibility formulas for Indicated Pure Premiums (IPPs) and National Pure Premiums (NPPs) will be updated with the following parameters:
  - Exponent of 0.5
  - Double today's Full Standards
- These changes are planned for the upcoming rate filing cycle
- See Feb 2017 AC Agenda for more on this decision

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Considered and Reviewed But Not Changing

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Reviewed But Not Changing

Major items that were considered and reviewed but will *not* be incorporated:

- Basing credibility on indemnity and medical combined rather than separately
  - See Feb 2017 AC Agenda
- Changing the number of policy periods used for IPP and NPP
  - See Oct 2015 AC Agenda
- Implementing new pure premium components: frequency estimators, severity estimators and Group Pure Premiums (GPPs)
  - See Feb 2017 AC Agenda

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Reviewed But Not Changing

Continued …

Major items that were considered and reviewed but will *not* be incorporated:

- Reseeding the smallest classes
  - NCCI underwriting staff plans to eliminate/revise the classes we were considering for reseeding
- Eliminating Industry Group differentials
  - See AC Agenda for this meeting (Feb 2018)

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Federal Classes

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Federal Classes

- Federal classes consist of the USL&HW (F-Classes), Maritime and FELA classes*

- These classes will benefit from the upcoming changes to credibility

- A separate project will determine whether any additional changes would be beneficial

* USL&HW: United States Longshore and Harbor Workers Act
  FELA: Federal Employers Liability Act

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Summary

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Summary

- Credibility formulas for Indicated Pure Premiums (IPPs) and National Pure Premiums (NPPs) will be updated with the following parameters:
  - Exponent of 0.5
  - Double today's Full Standards
- These changes are planned for the upcoming rate filing cycle
- NCCI underwriting will be eliminating/revising approximately two dozen class codes as a result of our research
- Federal classes will be reviewed as part of a separate project

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Missouri
Indemnity Limited Statewide Paid Loss Development through @12/19

PY	1/2	2/3	3/4	4/5	5/6	6/7	7/8	8/9	9/10
1991									
1992									
1993									
1994									
1995									
1996									
1997									
1998									
1999									
2000									1.008
2001								1.010	1.010
2002							1.028	1.018	1.008
2003						1.034	1.023	1.016	1.016
2004					1.050	1.032	1.021	1.020	1.014
2005				1.081	1.046	1.036	1.022	1.012	1.014
2006			1.117	1.068	1.040	1.032	1.026	1.016	1.009
2007		1.271	1.125	1.077	1.054	1.036	1.018	1.016	1.021
2008	1.793	1.248	1.159	1.092	1.047	1.041	1.019	1.020	1.020
2009	1.799	1.292	1.141	1.091	1.059	1.026	1.023	1.017	1.012
2010	1.872	1.289	1.152	1.092	1.051	1.033	1.020	1.016	
2011	1.789	1.295	1.161	1.092	1.060	1.045	1.024		
2012	1.801	1.308	1.155	1.087	1.052	1.031			
2013	1.747	1.328	1.182	1.073	1.040				
2014	1.869	1.268	1.117	1.074					
2015	1.806	1.282	1.144						
2016	1.781	1.291							
2017	1.812								

Exhibit 4

10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
								1.003
							1.004	1.004
						1.005	1.002	1.004
					1.005	1.004	1.004	1.001
				1.008	1.004	1.007	1.004	1.002
			1.005	1.004	1.005	1.005	1.004	1.002
		1.006	1.004	1.004	1.002	1.003	1.002	1.004
	1.007	1.007	1.005	1.005	1.004	1.005	1.004	1.007
1.015	1.006	1.006	1.008	1.007	1.001	1.007	1.002	1.002
1.008	1.003	1.013	1.006	1.006	1.004	1.003	1.004	1.001
1.010	1.007	1.004	1.012	1.003	1.005	1.004	1.002	
1.009	1.008	1.007	1.003	1.004	1.003	1.005		
1.005	1.006	1.005	1.007	1.007	1.005			
1.014	1.007	1.006	1.012	1.005				
1.010	1.008	1.006	1.004					
1.008	1.010	1.005						
1.013	1.006							
1.009								

Missouri
Indemnity Limited Statewide Paid+Case Loss Development through @12/19

PY	1/2	2/3	3/4	4/5	5/6	6/7	7/8	8/9	9/10
1991									
1992									
1993									
1994									
1995									
1996									
1997									
1998									
1999									
2000									0.998
2001								1.002	1.007
2002							1.004	1.005	1.005
2003						1.016	1.005	1.005	1.007
2004					1.014	0.996	1.001	1.001	1.008
2005				1.016	1.017	1.005	1.005	0.999	1.006
2006			1.027	1.013	1.017	1.004	1.009	1.002	1.002
2007		1.045	1.024	1.009	1.021	1.001	1.007	1.014	1.012
2008	1.116	1.041	1.055	1.029	1.028	1.013	1.009	1.008	1.002
2009	1.119	1.063	1.028	1.041	1.005	1.002	1.014	1.001	1.004
2010	1.125	1.059	1.043	1.029	1.015	1.014	1.005	1.000	
2011	1.095	1.051	1.072	1.033	1.017	1.003	1.003		
2012	1.136	1.078	1.038	1.019	1.008	1.009			
2013	1.128	1.089	1.074	1.040	1.002				
2014	1.135	1.054	1.021	1.028					
2015	1.123	1.063	1.033						
2016	1.140	1.062							
2017	1.127								

Exhibit 4

10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
								1.002
							1.002	1.002
						1.001	1.002	1.003
					1.001	1.000	1.000	1.001
				0.998	1.000	1.000	1.000	1.001
			0.996	1.000	1.001	1.001	1.001	1.002
		1.001	0.999	0.999	0.998	0.998	1.004	1.003
	1.002	1.005	1.001	1.006	0.999	1.003	1.003	1.000
1.001	0.999	1.002	1.003	0.999	1.001	1.001	1.001	1.003
1.003	1.003	1.004	1.001	1.001	1.000	1.000	0.996	1.002
0.997	1.004	1.001	1.002	0.999	1.002	1.000	0.998	
1.002	0.995	0.999	1.003	0.999	1.002	1.002		
1.000	1.000	1.008	0.998	1.004	1.001			
1.002	1.000	1.011	1.006	1.002				
0.998	1.004	1.004	1.002					
1.001	0.998	1.002						
1.002	1.002							
1.003								

Missouri
Medical Limited Statewide Paid Loss Development through @12/19

PY	1/2	2/3	3/4	4/5	5/6	6/7	7/8	8/9	9/10
1991									
1992									
1993									
1994									
1995									
1996									
1997									
1998									
1999									
2000									1.012
2001								1.004	1.007
2002							1.012	1.011	1.006
2003						1.015	1.014	1.008	1.009
2004					1.010	1.015	1.012	1.007	1.012
2005				1.028	1.026	1.022	1.016	1.006	1.006
2006			1.032	1.017	1.014	1.009	1.015	1.008	1.004
2007		1.062	1.036	1.009	1.012	1.011	1.009	1.004	1.004
2008	1.221	1.064	1.033	1.023	1.022	1.019	1.012	1.004	1.012
2009	1.226	1.059	1.036	1.017	1.013	1.010	1.006	1.006	1.003
2010	1.243	1.059	1.036	1.016	1.012	1.010	1.009	1.007	
2011	1.218	1.058	1.036	1.020	1.018	1.013	1.012		
2012	1.226	1.066	1.030	1.019	1.015	1.009			
2013	1.219	1.064	1.027	1.016	1.005				
2014	1.241	1.061	1.021	1.015					
2015	1.237	1.059	1.035						
2016	1.205	1.060							
2017	1.212								

Exhibit 4

10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
								1.002
							1.002	1.001
						1.003	1.004	1.003
					1.004	1.008	1.004	1.004
				1.005	1.005	1.003	1.004	1.003
			1.006	1.004	1.000	1.001	1.003	1.001
		1.007	1.005	1.006	1.004	1.006	1.005	1.011
	1.011	1.012	1.009	1.003	1.003	1.001	1.001	1.002
1.007	1.008	1.007	1.010	1.006	1.002	1.009	1.001	1.001
1.006	1.007	1.007	1.004	1.017	1.001	1.002	1.003	1.001
1.009	1.007	1.004	1.003	1.004	1.005	1.003	1.003	
1.007	1.005	1.005	1.007	1.004	1.003	1.011		
1.005	1.005	1.004	1.002	1.004	1.002			
1.009	1.004	1.004	1.004	1.006				
1.005	1.004	1.005	1.004					
1.003	1.005	1.003						
1.005	1.003							
1.005								

Missouri
Medical Limited Statewide Paid+Case Loss Development through @12/19

PY	1/2	2/3	3/4	4/5	5/6	6/7	7/8	8/9	9/10
1991									
1992									
1993									
1994									
1995									
1996									
1997									
1998									
1999									
2000									1.011
2001								1.009	1.001
2002							1.002	1.001	1.008
2003						1.009	1.000	0.999	0.995
2004					0.995	1.005	1.001	1.035	1.005
2005				1.008	0.989	1.002	1.004	1.001	1.023
2006			0.996	0.997	1.002	0.985	1.006	0.998	1.001
2007		1.010	1.001	1.000	0.997	0.998	1.003	1.004	1.002
2008	1.071	1.025	1.010	0.983	1.010	1.007	0.996	1.007	0.990
2009	1.043	1.013	0.999	1.003	0.998	1.007	1.007	0.996	0.997
2010	1.050	1.002	0.994	0.993	1.010	1.001	0.997	0.998	
2011	1.022	0.998	0.972	0.993	1.024	0.992	1.006		
2012	1.031	1.005	1.004	0.998	0.986	0.995			
2013	1.013	0.993	1.000	1.000	0.981				
2014	1.034	0.993	0.992	1.008					
2015	1.035	1.006	1.007						
2016	1.007	0.966							
2017	1.025								

Exhibit 4

10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
								0.997
							1.003	1.002
						1.001	1.002	1.002
					0.996	1.001	0.996	1.006
				1.001	1.004	1.003	0.998	1.001
			0.999	0.991	1.004	1.008	1.001	1.002
		1.002	0.993	1.002	0.990	0.999	1.013	0.990
	1.014	1.009	1.004	0.989	1.008	1.004	1.000	1.000
1.000	1.002	1.000	1.005	1.002	1.000	1.004	0.999	0.999
1.003	1.011	1.005	1.003	0.990	0.997	1.000	1.001	1.003
1.017	1.007	1.002	0.999	1.003	0.993	1.000	0.996	
1.002	0.999	1.005	1.003	1.003	1.001	1.002		
1.004	0.993	1.004	0.999	1.009	1.001			
0.997	1.001	1.005	0.994	0.998				
0.997	1.010	1.002	1.000					
1.006	1.001	1.003						
0.996	1.001							
0.985								

Missouri
Statewide Unlimited DCCE Paid Development through @12/19

PY	1/2	2/3	3/4	4/5	5/6	6/7	7/8	8/9
1994								
1995								
1996								
1997								
1998								
1999								
2000								
2001								1.009
2002							1.018	1.008
2003						1.028	1.016	1.015
2004					1.038	1.022	1.020	1.011
2005				1.072	1.038	1.027	1.014	1.009
2006			1.086	1.054	1.034	1.018	1.011	1.011
2007		1.195	1.095	1.058	1.038	1.022	1.013	1.011
2008	1.462	1.191	1.114	1.050	1.032	1.023	1.015	1.010
2009	1.493	1.190	1.085	1.048	1.031	1.018	1.012	1.008
2010	1.508	1.181	1.090	1.049	1.026	1.016	1.010	1.007
2011	1.476	1.164	1.108	1.047	1.034	1.019	1.012	
2012	1.476	1.175	1.071	1.051	1.025	1.013		
2013	1.477	1.152	1.084	1.042	1.022			
2014	1.452	1.158	1.077	1.039				
2015	1.475	1.172	1.076					
2016	1.479	1.161						
2017	1.470							

9/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
						1.002	1.003	1.003
						1.003	1.002	1.001
				1.004	1.007	1.001	1.001	1.002
			1.007	1.003	1.004	1.002	1.003	1.002
		1.005	1.006	1.004	1.005	1.003	1.003	1.001
	1.008	1.011	1.011	1.004	1.005	1.002	1.004	1.002
1.009	1.007	1.010	1.007	1.004	1.005	1.001	1.001	1.002
1.012	1.008	1.005	1.002	1.002	1.004	1.005	0.999	1.002
1.015	1.008	1.006	1.004	1.003	1.002	1.004	1.002	
1.009	1.005	1.005	1.004	1.002	1.003	1.002		
1.008	1.009	1.005	1.003	1.003	1.003			
1.008	1.006	1.005	1.004	1.004				
1.006	1.006	1.005	1.003					
1.012	1.005	1.006						
1.008	1.007							
1.002								

Exhibit 4

18/19
1.007
1.001
1.002
1.002
1.002
1.001
1.002

Statewide - Private Carrier + State Fund
Derivation of the Factor to Adjust Losses for Prior Policy Years for Valuation Year 2019

Indemnity Paid+Case Data						
(1)	(2)		(3)		(4)=(3)/(2)	(5)	(6)
Policy	Older Year's Indemnity		Newer Year's Indemnity		Growth	Inverse	Upward Cum.
Years	Paid + Case Losses		Paid + Case Losses		Ratio	1 / (4)	Product of (5)
1986/1985	PY 1985@2004	140,568,476	PY 1986@2005	157,871,301	1.123	0.890	0.717
1987/1986	PY 1986@2005	157,871,301	PY 1987@2006	179,756,406	1.139	0.878	0.805
1988/1987	PY 1987@2006	177,454,320	PY 1988@2007	198,950,113	1.121	0.892	0.916
1989/1988	PY 1988@2007	198,505,376	PY 1989@2008	220,882,644	1.113	0.899	1.027
1990/1989	PY 1989@2008	219,039,126	PY 1990@2009	232,456,428	1.061	0.942	1.143
1991/1990	PY 1990@2009	227,189,268	PY 1991@2010	225,498,511	0.993	1.007	1.213
1992/1991	PY 1991@2010	225,498,511	PY 1992@2011	200,835,736	0.891	1.123	1.204
1993/1992	PY 1992@2011	200,811,854	PY 1993@2012	183,496,440	0.914	1.094	1.072
1994/1993	PY 1993@2012	183,545,036	PY 1994@2013	165,007,399	0.899	1.112	0.980
1995/1994	PY 1994@2013	163,997,293	PY 1995@2014	141,633,259	0.864	1.158	0.881
1996/1995	PY 1995@2014	141,608,646	PY 1996@2015	148,254,038	1.047	0.955	0.761
1997/1996	PY 1996@2015	148,247,760	PY 1997@2016	154,914,525	1.045	0.957	0.796
1998/1997	PY 1997@2016	154,914,525	PY 1998@2017	182,906,839	1.181	0.847	0.832
1999/1998	PY 1998@2017	192,061,279	PY 1999@2018	195,440,205	1.018	0.983	0.983
				Factor to Adjust Losses for Prior Years—10-Year Average			0.987

Medical Paid+Case Data						
(1)	(2)		(3)		(4)=(3)/(2)	(5)	(6)
Policy	Older Year's Medical		Newer Year's Medical		Growth	Inverse	Upward Cum.
Years	Paid + Case Losses		Paid + Case Losses		Ratio	1 / (4)	Product of (5)
1986/1985	PY 1985@2004	94,696,424	PY 1986@2005	108,101,402	1.142	0.876	0.537
1987/1986	PY 1986@2005	108,101,402	PY 1987@2006	140,700,501	1.302	0.768	0.613
1988/1987	PY 1987@2006	139,423,344	PY 1988@2007	152,395,769	1.093	0.915	0.798
1989/1988	PY 1988@2007	152,292,010	PY 1989@2008	169,069,844	1.110	0.901	0.872
1990/1989	PY 1989@2008	167,794,520	PY 1990@2009	186,527,540	1.112	0.900	0.968
1991/1990	PY 1990@2009	182,662,813	PY 1991@2010	191,692,398	1.049	0.953	1.076
1992/1991	PY 1991@2010	191,692,398	PY 1992@2011	166,012,660	0.866	1.155	1.129
1993/1992	PY 1992@2011	166,008,493	PY 1993@2012	170,212,510	1.025	0.975	0.978
1994/1993	PY 1993@2012	170,220,623	PY 1994@2013	152,705,754	0.897	1.115	1.003
1995/1994	PY 1994@2013	151,577,681	PY 1995@2014	134,631,701	0.888	1.126	0.900
1996/1995	PY 1995@2014	134,623,547	PY 1996@2015	128,910,066	0.958	1.044	0.799
1997/1996	PY 1996@2015	128,897,172	PY 1997@2016	153,272,672	1.189	0.841	0.765
1998/1997	PY 1997@2016	153,272,672	PY 1998@2017	156,640,785	1.022	0.978	0.910
1999/1998	PY 1998@2017	164,679,784	PY 1999@2018	177,106,284	1.075	0.930	0.930
				Factor to Adjust Losses for Prior Years—10-Year Average			0.946

MISSOURI

Exhibit 6

Statewide - Private Carrier + State Fund

Derivation of the Factor to Adjust Losses for Prior Policy Years for Valuation Year 2018

Indemnity Paid+Case Data						
(1)	(2)		(3)		(4)=(3)/(2)	(5)	(6)
Policy	Older Year's Indemnity		Newer Year's Indemnity		Growth	Inverse	Upward Cum.
Years	Paid + Case Losses		Paid + Case Losses		Ratio	1 / (4)	Product of (5)
1985/1984	PY 1984@2003	117,747,967	PY 1985@2004	141,498,461	1.202	0.832	0.607
1986/1985	PY 1985@2004	140,568,476	PY 1986@2005	157,871,301	1.123	0.890	0.729
1987/1986	PY 1986@2005	157,871,301	PY 1987@2006	179,756,406	1.139	0.878	0.819
1988/1987	PY 1987@2006	177,454,320	PY 1988@2007	198,950,113	1.121	0.892	0.932
1989/1988	PY 1988@2007	198,505,376	PY 1989@2008	220,882,644	1.113	0.899	1.045
1990/1989	PY 1989@2008	219,039,126	PY 1990@2009	232,456,428	1.061	0.942	1.163
1991/1990	PY 1990@2009	227,189,268	PY 1991@2010	225,498,511	0.993	1.007	1.234
1992/1991	PY 1991@2010	225,498,511	PY 1992@2011	200,835,736	0.891	1.123	1.225
1993/1992	PY 1992@2011	200,811,854	PY 1993@2012	183,496,440	0.914	1.094	1.091
1994/1993	PY 1993@2012	183,545,036	PY 1994@2013	165,007,399	0.899	1.112	0.997
1995/1994	PY 1994@2013	163,997,293	PY 1995@2014	141,633,259	0.864	1.158	0.896
1996/1995	PY 1995@2014	141,608,646	PY 1996@2015	148,254,038	1.047	0.955	0.774
1997/1996	PY 1996@2015	148,247,760	PY 1997@2016	154,914,525	1.045	0.957	0.811
1998/1997	PY 1997@2016	154,914,525	PY 1998@2017	182,906,839	1.181	0.847	0.847
				Factor to Adjust Losses for Prior Years—10-Year Average			1.008

Medical Paid+Case Data						
(1)	(2)		(3)		(4)=(3)/(2)	(5)	(6)
Policy	Older Year's Medical		Newer Year's Medical		Growth	Inverse	Upward Cum.
Years	Paid + Case Losses		Paid + Case Losses		Ratio	1 / (4)	Product of (5)
1985/1984	PY 1984@2003	77,605,188	PY 1985@2004	95,327,411	1.228	0.814	0.470
1986/1985	PY 1985@2004	94,696,424	PY 1986@2005	108,101,402	1.142	0.876	0.577
1987/1986	PY 1986@2005	108,101,402	PY 1987@2006	140,700,501	1.302	0.768	0.659
1988/1987	PY 1987@2006	139,423,344	PY 1988@2007	152,395,769	1.093	0.915	0.858
1989/1988	PY 1988@2007	152,292,010	PY 1989@2008	169,069,844	1.110	0.901	0.938
1990/1989	PY 1989@2008	167,794,520	PY 1990@2009	186,527,540	1.112	0.900	1.041
1991/1990	PY 1990@2009	182,662,813	PY 1991@2010	191,692,398	1.049	0.953	1.157
1992/1991	PY 1991@2010	191,692,398	PY 1992@2011	166,012,660	0.866	1.155	1.215
1993/1992	PY 1992@2011	166,008,493	PY 1993@2012	170,212,510	1.025	0.975	1.052
1994/1993	PY 1993@2012	170,220,623	PY 1994@2013	152,705,754	0.897	1.115	1.078
1995/1994	PY 1994@2013	151,577,681	PY 1995@2014	134,631,701	0.888	1.126	0.968
1996/1995	PY 1995@2014	134,623,547	PY 1996@2015	128,910,066	0.958	1.044	0.859
1997/1996	PY 1996@2015	128,897,172	PY 1997@2016	153,272,672	1.189	0.841	0.823
1998/1997	PY 1997@2016	153,272,672	PY 1998@2017	156,640,785	1.022	0.978	0.978
				Factor to Adjust Losses for Prior Years—10-Year Average			1.011

Supplemental Loss Development and Trend Information
Missouri January 1, 2021 Filing
Introduction

Supplemental Loss Development and Trend Information provides the data underlying the frequency and severity trend graphs shown in the filing document. The data included (i.e., policy year or accident year, limited or unlimited, etc.) is consistent with the data used in the filing and can vary by state. All of the data shown is as of the latest valuation date, December 31, 2019.

The development and on-level factors shown in the Supplemental Loss Development and Trend Information exhibit can be found in the filing. The frequency and severity values provided have been adjusted to the current wage level.

Note: The information shown in the Supplemental Loss Development and Trend Information exhibit is provided for informational purposes only. NCCI makes no warranty that any of the loss development factors, on-level factors, wage adjustment factors or any other information provided is suitable for application to an individual carrier's data.

Supplemental Loss Development and Trend Information
Missouri January 1, 2021 Filing
Definitions

Accident Year (AY)—A loss accounting definition in which experience is summarized by the calendar year in which an accident occurred.

Calendar Year (CY)
1. The 12-month period beginning January 1 and ending December 31.
2. Method of accounting for all financial transactions occurring during a specific year.

Case Reserves—Reserves that an insurance company establishes for specific (known) claims.

DSR Premium (commonly referred to as DSR Level Premium)—The standard earned premium that would result if business were written at a common benchmark level known as the designated statistical reporting level (e.g., NCCI state-approved loss costs or rates).

Frequency—The number of workplace injuries resulting in lost-time claims per million dollars of on-leveled, wage-adjusted premium.

Incurred Claim Count—The total of all claims reported, whether open or closed, as of a given valuation date. An indemnity claim is associated with a payment or case reserve for an indemnity loss (i.e., lost work time-related benefits) and excludes claims closed without an indemnity payment.

Limited Losses—Losses that result after the application of NCCI's large loss procedure (in which individual large claims are limited to state- and year-specific large loss thresholds).

On-Level Factor—Applied to historical policy and accident year premiums and losses to adjust the historical experience to reflect approved loss cost and rate level changes as well as statutory benefit level changes implemented since that time period.

Paid+Case Losses—The sum of paid losses and case reserves. Also known as case-incurred losses.

Paid Losses—Losses that an insurance company has paid as a result of claim activity.

Policy Year

1. The one-year period beginning with the effective date or anniversary of a policy.

2. A premium and loss accounting definition in which experience is summarized for all policies with effective dates in a given calendar year period.

Severity—The average indemnity or medical cost per lost-time claim.

Ultimate Development Factor—For an aggregation of data, an estimate of the development that will occur between the data's current valuation date and the time period when all claims are closed. For example, an ultimate loss development factor applied to Policy Year 2000 reported losses represents an estimate of the Policy Year 2000 ultimate losses.

Unlimited Losses—Losses that have not been adjusted to reflect NCCI's large loss procedure (see **Limited Losses**).

Valuation Date—The date that premiums and losses are valued for reporting purposes. Premiums and losses change over time from initial estimates to final values (other than calendar year statistics). Therefore, interim snapshots have associated valuation dates.

Wage Level Adjustment Factor—Ratio of the average workers' wage during the most recent policy or accident year period to the average workers' wage during a historical time period.

Supplemental Loss Development and Trend Information
Missouri January 1, 2021 Filing
Limited–Statewide–Private Carrier + State Fund–Policy Year

Lost-Time Claim Frequency and Severity–Based on Data in Excess of Wage Inflation

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		(9)	(10)	(11)
	Claim Freq	Indemnity Severity			Medical Severity				Annual Percentage Change		
	Per Million									Indemnity	Medical
Policy	On-level		Paid +	Average		Paid +	Average		Claim	Severity	Severity
Year	Premium	Paid	Case	Pd/P+C	Paid	Case	Pd/P+C		Frequency	(Avg Pd/P+C)	(Avg Pd/P+C)
2004	29.815	21,227	21,826	21,527	23,466	24,016	23,741				
2005	26.260	20,827	20,973	20,900	25,235	26,257	25,746		-11.9%	-2.9%	8.4%
2006	24.816	20,407	20,445	20,426	26,018	25,986	26,002		-5.5%	-2.3%	1.0%
2007	25.019	21,376	21,653	21,514	26,075	25,998	26,036		0.8%	5.3%	0.1%
2008	23.158	22,219	22,535	22,377	28,588	29,475	29,032		-7.4%	4.0%	11.5%
2009	21.750	22,302	21,966	22,134	28,184	27,759	27,972		-6.1%	-1.1%	-3.7%
2010	23.023	22,466	22,293	22,379	30,247	29,935	30,091		5.9%	1.1%	7.6%
2011	21.892	23,825	23,206	23,515	31,077	31,060	31,069		-4.9%	5.1%	3.3%
2012	21.137	23,067	22,372	22,719	30,292	30,295	30,293		-3.4%	-3.4%	-2.5%
2013	20.648	24,025	23,628	23,826	29,751	29,175	29,463		-2.3%	4.9%	-2.7%
2014	20.044	23,545	23,197	23,371	30,009	29,406	29,707		-2.9%	-1.9%	0.8%
2015	19.281	23,393	23,109	23,251	31,304	31,857	31,581		-3.8%	-0.5%	6.3%
2016	18.382	23,916	23,560	23,738	31,726	30,943	31,334		-4.7%	2.1%	-0.8%
2017	18.104	23,399	22,988	23,194	33,830	34,161	33,995		-1.5%	-2.3%	8.5%
2018	18.040	24,099	24,596	24,348	34,082	33,858	33,970		-0.4%	5.0%	-0.1%

Notes: (2) = (15) / [(22) / 1,000,000]   (6) = (39) / (15)   (9) is based on (2)
(3) = (27) / (15)   (7) = (43) / (15)   (10) is based on (5)
(4) = (31) / (15)   (8) = (45) / (15)   (11) is based on (8)
(5) = (33) / (15)

Claim Counts

(12)	(13)	(14)	(15)
			Ultimate
	Incurred	Ultimate	Incurred Lost-
Policy	Lost-Time	Development	Time Claim
Year	Claim Count	Factor	Count
2004	13,356	1.000	13,356
2005	12,195	1.000	12,195
2006	12,027	1.000	12,027
2007	12,704	1.000	12,704
2008	11,076	1.000	11,076
2009	10,048	1.000	10,048
2010	10,922	1.000	10,922
2011	10,342	1.000	10,342
2012	9,799	1.000	9,799
2013	9,626	1.000	9,626
2014	9,514	1.000	9,514
2015	9,489	0.998	9,470
2016	9,307	0.998	9,288
2017	9,330	1.003	9,358
2018	8,754	1.044	9,139

Notes: (15) = (13) x (14)

Premium

(16)	(17)	(18)	(19)	(20)	(21)	(22)
					Factor to	
	DSR	Ultimate			Adjust to 2018	Wage-Adj
Policy	Level	Development	Ultimate	On-level	Wage	On-level
Year	Premium	Factor	Premium	Factor	Levels	Ult. Prem
2004	571,375,826	1.000	571,375,826	0.553	1.417	447,958,648
2005	602,321,720	1.000	602,321,720	0.562	1.372	464,390,046
2006	637,695,551	1.000	637,695,551	0.574	1.324	484,648,619
2007	692,743,226	1.000	692,743,226	0.578	1.269	507,780,785
2008	602,365,485	1.000	602,365,485	0.639	1.242	478,278,195
2009	541,602,630	1.000	541,602,630	0.686	1.243	461,987,043
2010	558,777,683	1.000	558,777,683	0.695	1.221	474,402,253
2011	546,775,878	1.000	546,775,878	0.726	1.190	472,414,359
2012	522,666,691	1.000	522,666,691	0.762	1.164	463,605,355
2013	540,208,766	1.000	540,208,766	0.754	1.145	466,200,165
2014	628,677,306	1.000	628,677,306	0.679	1.112	474,241,366
2015	641,196,354	1.000	641,196,354	0.704	1.088	491,156,407
2016	653,643,107	1.000	653,643,107	0.723	1.069	505,266,122
2017	656,818,816	1.000	656,818,816	0.760	1.036	516,916,408
2018	629,619,394	1.007	634,026,730	0.799	1.000	506,587,357

(19) = (17) x (18)
(22) = (19) x [(20) x (21)]

Limited Indemnity Losses

(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)
	Paid				Paid + Case				Average Pd/P+C		
Policy Year	Losses	Ultimate Development Factor	Ultimate Losses	Wage-Adj On-level Ult. Losses	Losses	Ultimate Development Factor	Ultimate Losses	Wage-Adj On-level Ult. Losses	Ultimate Losses	Wage-Adj On-level Ult. Losses	Loss On-level Factor
2004	191,089,182	1.050	200,643,641	283,509,465	203,458,379	1.014	206,306,796	291,511,503	203,475,219	287,510,484	0.997
2005	174,669,269	1.056	184,450,748	253,988,680	183,000,226	1.015	185,745,229	255,771,180	185,097,989	254,879,931	1.004
2006	173,044,868	1.064	184,119,740	245,431,613	181,381,062	1.017	184,464,540	245,891,232	184,292,140	245,661,423	1.007
2007	198,584,246	1.070	212,485,143	271,556,013	210,604,449	1.022	215,237,747	275,073,841	213,861,445	273,314,927	1.007
2008	182,314,748	1.079	196,717,613	246,093,734	195,032,228	1.023	199,517,969	249,596,979	198,117,791	247,845,357	1.007
2009	164,053,820	1.091	178,982,718	224,086,363	172,156,767	1.024	176,288,529	220,713,238	177,635,624	222,399,801	1.007
2010	180,044,278	1.108	199,489,060	245,371,544	192,376,734	1.029	197,955,659	243,485,461	198,722,360	244,428,503	1.007
2011	182,498,057	1.127	205,675,310	246,399,021	193,740,816	1.034	200,328,004	239,992,949	203,001,657	243,195,985	1.007
2012	167,415,689	1.152	192,862,874	226,035,288	179,508,872	1.042	187,048,245	219,220,543	189,955,560	222,627,916	1.007
2013	168,141,609	1.196	201,097,364	231,261,969	188,356,236	1.050	197,774,048	227,440,155	199,435,706	229,351,062	1.004
2014	161,030,427	1.251	201,449,064	224,011,359	187,407,732	1.059	198,464,788	220,692,844	199,956,926	222,352,102	1.000
2015	151,497,436	1.344	203,612,554	221,530,459	184,362,713	1.091	201,139,720	218,840,015	202,376,137	220,185,237	1.000
2016	136,706,428	1.520	207,793,771	222,131,541	179,088,737	1.143	204,698,426	218,822,617	206,246,099	220,477,080	1.000
2017	108,058,588	1.956	211,362,598	218,971,652	169,924,533	1.222	207,647,779	215,123,099	209,505,189	217,047,376	1.000
2018	62,656,894	3.515	220,238,982	220,238,982	162,652,397	1.382	224,785,613	224,785,613	222,512,298	222,512,298	1.000

Notes: (26) = (24) x (25)
(27) = (26) x [(34) x (21)]
(30) = (28) x (29)
(31) = (30) x [(34) x (21)]
(32) = [0.50 x (26)] + [0.50 x (30)]
(33) = (32) x [(34) x (21)]

Limited Medical Losses

(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	(46)
	Paid				Paid + Case				Average Pd/P+C		
Policy Year	Losses	Ultimate Development Factor	Ultimate Losses	Wage-Adj On-level Ult. Losses	Losses	Ultimate Development Factor	Ultimate Losses	Wage-Adj On-level Ult. Losses	Ultimate Losses	Wage-Adj On-level Ult. Losses	Loss On-level Factor
2004	211,339,248	1.057	223,385,585	313,409,976	224,583,369	1.018	228,625,870	320,762,096	226,005,728	317,086,036	0.990
2005	211,820,789	1.062	224,953,678	307,736,632	229,698,950	1.019	234,063,230	320,198,499	229,508,454	313,967,565	0.997
2006	221,709,319	1.066	236,342,134	312,916,985	231,879,024	1.018	236,052,846	312,533,968	236,197,490	312,725,477	1.000
2007	243,958,128	1.070	261,035,197	331,253,665	254,660,269	1.022	260,262,795	330,273,487	260,648,996	330,763,576	1.000
2008	237,376,770	1.074	254,942,651	316,638,773	256,946,988	1.023	262,856,769	326,468,107	258,899,710	321,553,440	1.000
2009	211,152,984	1.079	227,834,070	283,197,749	220,211,159	1.019	224,395,171	278,923,198	226,114,621	281,060,474	1.000
2010	248,677,098	1.088	270,560,683	330,354,594	262,003,845	1.022	267,767,930	326,944,643	269,164,307	328,649,619	1.000
2011	246,423,414	1.096	270,080,062	321,395,274	263,868,538	1.023	269,937,514	321,225,642	270,008,788	321,310,458	1.000
2012	230,149,982	1.108	255,006,180	296,827,194	248,814,550	1.025	255,034,914	296,860,640	255,020,547	296,843,917	1.000
2013	223,317,998	1.120	250,116,158	286,383,001	239,292,083	1.025	245,274,385	280,839,171	247,695,272	283,611,086	1.000
2014	227,011,063	1.131	256,749,512	285,505,457	245,453,529	1.025	251,589,867	279,767,932	254,169,690	282,636,695	1.000
2015	237,140,307	1.149	272,474,213	296,451,944	271,050,130	1.023	277,284,283	301,685,300	274,879,248	299,068,622	1.000
2016	233,403,448	1.181	275,649,472	294,669,286	264,095,314	1.018	268,849,030	287,399,613	272,249,251	291,034,449	1.000
2017	244,076,116	1.252	305,583,297	316,584,296	305,208,978	1.011	308,566,277	319,674,663	307,074,787	318,129,479	1.000
2018	205,729,460	1.514	311,474,402	311,474,402	299,251,383	1.034	309,425,930	309,425,930	310,450,166	310,450,166	1.000

Notes: (38) = (36) x (37)
(39) = (38) x [(46) x (21)]
(42) = (40) x (41)
(43) = (42) x [(46) x (21)]
(44) = [0.50 x (38)] + [0.50 x (42)]
(45) = (44) x [(46) x (21)]

Determination of the indicated loss cost level change after excluding the assigned risk premium and loss experience reported to NCCI by Missouri's designated assigned risk plan administrator from the filing's experience period

		PY 2018	PY 2017
Premium:			
(1)	Standard Earned Premium Developed to Ultimate (Appendix A-II)	$625,446,341	$647,272,786
(2)	Premium On-level Factor (Appendix A-I)	0.799	0.760
(3)	Pure Premium Available for Benefit Costs = (1) x (2)	$499,731,626	$491,927,317
		$4,378,124.39	
Indemnity Benefit Cost:			
(4)	Limited Indemnity Losses Developed to Ultimate (Appendix A-II)	$217,746,484	$205,277,692
(5)	Indemnity Loss On-level Factor (Appendix A-I)	1.000	1.000
(6)	Adjusted Limited Indemnity Losses = (4) x (5)	$217,746,484	$205,277,692
(7)	Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.436	0.417
(8)	Factor to Reflect Indemnity Trend (Appendix A-III)	0.941	0.922
(9)	Projected Limited Indemnity Cost Ratio = (7) x (8)	0.410	0.384
(10)	Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis (Appendix A-II)	1.011	1.011
(11)	Projected Indemnity Cost Ratio = (9) x (10)	0.415	0.388
(12)	Factor to Reflect Proposed Changes in Indemnity Benefits (Appendix C)	1.000	1.000
(13)	Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.415	0.388
Medical Benefit Cost:			
(14)	Limited Medical Losses Developed to Ultimate (Appendix A-II)	$298,583,644	$297,442,733
(15)	Medical Loss On-level Factor (Appendix A-I)	1.000	1.000
(16)	Adjusted Limited Medical Losses = (14) x (15)	$298,583,644	$297,442,733
(17)	Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.597	0.605
(18)	Factor to Reflect Medical Trend (Appendix A-III)	0.970	0.961
(19)	Projected Limited Medical Cost Ratio = (17) x (18)	0.579	0.581
(20)	Factor to Adjust Medical Cost Ratio to an Unlimited Basis (Appendix A-II)	1.011	1.011
(21)	Projected Medical Cost Ratio = (19) x (20)	0.585	0.587
(22)	Factor to Reflect Proposed Changes in Medical Benefits (Appendix C)	1.000	1.000
(23)	Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.585	0.587
Total Benefit Cost:			
(24)	Indicated Change Based on Experience, Trend, and Benefits = (13) + (23)	1.000	0.975
(25)	Average Indicated Change Based on Experience, Trend, and Benefits = Average of (24)		0.988
(26)	Effect of the Change in Loss-based Expenses (Exhibit II)		1.005
(27)	Overall Average Voluntary Loss Cost Level Change		0.993

Exhibit 18

Missouri

Class Code	Exposure	Current 01/01/20	Proposed 01/01/21	Percent Change 01/01/21	Percent Change 01/01/20	Percent Change 01/01/19
0005	175,221.52	2.84	2.90	2.1%	-4.7%	-10.0%
0008	72,044.03	2.53	2.39	-5.5%	-2.7%	-7.1%
0016	19,767.75	5.19	4.80	-7.5%	-9.7%	-15.1%
0034	480,849.76	2.41	2.62	8.7%	7.1%	11.4%
0035	181,933.01	2.07	2.03	-1.9%	10.1%	6.2%
0036	83,665.46	6.61	5.93	-10.3%	-10.6%	-11.5%
0037	516,030.64	3.02	2.99	-1.0%	-7.1%	-1.5%
0042	677,173.43	5.32	5.69	7.0%	-0.4%	-13.7%
0050	157,933.99	4.48	4.55	1.6%	0.4%	-7.9%
0059	0.00	0.12	0.12	0.0%	0.0%	0.0%
0065	0.00	0.04	0.04	0.0%	0.0%	0.0%
0066	0.00	0.04	0.04	0.0%	0.0%	0.0%
0067	0.00	0.04	0.04	0.0%	0.0%	0.0%
0079	18,493.73	3.57	3.42	-4.2%	-15.8%	-18.9%
0083	856,881.52	4.34	4.25	-2.1%	-4.6%	1.1%
0106	721,993.64	7.12	6.74	-5.3%	5.0%	9.7%
0113	10,829.96	4.54	4.39	-3.3%	-9.9%	-17.4%
0170	30.75	1.99	1.99	0.0%	-2.9%	-8.9%
0251	8,788.25	3.35	3.38	0.9%	-4.8%	-1.1%
0401	66,857.73	10.47	10.77	2.9%	1.6%	2.3%
0771	0.00	0.44	0.44	0.0%	0.0%	4.8%
0908	375.50	116.00	117.00	0.9%	-4.1%	5.2%
0913	493.60	394.00	423.00	7.4%	3.4%	5.5%
0917	175,754.28	3.39	3.31	-2.4%	-7.6%	-7.6%
1005	11,956.71	5.21	5.70	9.4%	11.3%	19.1%
1016	30.84	12.52	14.64	16.9%	11.6%	6.5%
1164	880,843.19	4.39	4.25	-3.2%	-4.4%	-1.1%
1165	5,884.58	3.12	3.00	-3.8%	-8.2%	-8.6%
1320	8,789.68	1.40	1.42	1.4%	-4.1%	-0.7%
1322	24.70	6.10	6.44	5.6%	-2.4%	-3.7%
1430	186,535.51	5.40	5.22	-3.3%	4.9%	-1.2%
1438	295,545.44	12.64	12.78	1.1%	8.4%	-5.5%
1452	15,332.37	2.81	2.96	5.3%	-4.7%	-15.2%
1463	133,566.21	9.01	8.77	-2.7%	-3.0%	-14.3%
1472	226,639.18	2.68	2.74	2.2%	5.1%	0.4%
1624	866,758.81	2.90	2.46	-15.2%	-12.9%	-10.2%
1642	221,768.82	2.43	2.60	7.0%	-1.6%	-8.9%
1654	29,810.94	3.47	3.45	-0.6%	-8.0%	1.6%
1699	192,835.91	2.56	2.50	-2.3%	-8.6%	-4.4%
1701	856,510.08	3.08	2.94	-4.5%	-0.6%	-8.3%
1710	29,825.41	3.03	3.28	8.3%	-1.0%	-1.3%
1747	46,192.46	1.95	1.99	2.1%	15.4%	6.3%
1748	0.00	5.31	5.60	5.5%	-3.1%	-3.4%
1803	175,706.22	7.16	7.24	1.1%	1.1%	-4.7%
1924	96,272.63	3.58	3.32	-7.3%	-6.8%	-7.2%
1925	285,772.17	3.25	3.35	3.1%	0.6%	-1.2%
2002	224,260.19	2.91	3.08	5.8%	3.9%	10.7%

Exhibit 18

Missouri

Class Code	Exposure	Current 01/01/20	Proposed 01/01/21	Percent Change 01/01/21	Percent Change 01/01/20	Percent Change 01/01/19
2003	738,282.67	3.52	3.65	3.7%	-3.0%	-0.3%
2014	740,965.56	4.52	4.62	2.2%	0.4%	13.1%
2016	246,791.34	2.88	2.84	-1.4%	-1.7%	11.8%
2021	102,411.03	2.06	2.49	20.9%	10.8%	5.7%
2039	427,492.65	2.50	2.68	7.2%	0.4%	3.3%
2041	64,450.46	2.47	2.54	2.8%	0.4%	-0.4%
2065	15,711.78	1.75	1.70	-2.9%	-7.4%	-2.6%
2070	996,794.17	3.91	3.86	-1.3%	-3.0%	-6.5%
2081	24,879.45	4.79	4.79	0.0%	-1.6%	-13.8%
2089	2,186,544.13	3.17	3.13	-1.3%	-4.8%	-2.9%
2095	1,714,750.77	3.23	3.42	5.9%	12.5%	0.7%
2105	6,032.62	3.42	4.00	17.0%	5.9%	1.6%
2110	45,326.67	1.80	1.76	-2.2%	-4.8%	-5.5%
2111	363,152.16	2.06	1.98	-3.9%	-4.2%	-0.5%
2112	3,015.22	3.57	3.57	0.0%	-1.9%	4.3%
2114	0.00	2.96	2.92	-1.4%	-3.9%	1.3%
2121	816,217.95	1.18	1.26	6.8%	-7.8%	-12.9%
2130	205,956.09	1.68	1.72	2.4%	-2.3%	-1.1%
2131	86,493.91	2.22	2.34	5.4%	0.5%	-5.2%
2143	126,190.15	2.17	2.31	6.5%	5.9%	12.6%
2157	709,315.66	5.97	5.32	-10.9%	-4.5%	-4.7%
2172	378.56	1.47	1.48	0.7%	-3.9%	-0.6%
2174	157.80	2.76	2.93	6.2%	0.4%	-6.8%
2211	121.59	9.36	8.97	-4.2%	-7.9%	-9.4%
2220	13,310.54	1.92	2.03	5.7%	1.1%	-0.5%
2288	102,587.49	3.55	3.84	8.2%	-3.5%	-8.7%
2302	44.97	1.62	1.71	5.6%	-5.8%	-5.5%
2305	99,437.24	2.26	2.18	-3.5%	-7.4%	-18.4%
2361	3,179.75	1.80	1.74	-3.3%	-2.2%	-2.1%
2362	1,724.46	1.73	1.94	12.1%	4.8%	5.8%
2380	648.23	1.98	2.00	1.0%	-5.7%	-7.1%
2388	95,243.54	1.52	1.55	2.0%	1.3%	0.0%
2402	1,531.68	2.46	2.54	3.3%	4.2%	4.0%
2413	7,832.21	2.52	2.65	5.2%	2.9%	3.8%
2416	0.00	1.80	1.94	7.8%	-3.2%	-2.6%
2417	21,915.21	1.34	1.40	4.5%	3.9%	-7.2%
2501	1,113,976.11	2.45	2.53	3.3%	4.3%	4.0%
2503	18,445.18	1.31	1.21	-7.6%	-8.4%	4.4%
2570	29,366.79	3.77	3.86	2.4%	-2.6%	-3.7%
2585	1,070,479.25	3.08	2.94	-4.5%	-1.9%	0.3%
2586	60,761.54	2.50	2.78	11.2%	12.6%	8.3%
2587	1,652.71	1.73	1.95	12.7%	-0.6%	-5.4%
2589	197,808.85	1.88	1.96	4.3%	-1.6%	0.0%
2600	0.00	3.72	4.08	9.7%	-2.1%	-0.3%
2623	28,347.31	6.02	5.79	-3.8%	-8.9%	-9.8%
2651	75,813.67	2.21	2.23	0.9%	3.8%	8.1%
2660	265,003.28	2.70	2.83	4.8%	0.0%	-1.5%

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Class Code	Exposure	Current 01/01/20	Proposed 01/01/21	Percent Change 01/01/21	01/01/20	01/01/19
2683	6,412.74	2.10	2.53	20.5%	16.0%	7.1%
2688	62,641.78	2.42	2.30	-5.0%	-10.7%	-9.4%
2701	5,992.00	10.48	10.42	-0.6%	3.6%	12.3%
2702	15,178.76	15.86	15.80	-0.4%	-11.2%	-11.1%
2709	2,521.13	16.56	19.92	20.3%	-0.5%	15.3%
2710	129,721.30	12.46	12.62	1.3%	-7.8%	-10.6%
2714	607.79	4.62	4.50	-2.6%	-2.5%	-6.3%
2731	409,352.29	3.68	3.47	-5.7%	5.4%	-0.6%
2735	46,555.09	3.48	3.69	6.0%	-6.5%	-5.1%
2759	315,693.81	6.08	5.91	-2.8%	-1.8%	-0.6%
2790	34,714.04	1.63	1.80	10.4%	0.6%	2.5%
2797	26,107.37	4.75	5.07	6.7%	9.2%	17.9%
2799	36,736.23	5.03	4.69	-6.8%	-0.4%	8.4%
2802	322,297.70	4.92	4.88	-0.8%	0.0%	-6.8%
2835	18,458.08	2.22	2.26	1.8%	-10.1%	-8.2%
2836	6,958.56	2.16	2.48	14.8%	3.8%	5.6%
2841	51,210.84	3.55	3.94	11.0%	0.0%	-4.1%
2881	218,987.49	2.93	2.78	-5.1%	-6.1%	-2.5%
2883	1,362,081.47	2.83	2.74	-3.2%	-4.4%	2.1%
2915	0.00	3.35	3.32	-0.9%	6.0%	10.5%
2916	1,781.97	3.71	3.41	-8.1%	-7.9%	-13.1%
2923	8,645.78	1.85	1.77	-4.3%	-3.1%	-3.5%
2960	25,697.67	5.19	4.97	-4.2%	-6.3%	-15.5%
3004	24.97	1.77	1.71	-3.4%	-8.3%	-13.8%
3018	45,812.00	4.37	3.87	-11.4%	-14.0%	-14.3%
3022	136,716.92	3.44	3.28	-4.7%	-2.8%	-8.1%
3027	12,461.84	2.45	2.28	-6.9%	-3.9%	-7.3%
3028	192,547.90	3.60	3.71	3.1%	-5.0%	-12.7%
3030	839,145.37	4.32	4.48	3.7%	1.6%	2.9%
3040	290,156.21	4.84	4.76	-1.7%	-6.6%	-7.8%
3041	17,115.16	4.07	3.96	-2.7%	-8.3%	-9.8%
3042	442.35	4.76	4.79	0.6%	-5.0%	-14.4%
3064	147,298.61	3.32	3.45	3.9%	5.1%	-4.8%
3076	5,007,821.41	3.00	2.99	-0.3%	4.9%	1.4%
3081	102,361.34	3.95	4.27	8.1%	2.6%	9.1%
3082	48,569.98	4.61	4.76	3.3%	0.2%	-2.3%
3085	624,796.40	4.41	4.61	4.5%	0.9%	-15.1%
3110	46,634.20	4.21	4.19	-0.5%	-10.6%	-11.6%
3111	4,111.90	2.15	2.08	-3.3%	-7.3%	-0.4%
3113	1,438,342.90	1.76	1.64	-6.8%	-4.9%	0.0%
3114	55,022.26	3.25	3.35	3.1%	6.2%	8.9%
3118	15,271.75	2.05	1.99	-2.9%	-4.2%	-2.3%
3119	734.66	1.37	1.41	2.9%	-7.4%	-9.2%
3122	739.81	2.03	2.08	2.5%	3.6%	-3.0%
3126	35,705.76	1.31	1.36	3.8%	3.1%	8.5%
3131	140.89	1.81	1.79	-1.1%	-1.6%	1.7%
3132	8,404.38	3.68	4.45	20.9%	0.0%	-3.2%

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Class Code	Exposure	Current 01/01/20	Proposed 01/01/21	Percent Change 01/01/21	Percent Change 01/01/20	Percent Change 01/01/19
3145	120,429.46	2.26	2.33	3.1%	-2.2%	-6.9%
3146	444,986.31	2.22	2.25	1.4%	1.4%	5.3%
3169	74,896.11	2.22	2.48	11.7%	6.7%	5.1%
3179	1,922,408.55	2.01	2.08	3.5%	-1.5%	-7.7%
3180	222,389.80	2.64	2.65	0.4%	-5.0%	3.3%
3188	270,958.12	2.16	2.19	1.4%	-6.5%	7.4%
3220	283,324.98	2.15	2.19	1.9%	-3.2%	-8.3%
3224	0.00	2.85	3.12	9.5%	0.7%	-4.7%
3227	300,731.19	2.89	2.83	-2.1%	-3.7%	1.7%
3240	3,707.77	2.71	2.48	-8.5%	16.8%	17.2%
3241	300,108.05	2.74	2.60	-5.1%	-15.4%	-9.0%
3255	0.00	2.24	2.37	5.8%	1.4%	-2.2%
3257	413,677.16	2.47	2.48	0.4%	-1.2%	2.5%
3270	154,153.28	3.65	3.62	-0.8%	-0.5%	-12.2%
3300	346,188.63	3.93	4.28	8.9%	0.3%	2.1%
3303	255,362.59	2.01	2.04	1.5%	1.5%	-14.3%
3307	74,090.81	3.27	2.92	-10.7%	-8.7%	-13.5%
3315	40,313.42	3.04	2.97	-2.3%	-5.6%	-9.6%
3334	105,216.96	1.80	1.79	-0.6%	-3.2%	-3.1%
3336	87,932.05	2.63	2.72	3.4%	-5.4%	-4.8%
3365	296,510.66	3.31	3.28	-0.9%	-4.6%	-11.5%
3372	158,036.15	3.13	2.99	-4.5%	-8.2%	-5.0%
3373	75,282.37	4.45	4.37	-1.8%	-3.7%	-11.5%
3383	32,740.72	1.51	1.55	2.6%	2.0%	4.2%
3385	4,802.07	0.82	0.88	7.3%	1.2%	-3.6%
3400	1,078,320.18	4.20	4.31	2.6%	2.7%	-2.2%
3507	890,324.32	2.57	2.59	0.8%	6.6%	0.4%
3515	4,588.12	2.59	2.57	-0.8%	-2.3%	-4.3%
3548	29,206.42	1.43	1.48	3.5%	-0.7%	-5.3%
3559	56,884.69	2.36	2.35	-0.4%	1.7%	-3.3%
3574	1,467,736.94	1.72	2.08	20.9%	-17.7%	16.1%
3581	67,302.77	1.22	1.27	4.1%	5.2%	-4.9%
3612	725,582.56	1.97	1.96	-0.5%	-2.0%	-6.1%
3620	546,838.76	3.69	3.64	-1.4%	0.3%	0.3%
3629	933,329.43	1.51	1.48	-2.0%	-6.8%	-8.0%
3632	4,028,331.59	2.80	2.81	0.4%	-2.1%	-6.8%
3634	487,491.89	1.54	1.50	-2.6%	-6.7%	3.8%
3635	52,178.35	2.10	2.08	-1.0%	-1.4%	-2.7%
3638	149,464.05	1.88	2.18	16.0%	5.0%	-6.8%
3642	2,059.16	1.21	1.12	-7.4%	-5.5%	-3.0%
3643	1,935,097.83	2.41	2.68	11.2%	10.6%	-0.9%
3647	1,135,140.42	2.49	2.76	10.8%	0.0%	0.4%
3648	94,392.22	1.46	1.55	6.2%	2.1%	-3.4%
3681	3,200,659.88	0.73	0.72	-1.4%	-5.2%	-4.9%
3685	1,357,601.56	1.16	1.09	-6.0%	-4.9%	-10.9%
3719	12,535.99	1.04	0.95	-8.7%	-11.1%	-23.5%
3724	2,542,469.24	3.20	3.19	-0.3%	-2.1%	-14.8%

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Class Code	Exposure	Current 01/01/20	Proposed 01/01/21	Percent Change 01/01/21	01/01/20	01/01/19
3726	226,002.98	3.18	3.25	2.2%	-4.2%	-2.4%
3803	182,177.56	2.00	2.28	14.0%	15.6%	0.6%
3807	222,544.57	2.02	2.28	12.9%	1.0%	-1.5%
3808	326,248.69	3.50	3.59	2.6%	-1.4%	-5.6%
3821	258,621.49	4.46	4.57	2.5%	-4.5%	-9.5%
3822	21,263.56	3.50	3.45	-1.4%	-3.3%	-6.5%
3824	921,883.83	4.04	3.91	-3.2%	-12.0%	-5.2%
3826	123,855.40	1.00	1.07	7.0%	-2.0%	5.2%
3827	1,055.14	2.35	2.39	1.7%	-2.5%	-5.5%
3830	9,338,773.95	0.70	0.70	0.0%	-1.4%	4.4%
3851	248,516.58	2.69	2.38	-11.5%	-20.9%	-21.8%
3865	49,864.89	2.05	2.47	20.5%	10.8%	8.8%
3881	197,796.48	3.69	3.57	-3.3%	-2.1%	-9.2%
4000	173,834.85	4.50	3.99	-11.3%	-8.0%	-0.4%
4018	156,588.93	4.95	5.34	7.9%	1.6%	-0.8%
4021	4,295.82	6.19	5.40	-12.8%	-4.2%	-14.2%
4034	398,025.55	6.33	6.28	-0.8%	-6.5%	4.5%
4036	47,993.71	2.40	2.25	-6.3%	-8.4%	-5.1%
4038	12,410.35	3.83	3.71	-3.1%	-10.1%	-14.3%
4062	19,358.05	2.63	2.67	1.5%	4.4%	3.3%
4101	98,258.00	2.22	2.21	-0.5%	-5.5%	1.3%
4109	88,906.84	0.55	0.57	3.6%	-1.8%	-11.1%
4110	47,566.00	1.21	1.16	-4.1%	-5.5%	-12.9%
4111	7,465.88	1.73	1.79	3.5%	-1.1%	-4.4%
4114	313,205.84	3.11	3.11	0.0%	-5.5%	-10.6%
4130	156,852.95	3.09	3.03	-1.9%	-2.5%	-4.5%
4131	798.98	4.55	4.58	0.7%	14.3%	1.8%
4133	5,499.63	1.80	1.96	8.9%	-2.7%	8.8%
4149	173,628.59	0.82	0.77	-6.1%	-4.7%	-3.4%
4206	11,298.79	2.34	2.49	6.4%	-0.4%	-1.3%
4207	0.00	1.80	1.92	6.7%	-0.6%	0.6%
4239	90,396.78	1.90	2.01	5.8%	6.1%	-0.6%
4240	76,927.40	3.48	3.37	-3.2%	-0.3%	16.3%
4243	528,667.20	2.06	2.21	7.3%	0.0%	-6.4%
4244	1,065,505.83	2.32	2.48	6.9%	-1.7%	-10.3%
4250	88,457.24	1.68	1.72	2.4%	0.0%	-5.1%
4251	148,058.17	3.28	3.41	4.0%	-2.4%	-0.3%
4263	25,976.13	3.32	3.36	1.2%	-7.5%	-14.5%
4273	644,739.57	2.27	2.34	3.1%	-2.2%	-6.5%
4279	341,103.44	2.24	2.33	4.0%	3.7%	-0.9%
4283	221,402.29	1.38	1.28	-7.2%	-2.8%	-8.4%
4299	2,263,941.96	2.07	1.96	-5.3%	-2.8%	-3.6%
4304	236,165.26	5.73	5.07	-11.5%	-11.2%	-9.8%
4307	83,489.17	1.68	1.79	6.5%	-1.2%	7.6%
4351	22,750.33	0.83	0.89	7.2%	6.4%	0.0%
4352	25,588.02	1.65	1.66	0.6%	1.9%	-5.8%
4361	746,309.38	0.71	0.67	-5.6%	-6.6%	-11.6%

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Class Code	Exposure	Current 01/01/20	Proposed 01/01/21	Percent Change 01/01/21	01/01/20	01/01/19
4410	1,404,239.63	2.88	3.06	6.3%	-2.4%	4.6%
4420	1,422.67	3.92	3.89	-0.8%	-4.2%	-0.7%
4431	14,577.32	1.26	1.26	0.0%	-0.8%	-3.1%
4432	0.00	1.21	1.20	-0.8%	-5.5%	-5.9%
4452	631,243.44	2.59	2.47	-4.6%	-5.1%	-2.2%
4459	1,103,493.38	2.40	2.39	-0.4%	4.8%	-5.4%
4470	89,370.98	2.17	2.15	-0.9%	3.3%	1.4%
4484	4,585,157.44	2.47	2.65	7.3%	5.1%	-3.3%
4493	8,910.10	4.44	3.66	-17.6%	-21.0%	-2.8%
4511	3,168,541.62	0.41	0.40	-2.4%	5.1%	8.3%
4557	230,195.12	2.00	2.23	11.5%	-4.3%	-8.7%
4558	460,416.28	1.71	1.72	0.6%	-4.5%	-4.3%
4568	9,501.52	3.71	3.30	-11.1%	-15.9%	-4.8%
4581	13,428.47	1.58	1.91	20.9%	18.8%	17.7%
4583	304,754.42	4.08	4.43	8.6%	3.3%	4.5%
4611	3,066,940.57	0.98	1.07	9.2%	-1.0%	-4.8%
4635	348,178.29	2.94	2.77	-5.8%	-2.3%	-5.6%
4653	7,003.71	1.29	1.41	9.3%	0.8%	-4.5%
4665	11,430.17	9.01	9.02	0.1%	3.2%	-2.9%
4683	54,677.09	3.58	3.60	0.6%	-4.0%	-7.0%
4686	134,366.43	2.41	2.16	-10.4%	-7.7%	4.0%
4692	296,450.94	0.82	0.86	4.9%	1.2%	3.8%
4693	146,235.24	0.82	0.92	12.2%	9.3%	10.3%
4703	189,721.78	1.91	1.87	-2.1%	-2.6%	-10.9%
4717	79,868.73	2.05	2.11	2.9%	3.0%	7.0%
4720	862,039.74	1.93	2.05	6.2%	8.4%	5.3%
4740	84,049.32	0.98	1.01	3.1%	10.1%	7.2%
4741	80,852.92	2.22	2.31	4.1%	3.7%	-6.6%
4751	0.00	1.75	2.05	17.1%	2.9%	-6.1%
4771	334,142.82	2.52	2.52	0.0%	0.4%	6.4%
4777	55,415.29	3.89	3.86	-0.8%	-4.0%	-0.2%
4825	2,183,199.77	0.72	0.72	0.0%	0.0%	-5.3%
4828	1,365,039.87	1.82	1.94	6.6%	-7.1%	-8.0%
4829	1,668,027.51	1.07	1.11	3.7%	0.9%	2.9%
4902	125,907.34	2.39	2.34	-2.1%	-8.1%	-10.7%
4923	29,481.00	0.97	0.99	2.1%	4.3%	-6.1%
5020	86,169.89	4.23	4.07	-3.8%	-6.2%	0.7%
5022	1,286,615.90	5.46	5.66	3.7%	0.0%	-0.2%
5037	7,932.57	10.46	9.86	-5.7%	-6.6%	-7.4%
5040	130,018.73	11.04	9.71	-12.0%	-7.6%	-16.7%
5057	367,381.53	3.66	4.34	18.6%	-0.8%	-9.6%
5059	58,420.11	24.30	23.46	-3.5%	-5.7%	-8.8%
5102	416,529.46	5.20	4.96	-4.6%	-5.3%	-6.0%
5146	386,754.85	4.38	4.46	1.8%	-3.9%	-1.9%
5160	425,156.27	2.02	1.96	-3.0%	-6.5%	-9.2%
5183	4,403,480.82	2.65	2.59	-2.3%	-3.6%	-8.9%
5188	548,196.31	2.64	2.58	-2.3%	5.6%	-0.4%

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Class Code	Exposure	Current 01/01/20	Proposed 01/01/21	Percent Change 01/01/21	01/01/20	01/01/19
5190	5,343,237.63	2.50	2.49	-0.4%	0.0%	-2.7%
5191	3,400,487.11	0.66	0.69	4.5%	1.5%	-3.0%
5192	545,002.00	2.19	2.55	16.4%	2.8%	-1.4%
5213	1,493,212.15	5.39	4.86	-9.8%	-11.1%	-2.6%
5215	536,178.42	4.87	4.86	-0.2%	-0.4%	-3.7%
5221	2,795,020.67	3.94	4.15	5.3%	4.0%	-4.1%
5222	261,291.55	6.74	6.70	-0.6%	-1.6%	-4.9%
5223	141,230.53	5.27	4.97	-5.7%	-8.8%	-6.2%
5348	676,263.06	3.73	3.50	-6.2%	-3.9%	-15.5%
5402	6,600.40	3.72	4.26	14.5%	12.4%	-1.8%
5403	2,937,940.67	4.98	4.92	-1.2%	-2.7%	-7.1%
5437	1,329,660.47	4.04	4.45	10.1%	3.3%	3.7%
5443	3,459.17	2.80	2.82	0.7%	6.9%	-6.4%
5445	1,792,945.01	4.38	3.97	-9.4%	-0.9%	-4.3%
5462	338,706.11	4.99	4.67	-6.4%	-7.1%	-0.4%
5472	84,930.55	4.55	4.36	-4.2%	-10.6%	-3.0%
5473	101,666.21	6.81	6.85	0.6%	-4.5%	-7.0%
5474	1,918,312.67	4.73	4.75	0.4%	-6.5%	-7.7%
5478	619,735.18	5.05	4.41	-12.7%	-9.3%	-9.9%
5479	168,358.63	6.14	6.14	0.0%	-4.7%	-9.7%
5480	53,295.15	5.08	4.91	-3.3%	-1.7%	0.2%
5491	23,956.55	1.54	1.49	-3.2%	2.7%	-5.1%
5506	1,910,702.24	4.68	4.62	-1.3%	2.6%	-5.4%
5507	170,855.58	3.20	3.28	2.5%	-0.3%	-10.3%
5535	964,395.93	5.36	5.52	3.0%	-1.3%	-11.0%
5537	3,906,366.80	3.83	3.66	-4.4%	8.5%	-4.3%
5551	813,619.54	13.67	14.25	4.2%	-0.6%	-9.4%
5606	5,466,731.31	1.10	1.12	1.8%	-4.3%	-0.9%
5610	127,606.04	4.25	3.68	-13.4%	-10.1%	-6.2%
5645	2,302,359.80	9.19	8.95	-2.6%	3.0%	-3.8%
5703	1,814.76	10.02	11.90	18.8%	5.8%	-3.6%
5705	504.77	22.38	19.95	-10.9%	-7.6%	-11.0%
5951	38,200.91	0.35	0.39	11.4%	2.9%	0.0%
6003	15,109.01	4.26	4.58	7.5%	2.2%	-6.1%
6005	1,411.56	4.55	4.32	-5.1%	-6.4%	-10.2%
6045	9,266.10	3.12	3.52	12.8%	5.4%	-6.3%
6204	137,007.78	8.43	7.30	-13.4%	-10.8%	-25.2%
6206	88.95	2.10	2.28	8.6%	0.5%	-10.3%
6213	2,936.53	1.15	1.11	-3.5%	-10.2%	-12.3%
6214	24.70	1.58	1.52	-3.8%	-6.0%	-12.0%
6216	10,247.60	3.96	4.01	1.3%	-5.7%	-4.3%
6217	2,377,460.45	3.40	3.15	-7.4%	-11.5%	-8.1%
6229	96,851.87	3.91	4.14	5.9%	-3.0%	-1.0%
6233	172,496.79	1.89	2.07	9.5%	5.6%	1.7%
6235	8,411.26	5.33	5.18	-2.8%	-2.9%	-17.2%
6236	0.00	5.22	5.14	-1.5%	-4.6%	-10.9%
6237	3,484.08	1.19	1.16	-2.5%	-5.6%	-11.3%

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6251	81,624.05	3.06	2.90	-5.2%	-10.5%	-6.0%
6252	51,057.01	2.95	2.79	-5.4%	-4.2%	-10.7%
6306	496,709.11	4.92	4.53	-7.9%	-9.2%	-21.8%
6319	555,867.17	3.42	3.30	-3.5%	-5.8%	-11.9%
6325	601,592.93	2.83	2.80	-1.1%	-7.5%	-5.6%
6400	203,337.37	5.06	4.94	-2.4%	12.7%	0.9%
6503	34,730.60	1.96	2.00	2.0%	-1.0%	-1.0%
6504	4,309,721.64	2.29	2.25	-1.7%	-0.9%	1.8%
6702	0.00	3.45	3.54	2.6%	0.3%	-5.8%
6703	0.00	5.60	6.48	15.7%	17.9%	1.9%
6704	0.00	3.83	3.93	2.6%	0.3%	-5.7%
6824	0.00	7.27	6.64	-8.7%	-8.3%	3.5%
6825	155,417.91	2.74	2.58	-5.8%	-7.1%	1.4%
6826	0.02	4.21	3.93	-6.7%	-3.0%	4.6%
6834	913,321.85	3.09	2.62	-15.2%	-9.1%	-5.3%
6835	0.00	2.59	2.62	1.2%	-2.3%	-0.7%
6836	162,068.04	3.02	3.09	2.3%	-5.3%	6.7%
6872	844.61	10.12	9.12	-9.9%	-4.4%	-2.2%
6874	0.00	15.18	14.63	-3.6%	-1.2%	7.9%
6882	3,785.00	3.32	3.16	-4.8%	-7.8%	-3.2%
6884	0.00	5.16	5.03	-2.5%	-4.6%	-4.6%
7016	0.00	2.34	2.64	12.8%	17.6%	9.9%
7024	3,805.48	2.60	2.93	12.7%	17.6%	10.0%
7038	0.00	5.10	4.80	-5.9%	-4.9%	2.1%
7046	0.00	9.40	9.49	1.0%	-2.0%	-1.8%
7047	0.00	3.24	4.83	49.1%	17.8%	19.0%
7050	0.00	8.73	8.79	0.7%	18.0%	10.4%
7090	1,035.38	5.67	5.33	-6.0%	-4.7%	2.1%
7098	10.00	10.44	10.54	1.0%	-2.1%	-1.8%
7099	0.00	15.63	17.38	11.2%	18.0%	6.1%
7133	17,617.43	2.26	2.57	13.7%	1.8%	4.2%
7151	0.00	2.75	3.12	13.5%	1.9%	4.2%
7152	0.00	4.40	5.72	30.0%	18.0%	12.7%
7153	0.00	3.05	3.47	13.8%	1.7%	4.2%
7219	12,624,490.32	6.43	6.38	-0.8%	-1.7%	0.8%
7222	7,350.08	5.63	5.80	3.0%	0.5%	4.5%
7225	176,366.34	6.02	7.28	20.9%	-2.1%	-0.6%
7230	366,247.84	6.01	6.30	4.8%	-3.1%	2.5%
7231	518,187.66	6.91	6.99	1.2%	-7.4%	-0.1%
7232	308,031.95	6.86	7.53	9.8%	3.0%	13.8%
7309	14,169.93	10.26	9.20	-10.3%	-6.3%	0.6%
7313	36.81	3.38	3.25	-3.8%	3.0%	8.6%
7317	10,199.73	8.02	7.99	-0.4%	-4.3%	5.3%
7327	0.00	19.03	18.71	-1.7%	0.0%	7.1%
7333	0.00	1.85	1.97	6.5%	-4.6%	7.8%
7335	14.31	2.05	2.19	6.8%	-4.7%	7.5%
7337	0.00	3.15	3.61	14.6%	18.0%	16.1%

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7350	9,220.48	10.48	9.46	-9.7%	-8.3%	-4.8%
7360	336,705.40	3.66	3.73	1.9%	-1.9%	-5.3%
7370	150,342.21	4.12	4.02	-2.4%	-8.4%	-5.9%
7380	5,031,599.11	4.26	4.45	4.5%	-0.2%	-1.8%
7382	1,371,358.69	4.07	4.14	1.7%	-5.8%	-2.3%
7390	357,290.91	4.84	4.54	-6.2%	-6.7%	-21.2%
7394	0.00	3.53	3.73	5.7%	5.1%	0.3%
7395	1,501.61	3.92	4.14	5.6%	5.1%	0.3%
7398	0.00	5.47	6.83	24.9%	17.9%	8.4%
7402	8,722.81	0.10	0.10	0.0%	-9.1%	-8.3%
7403	2,146,329.55	3.88	4.26	9.8%	-1.3%	-10.7%
7405	891,314.29	1.19	1.22	2.5%	-5.6%	4.1%
7420	9,353.21	6.86	6.50	-5.2%	-4.5%	-5.3%
7421	345,832.21	0.55	0.58	5.5%	7.8%	-3.8%
7422	98,765.22	1.73	1.52	-12.1%	-18.4%	-17.2%
7425	263,934.06	2.02	1.82	-9.9%	-19.5%	-7.4%
7431	236,558.35	0.99	1.04	5.1%	5.3%	9.3%
7445	0.00	0.64	0.66	3.1%	-5.9%	4.6%
7453	0.00	0.53	0.56	5.7%	3.9%	10.9%
7502	84,730.98	2.47	2.07	-16.2%	-19.3%	-16.2%
7515	357,488.57	0.99	0.95	-4.0%	-3.9%	8.4%
7520	1,023,762.24	2.78	2.55	-8.3%	-7.9%	-13.7%
7538	781,649.27	5.13	5.10	-0.6%	-6.9%	2.2%
7539	536,725.14	1.69	1.62	-4.1%	-17.6%	-18.0%
7540	149.66	2.55	2.51	-1.6%	-6.3%	-2.9%
7580	310,381.95	2.23	2.50	12.1%	2.8%	4.8%
7590	126,450.17	2.59	2.62	1.2%	-4.1%	-4.6%
7600	3,320,363.23	3.04	3.14	3.3%	-2.3%	-1.0%
7605	953,794.43	1.66	1.66	0.0%	-2.4%	-8.1%
7610	2,845,343.89	0.39	0.41	5.1%	5.4%	2.8%
7705	1,214,706.87	3.76	3.79	0.8%	-1.8%	14.0%
7710	1,245,520.46	4.08	4.12	1.0%	0.5%	1.5%
7711	155,176.77	4.08	4.12	1.0%	0.5%	1.5%
7720	3,694,716.12	2.53	2.71	7.1%	2.4%	-4.3%
7855	270,051.29	3.10	3.17	2.3%	0.3%	-5.8%
8001	398,020.49	1.88	1.95	3.7%	8.0%	-1.7%
8002	614,728.76	1.62	1.78	9.9%	2.5%	5.3%
8006	2,778,162.31	1.58	1.60	1.3%	-1.9%	-0.6%
8008	3,637,119.46	0.88	0.91	3.4%	2.3%	-5.5%
8010	2,742,818.09	1.53	1.60	4.6%	-1.9%	-10.9%
8013	1,338,764.43	0.32	0.34	6.3%	0.0%	-5.9%
8015	375,449.65	0.73	0.68	-6.8%	-6.4%	-3.7%
8017	9,161,583.67	1.31	1.28	-2.3%	-5.1%	-2.1%
8018	5,668,336.20	2.19	2.31	5.5%	3.3%	-1.4%
8021	403,683.71	2.67	2.69	0.7%	-5.7%	-6.6%
8031	188,558.72	1.98	2.01	1.5%	-2.5%	16.0%
8032	344,296.92	1.70	1.75	2.9%	-2.3%	-5.4%

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8033	5,452,136.95	1.51	1.55	2.6%	-0.7%	-2.6%
8034	207,879.81	1.92	2.01	4.7%	-8.1%	-5.9%
8037	9,949,723.22	1.61	1.72	6.8%	-8.0%	-2.8%
8039	1,056,295.14	1.11	1.19	7.2%	3.7%	-3.6%
8044	1,655,182.75	2.26	2.20	-2.7%	-1.7%	-1.3%
8045	4,434,064.78	0.54	0.52	-3.7%	8.0%	6.4%
8046	2,192,045.35	2.06	2.09	1.5%	-3.3%	-2.3%
8047	446,868.37	0.84	0.77	-8.3%	-13.4%	-16.4%
8058	1,974,099.21	2.33	2.49	6.9%	4.5%	-0.9%
8061	1,819,651.48	1.61	1.55	-3.7%	-3.0%	-6.7%
8072	254,751.29	0.51	0.51	0.0%	-1.9%	-1.9%
8102	197,122.16	1.92	2.01	4.7%	-5.4%	-9.4%
8103	23,048.24	1.92	2.24	16.7%	-0.5%	-3.5%
8106	506,224.38	4.17	4.56	9.4%	7.8%	-4.9%
8107	1,999,770.81	2.35	2.32	-1.3%	-3.7%	-0.8%
8111	670,382.37	1.54	1.52	-1.3%	-1.9%	-2.5%
8116	877,509.69	1.97	1.99	1.0%	-0.5%	-14.3%
8203	78,032.35	5.92	5.86	-1.0%	0.5%	1.7%
8204	40,664.24	3.36	3.36	0.0%	5.0%	-2.1%
8209	413.62	3.57	3.56	-0.3%	-3.3%	-18.4%
8215	1,113,853.73	3.50	3.71	6.0%	-1.7%	-16.8%
8227	1,170,064.13	2.85	2.90	1.8%	-2.7%	-10.4%
8232	2,975,514.07	5.00	5.00	0.0%	2.0%	-9.1%
8233	30,102.00	1.97	1.96	-0.5%	-3.9%	3.0%
8235	127,599.41	3.54	3.58	1.1%	0.0%	9.6%
8263	31,958.01	4.33	4.58	5.8%	-5.5%	-1.5%
8264	235,491.46	4.52	4.43	-2.0%	-2.4%	-8.3%
8265	308,365.27	4.13	4.13	0.0%	-11.8%	-14.1%
8279	45,079.39	5.01	5.10	1.8%	-3.8%	-3.9%
8288	145,158.82	6.89	6.96	1.0%	-0.7%	-8.7%
8291	291,864.87	2.89	2.99	3.5%	-4.0%	-2.3%
8292	1,596,860.45	3.42	3.52	2.9%	3.0%	-8.0%
8293	826,655.28	7.18	7.09	-1.3%	-7.4%	-8.7%
8304	267,651.34	4.03	4.26	5.7%	12.9%	2.0%
8350	768,074.99	5.32	5.23	-1.7%	-0.7%	-6.8%
8353	262,168.63	3.21	3.44	7.2%	-3.0%	-6.8%
8370	503,367.57	3.45	3.52	2.0%	0.6%	-8.3%
8381	78,250.63	2.10	2.06	-1.9%	-9.1%	-0.9%
8385	566,505.51	1.68	1.86	10.7%	-1.8%	-4.5%
8387	2,070,581.79	2.55	2.48	-2.7%	-8.6%	-10.0%
8391	8,388,317.60	1.94	2.01	3.6%	-1.5%	-6.6%
8392	346,896.51	2.12	2.10	-0.9%	-2.3%	-8.1%
8393	1,983,339.28	1.24	1.30	4.8%	1.6%	-6.9%
8500	88,583.53	4.60	4.61	0.2%	-4.8%	0.4%
8601	11,011,091.46	0.22	0.22	0.0%	-4.3%	9.5%
8602	195,784.57	0.96	1.11	15.6%	17.1%	15.5%
8603	5,072,703.01	0.06	0.07	16.7%	0.0%	0.0%

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8606	2,039.03	1.69	1.68	-0.6%	-5.1%	-7.3%
8709	735.71	4.35	4.12	-5.3%	-0.2%	4.8%
8719	1,352.52	1.76	1.73	-1.7%	-7.9%	-9.5%
8720	1,063,427.10	1.04	1.02	-1.9%	-12.6%	-15.6%
8721	254,205.00	0.25	0.26	4.0%	0.0%	0.0%
8723	20,034,704.33	0.14	0.14	0.0%	0.0%	-6.7%
8725	13,373.47	1.99	2.05	3.0%	6.4%	2.2%
8726	3,814.15	1.78	1.82	2.2%	-5.3%	1.1%
8728	483,232.22	0.37	0.41	10.8%	8.8%	9.7%
8734	0.00	0.32	0.34	6.3%	-5.9%	-10.5%
8737	0.00	0.29	0.30	3.4%	-3.3%	-11.8%
8738	0.00	0.49	0.56	14.3%	16.7%	-2.3%
8742	62,480,615.68	0.24	0.25	4.2%	-4.0%	-10.7%
8745	14,176.88	3.49	3.19	-8.6%	-15.7%	-11.0%
8748	3,342,328.30	0.49	0.51	4.1%	-5.8%	-8.8%
8755	604,626.60	0.31	0.30	-3.2%	-16.2%	-22.9%
8799	247,646.32	0.35	0.36	2.9%	-14.6%	-10.9%
8800	414,247.20	1.23	1.21	-1.6%	-5.4%	2.4%
8803	20,776,387.85	0.06	0.05	-16.7%	0.0%	-14.3%
8805	0.00	0.15	0.15	0.0%	-6.3%	-11.1%
8810	266,583,996.58	0.11	0.11	0.0%	-8.3%	-7.7%
8814	0.00	0.13	0.13	0.0%	-13.3%	-6.3%
8815	0.00	0.23	0.24	4.3%	15.0%	0.0%
8820	12,553,533.10	0.13	0.11	-15.4%	-7.1%	-6.7%
8824	1,462,372.67	1.88	1.91	1.6%	-19.0%	-1.7%
8826	1,370,393.57	1.74	1.87	7.5%	7.4%	-6.4%
8831	2,668,225.84	1.14	1.14	0.0%	-0.9%	-9.4%
8832	39,494,428.56	0.23	0.23	0.0%	-8.0%	0.0%
8833	19,708,990.48	1.04	1.07	2.9%	4.0%	-1.0%
8835	5,932,084.12	1.76	1.74	-1.1%	-7.4%	-2.6%
8855	28,781,844.22	0.14	0.14	0.0%	-6.7%	-6.3%
8856	396,927.54	0.30	0.36	20.0%	15.4%	13.0%
8861	5,866,338.59	1.14	1.25	9.6%	-1.7%	-1.7%
8868	36,697,133.22	0.38	0.39	2.6%	2.7%	0.0%
8869	3,463,126.54	0.89	0.89	0.0%	0.0%	-8.2%
8871	3,116,084.24	0.06	0.06	0.0%	-14.3%	0.0%
8901	10,920,540.51	0.17	0.16	-5.9%	-5.6%	0.0%
9012	4,699,112.20	0.77	0.71	-7.8%	-9.4%	-17.5%
9014	4,999,681.50	2.43	2.27	-6.6%	7.0%	-1.7%
9015	3,923,390.16	2.66	2.73	2.6%	-0.7%	4.7%
9016	431,316.45	2.85	2.83	-0.7%	4.0%	4.2%
9019	2,998.29	1.80	1.94	7.8%	17.6%	19.5%
9033	316,270.85	1.73	1.71	-1.2%	4.2%	1.8%
9040	873,195.69	3.29	3.38	2.7%	1.2%	-2.1%
9044	1,641,392.12	0.88	0.90	2.3%	0.0%	-6.4%
9052	4,595,054.75	1.71	1.66	-2.9%	0.6%	-1.2%
9058	1,040,888.20	1.33	1.39	4.5%	-5.7%	-6.6%

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Class Code	Exposure	Current 01/01/20	Proposed 01/01/21	Percent Change		
				01/01/21	01/01/20	01/01/19
9060	1,420,876.48	1.06	1.12	5.7%	-4.5%	-2.6%
9061	322,766.71	1.30	1.25	-3.8%	-10.3%	-12.7%
9062	92,644.26	1.16	1.20	3.4%	-9.4%	-9.2%
9063	2,262,010.25	0.69	0.76	10.1%	-4.2%	-6.5%
9077	0.00	2.42	2.43	0.4%	-0.4%	7.0%
9082	16,479,495.29	1.11	1.12	0.9%	-3.5%	-2.5%
9083	11,831,285.48	0.91	0.97	6.6%	-1.1%	-2.1%
9084	848,645.57	1.12	1.16	3.6%	-6.7%	-7.7%
9089	3,010.57	0.99	0.94	-5.1%	-4.8%	-7.1%
9093	232,462.53	1.23	1.16	-5.7%	-2.4%	-14.3%
9101	2,697,997.39	3.13	3.36	7.3%	-6.8%	-2.6%
9102	2,435,098.18	2.50	2.48	-0.8%	-7.7%	5.9%
9110	904,154.86	2.62	2.52	-3.8%	-7.1%	-5.7%
9154	1,030,761.28	1.47	1.63	10.9%	5.0%	-2.8%
9156	420,251.07	2.10	2.19	4.3%	2.9%	6.3%
9170	40,967.63	10.34	10.85	4.9%	6.8%	1.5%
9178	111,418.25	10.14	10.32	1.8%	-5.9%	-1.7%
9179	89,249.84	17.37	17.95	3.3%	2.5%	-1.7%
9180	211,831.19	3.85	3.87	0.5%	-2.5%	17.6%
9182	526,653.57	1.67	1.75	4.8%	2.5%	-4.7%
9186	25,616.87	14.81	13.02	-12.1%	-12.1%	1.0%
9220	179,998.00	3.45	3.53	2.3%	-4.7%	0.0%
9402	525,602.87	3.87	4.17	7.8%	1.6%	2.4%
9403	1,385,486.22	6.79	6.87	1.2%	3.2%	6.1%
9410	210,688.80	2.63	2.71	3.0%	-4.4%	-8.3%
9501	238,258.64	2.84	2.99	5.3%	0.4%	-2.4%
9505	95,533.48	3.98	3.87	-2.8%	-0.3%	10.2%
9516	465,572.41	2.63	2.35	-10.6%	-14.3%	-12.5%
9519	474,050.21	3.15	3.34	6.0%	-4.5%	2.8%
9521	183,284.40	3.29	3.45	4.9%	-6.8%	-8.8%
9522	354,200.43	3.60	4.35	20.8%	16.9%	3.7%
9534	169,393.73	4.02	3.99	-0.7%	-3.6%	-5.2%
9554	186,347.79	7.50	7.40	-1.3%	-6.7%	-10.8%
9586	1,620,778.18	0.48	0.48	0.0%	-4.0%	-13.8%
9600	7,855.38	2.96	3.17	7.1%	4.6%	1.4%
9620	527,209.09	1.01	1.05	4.0%	-1.0%	-7.3%
Total				0.8%	-1.8%	-3.7%

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

MISSOURI ADVISORY LOSS COSTS AND RATING VALUES FILING—JANUARY 1, 2021

RESPONSES TO THE DEPARTMENT OF COMMERCE AND INSURANCE'S REQUESTS
DATED OCTOBER 13, 2020

1. **Exhibit II, Section B, Page 43 of 98: Please provide the underlying data and analysis used to determine the Missouri Selected AOE provision of 9.1%. This would include the data and calculations used to determine the provision for the Missouri state fund that was weighted with the countrywide private carrier AOE provision.**

   Please see the attached Exhibit 1 for the requested information.

   State fund ultimate AOE ratios are determined based on data reported to NCCI on the financial Call for Loss Adjustment Expense (Financial Call #19). A weighted average of the state fund and private carrier AOE ratios is calculated, where the weights reflect the respective shares of ultimate projected losses for the loss cost effective period.

Exhibit 1

Missouri

Derivation of the Adjusting and Other Expense (AOE) Provision

	Private Carrier			**State Fund**		
	(1)	(2)	(3) = [(1)+(2)]/2	(4)	(5)	(6) = [(4)+(5)]/2
	Ultimate AOE	Ultimate AOE	Average	Ultimate AOE	Ultimate AOE	Average
	Ratio Based on	Ratio Based on	Ultimate AOE	Ratio Based on	Ratio Based on	Ultimate AOE
AY	Paid Data	Incurred Data	Ratio	Paid Data	Incurred Data	Ratio
2015	7.8%	7.8%	7.8%	10.6%	9.9%	10.3%
2016	8.3%	8.2%	8.3%	9.7%	9.1%	9.4%
2017	8.9%	8.8%	8.9%	9.3%	8.5%	8.9%
2018	8.8%	8.8%	8.8%	9.6%	9.3%	9.5%
2019	9.0%	8.8%	8.9%	10.5%	10.5%	10.5%
(7) Selected AOE ratio			**8.9%**			**9.7%**
(8) Weights			71%			29%

(9) Weighted-average AOE ratio = (0.089 x 0.71) + (0.097 x 0.29) =   **9.1%**

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

MISSOURI ADVISORY LOSS COSTS AND RATING VALUES FILING—JANUARY 1, 2021

RESPONSE TO THE DEPARTMENT OF COMMERCE AND INSURANCE'S REQUEST
DATED OCTOBER 20, 2020

1. **Please explain why the Average Ultimate AOE Ratios provided in the response to the objection dated October 13, 2020 do not equal the AOE ratios in Exhibit II on page 43 of the filing.**

   Please refer to Response 8 in connection with the objection letter dated September 28, 2020. Exhibit 8 provided in response to that prior request contains the calculations underlying the new AOE methodology proposed with this year's filing. Note that the historical countrywide AOE values shown for years 2015 through 2018 on page 43 of the filing are based on the current AOE methodology. The countrywide selected AOE provision shown on page 43 of the filing is based on the five years of AOE indications shown in the previously provided Exhibit 8. These five years of AOE indications are also reflected in the supporting calculations provided in response to the objection letter dated October 13, 2020.

ATTACHMENT B
PROPOSED AND CURRENT LOSS COSTS BY CLASS CODE

NCCI Missouri Loss Cost Filing Effective January 1, 2021
Analysis of the Absolute Loss Cost Change from Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by 2018 Payroll

Class Code	Loss Cost				Percent Change			Loss Cost	Absolute	Swing Max - Min	Payroll (100's)	
	2018	2019	2020	2021	2019	2020	2021	Coef. Var	Change	Change	2017	2018
8810	0.13	0.12	0.11	0.11	-7.7%	-8.3%	0.0%	0.08	16.67%	8.3%	255,211,347	266,583,997
8742	0.28	0.25	0.24	0.25	-10.7%	-4.0%	4.2%	0.07	19.94%	14.9%	60,950,716	62,480,616
8832	0.25	0.25	0.23	0.23	0.0%	-8.0%	0.0%	0.05	8.00%	8.0%	36,664,231	39,494,429
8868	0.37	0.37	0.38	0.39	0.0%	2.7%	2.6%	0.03	5.41%	2.7%	35,525,434	36,697,133
8855	0.16	0.15	0.14	0.14	-6.3%	-6.7%	0.0%	0.06	13.33%	6.7%	25,075,510	28,781,844
8803	0.07	0.06	0.06	0.05	-14.3%	0.0%	-16.7%	0.14	33.33%	16.7%	18,065,042	20,776,388
8723	0.15	0.14	0.14	0.14	-6.7%	0.0%	0.0%	0.04	6.67%	6.7%	19,563,323	20,034,704
8833	1.01	1.00	1.04	1.07	-1.0%	4.0%	2.9%	0.03	8.06%	5.0%	18,604,651	19,708,990
9082	1.18	1.15	1.11	1.12	-2.5%	-3.5%	0.9%	0.03	7.07%	4.4%	15,779,625	16,479,495
7219	6.49	6.54	6.43	6.38	0.8%	-1.7%	-0.8%	0.01	3.26%	2.5%	12,166,683	12,624,490
8820	0.15	0.14	0.13	0.11	-6.7%	-7.1%	-15.4%	0.13	31.87%	8.7%	12,575,621	12,553,533
9083	0.94	0.92	0.91	0.97	-2.1%	-1.1%	6.6%	0.03	10.04%	8.7%	11,249,827	11,831,285
8601	0.21	0.23	0.22	0.22	9.5%	-4.3%	0.0%	0.04	14.29%	13.9%	10,878,465	11,011,091
8901	0.18	0.18	0.17	0.16	0.0%	-5.6%	-5.9%	0.06	11.76%	5.9%	11,414,928	10,920,541
8037	1.80	1.75	1.61	1.72	-2.8%	-8.0%	6.8%	0.05	18.58%	14.8%	9,810,553	9,949,723
3830	0.68	0.71	0.70	0.70	4.4%	-1.4%	0.0%	0.02	5.88%	5.8%	9,096,560	9,338,774
8017	1.41	1.38	1.31	1.28	-2.1%	-5.1%	-2.3%	0.04	9.77%	2.9%	8,750,505	9,161,584
8391	2.11	1.97	1.94	2.01	-6.6%	-1.5%	3.6%	0.04	12.17%	10.2%	7,833,459	8,388,318
8835	1.95	1.90	1.76	1.74	-2.6%	-7.4%	-1.1%	0.06	11.37%	6.2%	5,714,031	5,932,084
8861	1.18	1.16	1.14	1.25	-1.7%	-1.7%	9.6%	0.04	13.43%	11.4%	5,358,532	5,866,339
8018	2.15	2.12	2.19	2.31	-1.4%	3.3%	5.5%	0.04	10.48%	6.9%	5,246,371	5,668,336
5606	1.16	1.15	1.10	1.12	-0.9%	-4.3%	1.8%	0.02	7.16%	6.2%	5,198,512	5,466,731
8033	1.56	1.52	1.51	1.55	-2.6%	-0.7%	2.6%	0.02	5.97%	5.2%	5,774,305	5,452,137
5190	2.57	2.50	2.50	2.49	-2.7%	0.0%	-0.4%	0.01	3.13%	2.7%	5,150,803	5,343,238
8603	0.06	0.06	0.06	0.07	0.0%	0.0%	16.7%	0.08	16.67%	16.7%	4,584,789	5,072,703
7380	4.35	4.27	4.26	4.45	-1.8%	-0.2%	4.5%	0.02	6.63%	6.3%	4,660,879	5,031,599
3076	2.82	2.86	3.00	2.99	1.4%	4.9%	-0.3%	0.03	6.74%	5.2%	5,081,301	5,007,821
9014	2.31	2.27	2.43	2.27	-1.7%	7.0%	-6.6%	0.03	16.07%	13.6%	4,710,137	4,999,682
9012	1.03	0.85	0.77	0.71	-17.5%	-9.4%	-7.8%	0.17	38.55%	9.7%	4,769,208	4,699,112
9052	1.72	1.70	1.71	1.66	-1.2%	0.6%	-2.9%	0.02	4.73%	3.5%	4,041,664	4,595,055
4484	2.43	2.35	2.47	2.65	-3.3%	5.1%	7.3%	0.05	16.48%	10.6%	4,004,186	4,585,157
8045	0.47	0.50	0.54	0.52	6.4%	8.0%	-3.7%	0.06	19.15%	11.7%	4,541,227	4,434,065
5183	3.02	2.75	2.65	2.59	-8.9%	-3.6%	-2.3%	0.07	15.46%	6.7%	4,282,023	4,403,481
6504	2.27	2.31	2.29	2.25	1.8%	-0.9%	-1.7%	0.01	4.44%	3.5%	3,686,151	4,309,722
3632	3.07	2.86	2.80	2.81	-6.8%	-2.1%	0.4%	0.04	9.47%	7.2%	3,679,662	4,028,332
9015	2.56	2.68	2.66	2.73	4.7%	-0.7%	2.6%	0.03	8.24%	5.4%	3,729,910	3,923,390
5537	3.69	3.53	3.83	3.66	-4.3%	8.5%	-4.4%	0.03	18.23%	12.9%	3,534,958	3,906,367
7720	2.58	2.47	2.53	2.71	-4.3%	2.4%	7.1%	0.04	14.39%	11.4%	3,432,603	3,694,716
8008	0.91	0.86	0.88	0.91	-5.5%	2.3%	3.4%	0.03	11.63%	8.9%	3,667,061	3,637,119
8869	0.97	0.89	0.89	0.89	-8.2%	0.0%	0.0%	0.04	8.25%	8.2%	3,318,827	3,463,127
5191	0.67	0.65	0.66	0.69	-3.0%	1.5%	4.5%	0.03	9.32%	7.5%	3,463,112	3,400,487
8748	0.57	0.52	0.49	0.51	-8.8%	-5.8%	4.1%	0.07	19.74%	12.9%	3,211,586	3,342,328
7600	3.14	3.11	3.04	3.14	-1.0%	-2.3%	3.3%	0.02	6.62%	5.5%	3,544,445	3,320,363
3681	0.81	0.77	0.73	0.72	-4.9%	-5.2%	-1.4%	0.05	11.90%	3.8%	2,446,154	3,200,660
4511	0.36	0.39	0.41	0.40	8.3%	5.1%	-2.4%	0.06	16.67%	10.8%	3,512,990	3,168,542
8871	0.07	0.07	0.06	0.06	0.0%	-14.3%	0.0%	0.09	14.29%	14.3%	2,456,877	3,116,084
4611	1.04	0.99	0.98	1.07	-4.8%	-1.0%	9.2%	0.04	15.59%	14.0%	3,157,722	3,066,941
8232	5.39	4.90	5.00	5.00	-9.1%	2.0%	0.0%	0.04	11.32%	11.1%	2,831,565	2,975,514
5403	5.51	5.12	4.98	4.92	-7.1%	-2.7%	-1.2%	0.05	11.33%	5.9%	2,787,745	2,937,941
7610	0.36	0.37	0.39	0.41	2.8%	5.4%	5.1%	0.06	13.89%	2.6%	2,660,830	2,845,344
5221	3.95	3.79	3.94	4.15	-4.1%	4.0%	5.3%	0.04	13.93%	9.4%	2,685,246	2,795,021
8006	1.62	1.61	1.58	1.60	-0.6%	-1.9%	1.3%	0.01	3.79%	3.1%	2,635,938	2,778,162
8010	1.75	1.56	1.53	1.60	-10.9%	-1.9%	4.6%	0.06	18.16%	15.4%	2,634,299	2,742,818
9101	3.45	3.36	3.13	3.36	-2.6%	-6.8%	7.3%	0.04	17.69%	14.2%	2,644,715	2,697,997
8831	1.27	1.15	1.14	1.14	-9.4%	-0.9%	0.0%	0.05	10.40%	9.4%	2,526,353	2,668,226
3724	3.84	3.27	3.20	3.19	-14.8%	-2.1%	-0.3%	0.09	17.67%	14.5%	2,544,942	2,542,469
9102	2.56	2.71	2.50	2.48	5.9%	-7.7%	-0.8%	0.04	14.98%	13.6%	2,248,866	2,435,098
6217	4.18	3.84	3.40	3.15	-8.1%	-11.5%	-7.4%	0.13	29.39%	4.1%	2,323,776	2,377,460
5645	9.27	8.92	9.19	8.95	-3.8%	3.0%	-2.6%	0.02	9.71%	6.8%	2,236,385	2,302,360

NCCI Missouri Loss Cost Filing Effective January 1, 2021

Analysis of the Absolute Loss Cost Change from Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by 2018 Payroll

Class Code	Loss Cost 2018	2019	2020	2021	Percent Change 2019	2020	2021	Loss Cost Coef. Var	Absolute Change	Swing Max - Min Change	Payroll (100's) 2017	2018
4299	2.21	2.13	2.07	1.96	-3.6%	-2.8%	-5.3%	0.05	12.20%	2.5%	2,380,979	2,263,942
9063	0.77	0.72	0.69	0.76	-6.5%	-4.2%	10.1%	0.05	22.18%	16.6%	2,271,633	2,262,010
8046	2.18	2.13	2.06	2.09	-2.3%	-3.3%	1.5%	0.02	7.19%	4.7%	2,219,568	2,192,045
2089	3.43	3.33	3.17	3.13	-2.9%	-4.8%	-1.3%	0.04	9.22%	3.5%	1,986,321	2,186,544
4825	0.76	0.72	0.72	0.72	-5.3%	0.0%	0.0%	0.03	5.26%	5.3%	2,061,898	2,183,200
7403	4.40	3.93	3.88	4.26	-10.7%	-1.3%	9.8%	0.06	23.07%	20.5%	2,042,578	2,146,330
8387	3.10	2.79	2.55	2.48	-10.0%	-8.6%	-2.7%	0.10	22.74%	7.3%	1,982,326	2,070,582
8107	2.46	2.44	2.35	2.32	-0.8%	-3.7%	-1.3%	0.03	5.87%	2.9%	1,818,342	1,999,771
8393	1.31	1.22	1.24	1.30	-6.9%	1.6%	4.8%	0.03	13.88%	11.7%	1,760,453	1,983,339
8058	2.25	2.23	2.33	2.49	-0.9%	4.5%	6.9%	0.05	12.65%	7.8%	1,902,765	1,974,099
3643	2.20	2.18	2.41	2.68	-0.9%	10.6%	11.2%	0.10	24.05%	12.1%	1,329,683	1,935,098
3179	2.21	2.04	2.01	2.08	-7.7%	-1.5%	3.5%	0.04	13.08%	11.2%	1,643,733	1,922,409
5474	5.48	5.06	4.73	4.75	-7.7%	-6.5%	0.4%	0.07	15.17%	8.1%	1,933,498	1,918,313
5506	4.82	4.56	4.68	4.62	-5.4%	2.6%	-1.3%	0.02	9.55%	8.0%	1,835,083	1,910,702
8061	1.78	1.66	1.61	1.55	-6.7%	-3.0%	-3.7%	0.06	14.05%	3.7%	1,776,589	1,819,651
5445	4.62	4.42	4.38	3.97	-4.3%	-0.9%	-9.4%	0.06	15.13%	8.5%	1,805,940	1,792,945
2095	2.85	2.87	3.23	3.42	0.7%	12.5%	5.9%	0.09	20.00%	11.8%	1,663,499	1,714,751
4829	1.03	1.06	1.07	1.11	2.9%	0.9%	3.7%	0.03	7.77%	2.8%	1,431,459	1,668,028
8044	2.33	2.30	2.26	2.20	-1.3%	-1.7%	-2.7%	0.02	5.78%	1.4%	1,590,757	1,655,183
9044	0.94	0.88	0.88	0.90	-6.4%	0.0%	2.3%	0.03	8.80%	8.7%	2,539,398	1,641,392
9586	0.58	0.50	0.48	0.48	-13.8%	-4.0%	0.0%	0.09	18.34%	13.8%	1,586,477	1,620,778
8292	3.61	3.32	3.42	3.52	-8.0%	3.0%	2.9%	0.04	14.54%	11.0%	1,465,865	1,596,860
5213	6.22	6.06	5.39	4.86	-2.6%	-11.1%	-9.8%	0.11	25.11%	8.5%	1,389,996	1,493,212
3574	1.80	2.09	1.72	2.08	16.1%	-17.7%	20.9%	0.10	65.27%	38.6%	513,164	1,467,737
8824	2.36	2.32	1.88	1.91	-1.7%	-19.0%	1.6%	0.12	22.91%	20.6%	1,295,292	1,462,373
3113	1.85	1.85	1.76	1.64	0.0%	-4.9%	-6.8%	0.06	12.01%	6.8%	1,426,505	1,438,343
9060	1.14	1.11	1.06	1.12	-2.6%	-4.5%	5.7%	0.03	13.33%	10.2%	1,341,056	1,420,876
4410	2.82	2.95	2.88	3.06	4.6%	-2.4%	6.3%	0.04	13.79%	8.6%	1,310,351	1,404,240
9403	6.20	6.58	6.79	6.87	6.1%	3.2%	1.2%	0.05	10.81%	5.0%	1,342,733	1,385,486
7382	4.42	4.32	4.07	4.14	-2.3%	-5.8%	1.7%	0.04	10.04%	7.5%	1,327,485	1,371,359
8826	1.73	1.62	1.74	1.87	-6.4%	7.4%	7.5%	0.06	22.77%	13.8%	732,634	1,370,394
4828	2.13	1.96	1.82	1.94	-8.0%	-7.1%	6.6%	0.07	23.32%	14.6%	1,170,027	1,365,040
2883	2.90	2.96	2.83	2.74	2.1%	-4.4%	-3.2%	0.03	9.94%	6.5%	1,273,831	1,362,081
3685	1.37	1.22	1.16	1.09	-10.9%	-4.9%	-6.0%	0.10	23.43%	6.0%	1,395,129	1,357,602
8013	0.34	0.32	0.32	0.34	-5.9%	0.0%	6.3%	0.03	12.50%	12.1%	1,397,188	1,338,764
5437	3.77	3.91	4.04	4.45	3.7%	3.3%	10.1%	0.07	18.04%	6.8%	1,306,098	1,329,660
5022	5.47	5.46	5.46	5.66	-0.2%	0.0%	3.7%	0.02	3.85%	3.8%	1,295,269	1,286,616
7710	4.00	4.06	4.08	4.12	1.5%	0.5%	1.0%	0.01	3.00%	1.0%	1,085,275	1,245,520
7705	3.36	3.83	3.76	3.79	14.0%	-1.8%	0.8%	0.06	17.00%	15.8%	1,095,461	1,214,707
8227	3.27	2.93	2.85	2.90	-10.4%	-2.7%	1.8%	0.06	15.40%	12.2%	1,122,259	1,170,064
3647	2.48	2.49	2.49	2.76	0.4%	0.0%	10.8%	0.05	11.29%	10.8%	1,110,849	1,135,140
2501	2.26	2.35	2.45	2.53	4.0%	4.3%	3.3%	0.05	11.95%	1.0%	1,077,937	1,113,976
8215	4.28	3.56	3.50	3.71	-16.8%	-1.7%	6.0%	0.09	25.92%	22.8%	1,009,787	1,113,854
4459	2.42	2.29	2.40	2.39	-5.4%	4.8%	-0.4%	0.02	10.89%	10.2%	793,725	1,103,493
3400	4.18	4.09	4.20	4.31	-2.2%	2.7%	2.6%	0.02	7.65%	4.8%	1,326,392	1,078,320
2585	3.13	3.14	3.08	2.94	0.3%	-1.9%	-4.5%	0.03	6.88%	4.9%	964,313	1,070,479
4244	2.63	2.36	2.32	2.48	-10.3%	-1.7%	6.9%	0.06	19.87%	17.2%	897,624	1,065,506
8720	1.41	1.19	1.04	1.02	-15.6%	-12.6%	-1.9%	0.15	32.68%	13.7%	1,022,911	1,063,427
8039	1.11	1.07	1.11	1.19	-3.6%	3.7%	7.2%	0.04	15.22%	10.8%	1,152,381	1,056,295
9058	1.51	1.41	1.33	1.39	-6.6%	-5.7%	4.5%	0.05	17.75%	11.1%	1,016,126	1,040,888
9154	1.44	1.40	1.47	1.63	-2.8%	5.0%	10.9%	0.07	19.66%	13.7%	930,979	1,030,761
7520	3.50	3.02	2.78	2.55	-13.7%	-7.9%	-8.3%	0.14	32.91%	5.8%	859,352	1,023,762
2070	4.31	4.03	3.91	3.86	-6.5%	-3.0%	-1.3%	0.05	11.07%	5.2%	531,989	996,794
5535	6.10	5.43	5.36	5.52	-11.0%	-1.3%	3.0%	0.06	15.77%	14.0%	1,004,638	964,396
7605	1.85	1.70	1.66	1.66	-8.1%	-2.4%	0.0%	0.05	10.65%	8.1%	935,580	953,794
3629	1.76	1.62	1.51	1.48	-8.0%	-6.8%	-2.0%	0.08	17.58%	6.0%	888,991	933,329
3824	4.84	4.59	4.04	3.91	-5.2%	-12.0%	-3.2%	0.10	21.56%	8.8%	778,106	921,884
6834	3.59	3.40	3.09	2.62	-5.3%	-9.1%	-15.2%	0.13	32.37%	9.9%	377,822	913,322
9110	2.99	2.82	2.62	2.52	-5.7%	-7.1%	-3.8%	0.08	17.50%	3.3%	805,703	904,155

NCCI Missouri Loss Cost Filing Effective January 1, 2021
Analysis of the Absolute Loss Cost Change from Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by 2018 Payroll

Class Code	Loss Cost				Percent Change			Loss Cost	Absolute	Swing Max - Min	Payroll (100's)	
	2018	2019	2020	2021	2019	2020	2021	Coef. Var	Change	Change	2017	2018
7405	1.21	1.26	1.19	1.22	4.1%	-5.6%	2.5%	0.02	12.69%	9.7%	832,298	891,314
3507	2.40	2.41	2.57	2.59	0.4%	6.6%	0.8%	0.04	7.92%	6.2%	809,408	890,324
1164	4.64	4.59	4.39	4.25	-1.1%	-4.4%	-3.2%	0.04	8.85%	3.3%	628,282	880,843
8116	2.31	1.98	1.97	1.99	-14.3%	-0.5%	1.0%	0.08	16.03%	15.3%	832,412	877,510
9040	3.32	3.25	3.29	3.38	-2.1%	1.2%	2.7%	0.02	6.19%	4.8%	834,652	873,196
1624	3.71	3.33	2.90	2.46	-10.2%	-12.9%	-15.2%	0.17	43.36%	4.9%	865,153	866,759
4720	1.69	1.78	1.93	2.05	5.3%	8.4%	6.2%	0.09	21.30%	3.1%	1,172,580	862,040
0083	4.50	4.55	4.34	4.25	1.1%	-4.6%	-2.1%	0.03	7.97%	5.7%	791,132	856,882
1701	3.38	3.10	3.08	2.94	-8.3%	-0.6%	-4.5%	0.06	13.94%	7.6%	772,916	856,510
9084	1.30	1.20	1.12	1.16	-7.7%	-6.7%	3.6%	0.06	18.97%	11.3%	759,618	848,646
3030	4.13	4.25	4.32	4.48	2.9%	1.6%	3.7%	0.03	8.47%	2.1%	785,052	839,145
8293	8.49	7.75	7.18	7.09	-8.7%	-7.4%	-1.3%	0.08	18.17%	7.5%	881,264	826,655
2121	1.47	1.28	1.18	1.26	-12.9%	-7.8%	6.8%	0.09	30.00%	19.7%	798,918	816,218
5551	15.17	13.75	13.67	14.25	-9.4%	-0.6%	4.2%	0.05	14.66%	13.6%	867,605	813,620
7538	5.39	5.51	5.13	5.10	2.2%	-6.9%	-0.6%	0.04	9.92%	9.1%	759,145	781,649
8350	5.75	5.36	5.32	5.23	-6.8%	-0.7%	-1.7%	0.04	9.40%	6.0%	717,830	768,075
4361	0.86	0.76	0.71	0.67	-11.6%	-6.6%	-5.6%	0.11	25.67%	6.0%	757,031	746,309
2014	3.98	4.50	4.52	4.62	13.1%	0.4%	2.2%	0.07	16.08%	12.6%	698,213	740,966
2003	3.64	3.63	3.52	3.65	-0.3%	-3.0%	3.7%	0.02	7.13%	6.7%	540,593	738,283
3612	2.14	2.01	1.97	1.96	-6.1%	-2.0%	-0.5%	0.04	8.73%	5.6%	790,319	725,583
0106	6.18	6.78	7.12	6.74	9.7%	5.0%	-5.3%	0.06	21.36%	15.0%	733,553	721,994
2157	6.56	6.25	5.97	5.32	-4.7%	-4.5%	-10.9%	0.09	21.33%	6.4%	678,966	709,316
0042	6.19	5.34	5.32	5.69	-13.7%	-0.4%	7.0%	0.07	22.10%	20.7%	657,098	677,173
5348	4.59	3.88	3.73	3.50	-15.5%	-3.9%	-6.2%	0.12	27.33%	11.6%	607,208	676,263
8111	1.61	1.57	1.54	1.52	-2.5%	-1.9%	-1.3%	0.03	5.80%	1.2%	707,498	670,382
4273	2.48	2.32	2.27	2.34	-6.5%	-2.2%	3.1%	0.04	12.10%	9.5%	644,283	644,740
4452	2.79	2.73	2.59	2.47	-2.2%	-5.1%	-4.6%	0.05	12.36%	3.0%	515,162	631,243
3085	5.15	4.37	4.41	4.61	-15.1%	0.9%	4.5%	0.08	21.47%	19.7%	644,461	624,796
5478	6.18	5.57	5.05	4.41	-9.9%	-9.3%	-12.7%	0.14	35.35%	3.3%	631,459	619,735
8002	1.50	1.58	1.62	1.78	5.3%	2.5%	9.9%	0.07	18.67%	7.3%	683,403	614,729
8755	0.48	0.37	0.31	0.30	-22.9%	-16.2%	-3.2%	0.23	47.46%	19.7%	638,779	604,627
6325	3.24	3.06	2.83	2.80	-5.6%	-7.5%	-1.1%	0.07	14.69%	6.5%	544,279	601,593
8385	1.79	1.71	1.68	1.86	-4.5%	-1.8%	10.7%	0.05	17.69%	15.2%	582,277	566,506
6319	4.12	3.63	3.42	3.30	-11.9%	-5.8%	-3.5%	0.10	22.52%	8.4%	597,604	555,867
5188	2.51	2.50	2.64	2.58	-0.4%	5.6%	-2.3%	0.03	8.43%	7.9%	562,891	548,196
3620	3.67	3.68	3.69	3.64	0.3%	0.3%	-1.4%	0.01	1.91%	1.6%	523,729	546,839
5192	2.16	2.13	2.19	2.55	-1.4%	2.8%	16.4%	0.09	21.38%	17.8%	547,627	545,002
7539	2.50	2.05	1.69	1.62	-18.0%	-17.6%	-4.1%	0.21	44.47%	13.9%	521,686	536,725
5215	5.08	4.89	4.87	4.86	-3.7%	-0.4%	-0.2%	0.02	4.38%	3.5%	548,826	536,178
4243	2.20	2.06	2.06	2.21	-6.4%	0.0%	7.3%	0.04	14.11%	13.6%	490,558	528,667
9620	1.10	1.02	1.01	1.05	-7.3%	-1.0%	4.0%	0.04	12.61%	11.2%	549,067	527,209
9182	1.71	1.63	1.67	1.75	-4.7%	2.5%	4.8%	0.03	12.38%	9.5%	450,631	526,654
9402	3.72	3.81	3.87	4.17	2.4%	1.6%	7.8%	0.05	12.10%	6.2%	438,231	525,603
7231	7.47	7.46	6.91	6.99	-0.1%	-7.4%	1.2%	0.04	8.76%	8.5%	428,051	518,188
0037	3.30	3.25	3.02	2.99	-1.5%	-7.1%	-1.0%	0.05	9.78%	6.1%	467,083	516,031
8106	4.07	3.87	4.17	4.56	-4.9%	7.8%	9.4%	0.07	23.62%	14.3%	464,766	506,224
8370	3.74	3.43	3.45	3.52	-8.3%	0.6%	2.0%	0.04	11.13%	10.3%	494,192	503,368
6306	6.93	5.42	4.92	4.53	-21.8%	-9.2%	-7.9%	0.19	43.57%	13.9%	450,582	496,709
3634	1.59	1.65	1.54	1.50	3.8%	-6.7%	-2.6%	0.04	13.57%	10.4%	410,059	487,492
8728	0.31	0.34	0.37	0.41	9.7%	8.8%	10.8%	0.12	32.26%	2.0%	463,191	483,232
0034	2.02	2.25	2.41	2.62	11.4%	7.1%	8.7%	0.11	29.70%	4.3%	377,904	480,850
9519	3.21	3.30	3.15	3.34	2.8%	-4.5%	6.0%	0.03	13.96%	10.6%	464,515	474,050
9516	3.51	3.07	2.63	2.35	-12.5%	-14.3%	-10.6%	0.18	42.36%	3.7%	496,687	465,572
4558	1.87	1.79	1.71	1.72	-4.3%	-4.5%	0.6%	0.04	9.58%	5.1%	441,207	460,416
8047	1.16	0.97	0.84	0.77	-16.4%	-13.4%	-8.3%	0.18	42.97%	8.0%	521,274	446,868
3146	2.08	2.19	2.22	2.25	5.3%	1.4%	1.4%	0.03	8.17%	3.9%	445,040	444,986
9016	2.63	2.74	2.85	2.83	4.2%	4.0%	-0.7%	0.04	9.13%	4.9%	385,208	431,316
2039	2.41	2.49	2.50	2.68	3.3%	0.4%	7.2%	0.05	11.20%	6.8%	433,000	427,493
5160	2.38	2.16	2.02	1.96	-9.2%	-6.5%	-3.0%	0.09	19.78%	6.3%	424,211	425,156

NCCI Missouri Loss Cost Filing Effective January 1, 2021
Analysis of the Absolute Loss Cost Change from Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by 2018 Payroll

	Loss Cost				Percent Change			Loss Cost	Absolute	Swing Max - Min	Payroll (100's)	
Class Code	2018	2019	2020	2021	2019	2020	2021	Coef. Var	Change	Change	2017	2018
9156	1.92	2.04	2.10	2.19	6.3%	2.9%	4.3%	0.05	14.06%	3.3%	383,059	420,251
5102	5.84	5.49	5.20	4.96	-6.0%	-5.3%	-4.6%	0.07	16.74%	1.4%	368,358	416,529
8800	1.27	1.30	1.23	1.21	2.4%	-5.4%	-1.6%	0.03	9.63%	7.7%	349,466	414,247
3257	2.44	2.50	2.47	2.48	2.5%	-1.2%	0.4%	0.01	4.11%	3.7%	365,001	413,677
2731	3.51	3.49	3.68	3.47	-0.6%	5.4%	-5.7%	0.03	12.10%	11.2%	394,027	409,352
8021	3.03	2.83	2.67	2.69	-6.6%	-5.7%	0.7%	0.06	13.47%	7.3%	394,553	403,684
4034	6.48	6.77	6.33	6.28	4.5%	-6.5%	-0.8%	0.03	12.14%	11.0%	382,878	398,026
8001	1.77	1.74	1.88	1.95	-1.7%	8.0%	3.7%	0.05	13.97%	9.7%	384,731	398,020
8856	0.23	0.26	0.30	0.36	13.0%	15.4%	20.0%	0.20	56.52%	7.0%	388,287	396,928
5146	4.65	4.56	4.38	4.46	-1.9%	-3.9%	1.8%	0.03	7.89%	5.8%	359,801	386,755
8015	0.81	0.78	0.73	0.68	-3.7%	-6.4%	-6.8%	0.08	17.91%	3.1%	381,701	375,450
5057	4.08	3.69	3.66	4.34	-9.6%	-0.8%	18.6%	0.08	30.97%	28.1%	325,894	367,382
7230	6.05	6.20	6.01	6.30	2.5%	-3.1%	4.8%	0.02	10.72%	7.9%	281,679	366,248
2111	2.16	2.15	2.06	1.98	-0.5%	-4.2%	-3.9%	0.04	8.73%	3.7%	298,315	363,152
7515	0.95	1.03	0.99	0.95	8.4%	-3.9%	-4.0%	0.04	17.18%	12.5%	332,705	357,489
7390	6.59	5.19	4.84	4.54	-21.2%	-6.7%	-6.2%	0.17	37.44%	15.0%	321,983	357,291
9522	2.97	3.08	3.60	4.35	3.7%	16.9%	20.8%	0.18	46.46%	17.1%	468,363	354,200
4635	3.19	3.01	2.94	2.77	-5.6%	-2.3%	-5.8%	0.06	14.35%	3.5%	326,682	348,178
8392	2.36	2.17	2.12	2.10	-8.1%	-2.3%	-0.9%	0.05	11.58%	7.1%	323,614	346,897
3300	3.84	3.92	3.93	4.28	2.1%	0.3%	8.9%	0.05	11.46%	8.7%	350,380	346,189
7421	0.53	0.51	0.55	0.58	-3.8%	7.8%	5.5%	0.06	18.02%	11.6%	311,890	345,832
8032	1.84	1.74	1.70	1.75	-5.4%	-2.3%	2.9%	0.03	11.03%	8.4%	277,539	344,297
4279	2.18	2.16	2.24	2.33	-0.9%	3.7%	4.0%	0.03	8.86%	4.9%	306,460	341,103
5462	5.39	5.37	4.99	4.67	-0.4%	-7.1%	-6.4%	0.07	14.37%	6.7%	372,133	338,706
7360	3.94	3.73	3.66	3.73	-5.3%	-1.9%	1.9%	0.03	9.36%	7.2%	249,567	336,705
4771	2.36	2.51	2.52	2.52	6.4%	0.4%	0.0%	0.03	6.78%	6.4%	334,620	334,143
3808	3.76	3.55	3.50	3.59	-5.6%	-1.4%	2.6%	0.03	9.83%	8.2%	303,619	326,249
9061	1.66	1.45	1.30	1.25	-12.7%	-10.3%	-3.8%	0.13	29.09%	8.8%	312,823	322,767
2802	5.28	4.92	4.92	4.88	-6.8%	0.0%	-0.8%	0.04	7.69%	6.8%	302,048	322,298
9033	1.63	1.66	1.73	1.71	1.8%	4.2%	-1.2%	0.03	7.36%	5.4%	314,514	316,271
2759	6.23	6.19	6.08	5.91	-0.6%	-1.8%	-2.8%	0.02	5.29%	2.2%	283,849	315,694
4114	3.68	3.29	3.11	3.11	-10.6%	-5.5%	0.0%	0.08	16.65%	10.6%	306,076	313,206
7580	2.07	2.17	2.23	2.50	4.8%	2.8%	12.1%	0.08	20.77%	9.3%	292,739	310,382
8265	5.45	4.68	4.13	4.13	-14.1%	-11.8%	0.0%	0.14	27.54%	14.1%	277,053	308,365
7232	5.85	6.66	6.86	7.53	13.8%	3.0%	9.8%	0.10	28.72%	10.8%	287,516	308,032
4583	3.78	3.95	4.08	4.43	4.5%	3.3%	8.6%	0.07	17.20%	5.3%	299,699	304,754
3227	2.95	3.00	2.89	2.83	1.7%	-3.7%	-2.1%	0.03	7.61%	5.4%	228,764	300,731
3241	3.56	3.24	2.74	2.60	-9.0%	-15.4%	-5.1%	0.15	32.24%	10.3%	257,941	300,108
3365	3.92	3.47	3.31	3.28	-11.5%	-4.6%	-0.9%	0.08	17.68%	10.6%	225,721	296,511
4692	0.78	0.81	0.82	0.86	3.8%	1.2%	4.9%	0.04	10.26%	3.6%	282,864	296,451
1438	12.34	11.66	12.64	12.78	-5.5%	8.4%	1.1%	0.04	15.65%	13.9%	49,458	295,545
8291	3.08	3.01	2.89	2.99	-2.3%	-4.0%	3.5%	0.03	10.03%	7.4%	265,911	291,865
3040	5.62	5.18	4.84	4.76	-7.8%	-6.6%	-1.7%	0.08	16.81%	6.2%	270,429	290,156
1925	3.27	3.23	3.25	3.35	-1.2%	0.6%	3.1%	0.02	4.98%	4.3%	256,802	285,772
3220	2.42	2.22	2.15	2.19	-8.3%	-3.2%	1.9%	0.05	13.76%	10.1%	290,975	283,325
3188	2.15	2.31	2.16	2.19	7.4%	-6.5%	1.4%	0.03	16.01%	13.9%	280,118	270,958
7855	3.28	3.09	3.10	3.17	-5.8%	0.3%	2.3%	0.03	8.53%	8.1%	236,200	270,051
8304	3.50	3.57	4.03	4.26	2.0%	12.9%	5.7%	0.10	21.71%	10.9%	283,147	267,651
2660	2.74	2.70	2.70	2.83	-1.5%	0.0%	4.8%	0.02	6.34%	6.3%	192,307	265,003
7425	2.71	2.51	2.02	1.82	-7.4%	-19.5%	-9.9%	0.18	41.05%	12.1%	253,715	263,934
8353	3.55	3.31	3.21	3.44	-6.8%	-3.0%	7.2%	0.04	17.87%	13.9%	282,971	262,169
5222	7.20	6.85	6.74	6.70	-4.9%	-1.6%	-0.6%	0.03	7.18%	4.3%	234,569	261,292
3821	5.16	4.67	4.46	4.57	-9.5%	-4.5%	2.5%	0.07	17.24%	12.0%	218,433	258,621
3303	2.31	1.98	2.01	2.04	-14.3%	1.5%	1.5%	0.07	17.75%	15.8%	189,230	255,363
8072	0.53	0.52	0.51	0.51	-1.9%	-1.9%	0.0%	0.02	3.85%	1.9%	252,465	254,751
8721	0.25	0.25	0.25	0.26	0.0%	0.0%	4.0%	0.02	4.00%	4.0%	252,408	254,205
3851	4.35	3.40	2.69	2.38	-21.8%	-20.9%	-11.5%	0.27	64.25%	10.3%	457,125	248,517
8799	0.46	0.41	0.35	0.36	-10.9%	-14.6%	2.9%	0.13	30.73%	17.5%	165,314	247,646
2016	2.62	2.93	2.88	2.84	11.8%	-1.7%	-1.4%	0.05	15.32%	13.5%	223,858	246,791

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Analysis of the Absolute Loss Cost Change from Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by 2018 Payroll

Class Code	Loss Cost				Percent Change			Loss Cost Coef. Var	Absolute Change	Swing Max - Min Change	Payroll (100's)	
	2018	2019	2020	2021	2019	2020	2021				2017	2018
9501	2.90	2.83	2.84	2.99	-2.4%	0.4%	5.3%	0.03	8.20%	7.7%	215,197	238,259
7431	0.86	0.94	0.99	1.04	9.3%	5.3%	5.1%	0.08	20.93%	4.3%	218,864	236,558
4304	7.15	6.45	5.73	5.07	-9.8%	-11.2%	-11.5%	0.15	36.10%	1.7%	241,751	236,165
8264	5.05	4.63	4.52	4.43	-8.3%	-2.4%	-2.0%	0.06	13.10%	6.3%	215,577	235,491
9093	1.47	1.26	1.23	1.16	-14.3%	-2.4%	-5.7%	0.10	23.67%	11.9%	230,029	232,463
4557	2.29	2.09	2.00	2.23	-8.7%	-4.3%	11.5%	0.06	26.46%	20.2%	229,661	230,195
1472	2.54	2.55	2.68	2.74	0.4%	5.1%	2.2%	0.04	7.87%	4.7%	206,977	226,639
3726	3.40	3.32	3.18	3.25	-2.4%	-4.2%	2.2%	0.03	9.02%	6.4%	159,054	226,003
2002	2.53	2.80	2.91	3.08	10.7%	3.9%	5.8%	0.08	21.74%	6.7%	286,338	224,260
3807	2.03	2.00	2.02	2.28	-1.5%	1.0%	12.9%	0.06	15.68%	14.3%	216,020	222,545
3180	2.69	2.78	2.64	2.65	3.3%	-5.0%	0.4%	0.02	8.96%	8.4%	171,174	222,390
1642	2.71	2.47	2.43	2.60	-8.9%	-1.6%	7.0%	0.05	18.36%	15.9%	338,385	221,769
4283	1.55	1.42	1.38	1.28	-8.4%	-2.8%	-7.2%	0.08	19.52%	5.6%	239,305	221,402
2881	3.20	3.12	2.93	2.78	-2.5%	-6.1%	-5.1%	0.06	14.31%	3.6%	227,858	218,987
9180	3.36	3.95	3.85	3.87	17.6%	-2.5%	0.5%	0.07	21.16%	20.1%	189,396	211,831
9410	3.00	2.75	2.63	2.71	-8.3%	-4.4%	3.0%	0.06	16.50%	11.4%	212,555	210,689
8034	2.22	2.09	1.92	2.01	-5.9%	-8.1%	4.7%	0.06	19.83%	12.8%	184,107	207,880
2130	1.74	1.72	1.68	1.72	-1.1%	-2.3%	2.4%	0.01	5.97%	4.7%	179,138	205,956
6400	4.45	4.49	5.06	4.94	0.9%	12.7%	-2.4%	0.07	16.40%	15.1%	193,922	203,337
2589	1.91	1.91	1.88	1.96	0.0%	-1.6%	4.3%	0.02	5.89%	5.8%	214,680	197,809
3881	4.15	3.77	3.69	3.57	-9.2%	-2.1%	-3.3%	0.07	15.10%	7.0%	183,066	197,796
8102	2.24	2.03	1.92	2.01	-9.4%	-5.4%	4.7%	0.07	20.71%	14.1%	150,959	197,122
8602	0.71	0.82	0.96	1.11	15.5%	17.1%	15.6%	0.19	56.34%	1.6%	184,263	195,785
1699	2.93	2.80	2.56	2.50	-4.4%	-8.6%	-2.3%	0.07	16.05%	6.2%	74,357	192,836
3028	4.34	3.79	3.60	3.71	-12.7%	-5.0%	3.1%	0.09	21.94%	15.7%	408,667	192,548
4703	2.20	1.96	1.91	1.87	-10.9%	-2.6%	-2.1%	0.07	16.12%	8.8%	185,415	189,722
8031	1.75	2.03	1.98	2.01	16.0%	-2.5%	1.5%	0.07	20.66%	18.5%	170,284	188,559
1430	5.21	5.15	5.40	5.22	-1.2%	4.9%	-3.3%	0.02	9.60%	8.2%	177,994	186,536
9554	9.01	8.04	7.50	7.40	-10.8%	-6.7%	-1.3%	0.09	19.78%	9.4%	173,440	186,348
9521	3.87	3.53	3.29	3.45	-8.8%	-6.8%	4.9%	0.07	21.83%	13.6%	170,514	183,284
3803	1.72	1.73	2.00	2.28	0.6%	15.6%	14.0%	0.14	32.56%	15.0%	166,857	182,178
0035	1.77	1.88	2.07	2.03	6.2%	10.1%	-1.9%	0.07	19.21%	12.0%	195,375	181,933
9220	3.62	3.62	3.45	3.53	0.0%	-4.7%	2.3%	0.02	7.12%	7.0%	169,496	179,998
7225	6.19	6.15	6.02	7.28	-0.6%	-2.1%	20.9%	0.09	24.28%	23.0%	0	176,366
0917	3.97	3.67	3.39	3.31	-7.6%	-7.6%	-2.4%	0.08	18.49%	5.3%	178,221	175,754
1803	7.43	7.08	7.16	7.24	-4.7%	1.1%	1.1%	0.02	7.08%	5.8%	160,263	175,706
0005	3.31	2.98	2.84	2.90	-10.0%	-4.7%	2.1%	0.07	17.57%	12.1%	181,264	175,222
4000	4.91	4.89	4.50	3.99	-0.4%	-8.0%	-11.3%	0.09	20.70%	10.9%	144,124	173,835
4149	0.89	0.86	0.82	0.77	-3.4%	-4.7%	-6.1%	0.06	14.77%	2.7%	159,696	173,629
6233	1.76	1.79	1.89	2.07	1.7%	5.6%	9.5%	0.07	17.61%	7.8%	123,598	172,497
5507	3.58	3.21	3.20	3.28	-10.3%	-0.3%	2.5%	0.05	13.45%	12.8%	122,683	170,856
9534	4.40	4.17	4.02	3.99	-5.2%	-3.6%	-0.7%	0.05	9.83%	4.5%	151,341	169,394
5479	7.13	6.44	6.14	6.14	-9.7%	-4.7%	0.0%	0.07	14.79%	9.7%	154,867	168,359
6836	2.99	3.19	3.02	3.09	6.7%	-5.3%	2.3%	0.03	14.98%	12.0%	129,200	162,068
3372	3.59	3.41	3.13	2.99	-5.0%	-8.2%	-4.5%	0.08	18.72%	3.7%	246,152	158,036
0050	4.84	4.46	4.48	4.55	-7.9%	0.4%	1.6%	0.04	10.03%	9.4%	132,497	157,934
4130	3.32	3.17	3.09	3.03	-4.5%	-2.5%	-1.9%	0.04	9.24%	2.6%	151,569	156,853
4018	4.91	4.87	4.95	5.34	-0.8%	1.6%	7.9%	0.04	10.54%	8.7%	144,069	156,589
6825	2.91	2.95	2.74	2.58	1.4%	-7.1%	-5.8%	0.06	14.93%	8.5%	311,921	155,418
7711	4.00	4.06	4.08	4.12	1.5%	0.5%	1.0%	0.01	3.00%	1.0%	155,950	155,177
3270	4.18	3.67	3.65	3.62	-12.2%	-0.5%	-0.8%	0.07	13.74%	11.7%	135,829	154,153
7370	4.78	4.50	4.12	4.02	-5.9%	-8.4%	-2.4%	0.08	17.58%	6.0%	141,593	150,342
3638	1.92	1.79	1.88	2.18	-6.8%	5.0%	16.0%	0.09	30.03%	22.7%	133,025	149,464
4251	3.37	3.36	3.28	3.41	-0.3%	-2.4%	4.0%	0.02	6.75%	6.3%	115,984	148,058
3064	3.32	3.16	3.32	3.45	-4.8%	5.1%	3.9%	0.04	14.44%	9.9%	131,653	147,299
4693	0.68	0.75	0.82	0.92	10.3%	9.3%	12.2%	0.13	35.29%	2.9%	169,544	146,235
8288	7.60	6.94	6.89	6.96	-8.7%	-0.7%	1.0%	0.05	10.58%	9.7%	159,929	145,159
5223	6.16	5.78	5.27	4.97	-6.2%	-8.8%	-5.7%	0.10	22.11%	3.1%	126,156	141,231
6204	12.64	9.45	8.43	7.30	-25.2%	-10.8%	-13.4%	0.24	57.35%	14.4%	110,201	137,008

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Analysis of the Absolute Loss Cost Change from Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by 2018 Payroll

Class Code	Loss Cost				Percent Change			Loss Cost Coef. Var	Absolute Change	Swing Max - Min Change	Payroll (100's)	
	2018	2019	2020	2021	2019	2020	2021				2017	2018
3022	3.85	3.54	3.44	3.28	-8.1%	-2.8%	-4.7%	0.07	16.27%	5.2%	119,430	136,717
4686	2.51	2.61	2.41	2.16	4.0%	-7.7%	-10.4%	0.08	23.57%	14.4%	96,361	134,366
1463	10.84	9.29	9.01	8.77	-14.3%	-3.0%	-2.7%	0.10	20.88%	11.6%	148,785	133,566
5040	14.34	11.95	11.04	9.71	-16.7%	-7.6%	-12.0%	0.17	40.68%	9.1%	110,190	130,019
2710	15.12	13.52	12.46	12.62	-10.6%	-7.8%	1.3%	0.09	20.78%	11.9%	135,590	129,721
5610	5.04	4.73	4.25	3.68	-6.2%	-10.1%	-13.4%	0.13	32.60%	7.3%	108,090	127,606
8235	3.23	3.54	3.54	3.58	9.6%	0.0%	1.1%	0.05	10.84%	9.6%	127,854	127,599
7590	2.83	2.70	2.59	2.62	-4.6%	-4.1%	1.2%	0.04	10.12%	5.8%	121,854	126,450
2143	1.82	2.05	2.17	2.31	12.6%	5.9%	6.5%	0.10	26.92%	6.8%	114,218	126,190
4902	2.91	2.60	2.39	2.34	-10.7%	-8.1%	-2.1%	0.10	22.09%	8.6%	123,640	125,907
3826	0.97	1.02	1.00	1.07	5.2%	-2.0%	7.0%	0.04	14.72%	9.0%	138,465	123,855
3145	2.48	2.31	2.26	2.33	-6.9%	-2.2%	3.1%	0.04	12.55%	10.0%	106,383	120,429
9178	10.97	10.78	10.14	10.32	-1.7%	-5.9%	1.8%	0.04	9.68%	7.7%	114,952	111,418
3334	1.92	1.86	1.80	1.79	-3.1%	-3.2%	-0.6%	0.03	7.04%	2.7%	100,198	105,217
2288	4.03	3.68	3.55	3.84	-8.7%	-3.5%	8.2%	0.05	21.72%	16.9%	111,919	102,587
2021	1.76	1.86	2.06	2.49	5.7%	10.8%	20.9%	0.16	41.48%	15.2%	84,763	102,411
3081	3.53	3.85	3.95	4.27	9.1%	2.6%	8.1%	0.08	20.96%	6.5%	104,760	102,361
5473	7.67	7.13	6.81	6.85	-7.0%	-4.5%	0.6%	0.06	12.50%	7.6%	103,032	101,666
2305	2.99	2.44	2.26	2.18	-18.4%	-7.4%	-3.5%	0.15	31.63%	14.9%	37,461	99,437
7422	2.56	2.12	1.73	1.52	-17.2%	-18.4%	-12.1%	0.23	55.59%	6.3%	75,072	98,765
4101	2.32	2.35	2.22	2.21	1.3%	-5.5%	-0.5%	0.03	7.38%	6.8%	69,377	98,258
6229	4.07	4.03	3.91	4.14	-1.0%	-3.0%	5.9%	0.02	10.11%	8.9%	99,095	96,852
1924	4.14	3.84	3.58	3.32	-7.2%	-6.8%	-7.3%	0.09	22.82%	0.5%	88,820	96,273
9505	3.62	3.99	3.98	3.87	10.2%	-0.3%	-2.8%	0.04	13.55%	13.0%	82,453	95,533
2388	1.50	1.50	1.52	1.55	0.0%	1.3%	2.0%	0.02	3.33%	2.0%	72,010	95,244
3648	1.48	1.43	1.46	1.55	-3.4%	2.1%	6.2%	0.03	12.05%	9.5%	88,748	94,392
9062	1.41	1.28	1.16	1.20	-9.2%	-9.4%	3.4%	0.09	23.58%	12.8%	96,195	92,644
4239	1.80	1.79	1.90	2.01	-0.6%	6.1%	5.8%	0.05	12.91%	6.7%	85,368	90,397
4470	2.07	2.10	2.17	2.15	1.4%	3.3%	-0.9%	0.02	5.80%	4.3%	82,885	89,371
9179	17.25	16.95	17.37	17.95	-1.7%	2.5%	3.3%	0.02	7.74%	5.1%	88,002	89,250
4109	0.63	0.56	0.55	0.57	-11.1%	-1.8%	3.6%	0.06	17.21%	14.7%	153,854	88,907
8500	4.81	4.83	4.60	4.61	0.4%	-4.8%	0.2%	0.03	5.43%	5.2%	83,296	88,584
4250	1.77	1.68	1.68	1.72	-5.1%	0.0%	2.4%	0.02	7.59%	7.5%	109,533	88,457
3336	2.92	2.78	2.63	2.72	-4.8%	-5.4%	3.4%	0.04	14.23%	8.8%	75,594	87,932
2131	2.33	2.21	2.22	2.34	-5.2%	0.5%	5.4%	0.03	11.34%	10.6%	86,271	86,494
5020	4.48	4.51	4.23	4.07	0.7%	-6.2%	-3.8%	0.05	10.96%	6.9%	97,758	86,170
5472	5.25	5.09	4.55	4.36	-3.0%	-10.6%	-4.2%	0.09	18.74%	7.6%	78,001	84,931
7502	3.65	3.06	2.47	2.07	-16.2%	-19.3%	-16.2%	0.25	61.00%	3.1%	137,040	84,731
4740	0.83	0.89	0.98	1.01	7.2%	10.1%	3.1%	0.09	21.69%	7.1%	57,329	84,049
0036	8.35	7.39	6.61	5.93	-11.5%	-10.6%	-10.3%	0.15	35.95%	1.2%	64,154	83,665
4307	1.58	1.70	1.68	1.79	7.6%	-1.2%	6.5%	0.05	15.99%	8.8%	101,471	83,489
6251	3.64	3.42	3.06	2.90	-6.0%	-10.5%	-5.2%	0.10	23.33%	5.3%	37,455	81,624
4741	2.29	2.14	2.22	2.31	-6.6%	3.7%	4.1%	0.03	15.01%	10.6%	123,956	80,853
4717	1.86	1.99	2.05	2.11	7.0%	3.0%	2.9%	0.05	13.44%	4.1%	80,736	79,869
8381	2.33	2.31	2.10	2.06	-0.9%	-9.1%	-1.9%	0.06	12.12%	8.2%	73,001	78,251
8203	5.79	5.89	5.92	5.86	1.7%	0.5%	-1.0%	0.01	3.28%	2.7%	77,363	78,032
4240	3.00	3.49	3.48	3.37	16.3%	-0.3%	-3.2%	0.07	20.35%	19.5%	79,837	76,927
2651	1.97	2.13	2.21	2.23	8.1%	3.8%	0.9%	0.06	13.20%	7.2%	85,208	75,814
3373	5.22	4.62	4.45	4.37	-11.5%	-3.7%	-1.8%	0.08	17.68%	9.7%	66,663	75,282
3169	1.98	2.08	2.22	2.48	5.1%	6.7%	11.7%	0.10	25.25%	6.7%	58,056	74,896
3307	4.14	3.58	3.27	2.92	-13.5%	-8.7%	-10.7%	0.15	36.56%	4.9%	69,028	74,091
0008	2.80	2.60	2.53	2.39	-7.1%	-2.7%	-5.5%	0.07	16.12%	4.5%	72,693	72,044
3581	1.22	1.16	1.22	1.27	-4.9%	5.2%	4.1%	0.04	14.87%	10.1%	85,685	67,303
0401	10.08	10.31	10.47	10.77	2.3%	1.6%	2.9%	0.03	6.85%	1.3%	59,383	66,858
2041	2.47	2.46	2.47	2.54	-0.4%	0.4%	2.8%	0.01	3.67%	3.2%	69,127	64,450
2688	2.99	2.71	2.42	2.30	-9.4%	-10.7%	-5.0%	0.12	27.07%	5.7%	58,736	62,642
2586	2.05	2.22	2.50	2.78	8.3%	12.6%	11.2%	0.13	35.61%	4.3%	58,298	60,762
5059	28.25	25.77	24.30	23.46	-8.8%	-5.7%	-3.5%	0.08	18.96%	5.3%	45,627	58,420
3559	2.40	2.32	2.36	2.35	-3.3%	1.7%	-0.4%	0.01	5.56%	5.1%	57,249	56,885

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Analysis of the Absolute Loss Cost Change from Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by 2018 Payroll

	Loss Cost				Percent Change			Loss Cost	Absolute	Swing Max - Min	Payroll (100's)	
Class Code	2018	2019	2020	2021	2019	2020	2021	Coef. Var	Change	Change	2017	2018
4777	4.06	4.05	3.89	3.86	-0.2%	-4.0%	-0.8%	0.03	5.01%	3.7%	17,196	55,415
3114	2.81	3.06	3.25	3.35	8.9%	6.2%	3.1%	0.08	19.22%	5.8%	29,702	55,022
4683	4.01	3.73	3.58	3.60	-7.0%	-4.0%	0.6%	0.05	11.91%	7.5%	6,143	54,677
5480	5.16	5.17	5.08	4.91	0.2%	-1.7%	-3.3%	0.02	5.35%	3.5%	48,066	53,295
3635	2.19	2.13	2.10	2.08	-2.7%	-1.4%	-1.0%	0.02	5.18%	1.8%	59,697	52,178
2841	3.70	3.55	3.55	3.94	-4.1%	0.0%	11.0%	0.05	15.49%	15.0%	47,794	51,211
6252	3.45	3.08	2.95	2.79	-10.7%	-4.2%	-5.4%	0.09	21.66%	6.5%	28,828	51,057
3865	1.70	1.85	2.05	2.47	8.8%	10.8%	20.5%	0.17	45.29%	11.7%	37,740	49,865
3082	4.71	4.60	4.61	4.76	-2.3%	0.2%	3.3%	0.02	5.89%	5.6%	36,493	48,570
4036	2.76	2.62	2.40	2.25	-5.1%	-8.4%	-6.3%	0.09	21.01%	3.3%	41,436	47,994
4110	1.47	1.28	1.21	1.16	-12.9%	-5.5%	-4.1%	0.11	24.02%	8.8%	13,047	47,566
3110	5.33	4.71	4.21	4.19	-11.6%	-10.6%	-0.5%	0.12	24.07%	11.2%	46,915	46,634
2735	3.92	3.72	3.48	3.69	-5.1%	-6.5%	6.0%	0.05	18.63%	12.5%	42,339	46,555
1747	1.59	1.69	1.95	1.99	6.3%	15.4%	2.1%	0.11	25.16%	13.3%	23,663	46,192
3018	5.93	5.08	4.37	3.87	-14.3%	-14.0%	-11.4%	0.19	45.22%	2.9%	49,612	45,812
2110	2.00	1.89	1.80	1.76	-5.5%	-4.8%	-2.2%	0.06	12.98%	3.3%	54,858	45,327
8279	5.42	5.21	5.01	5.10	-3.9%	-3.8%	1.8%	0.03	9.80%	5.7%	61,467	45,079
9170	9.54	9.68	10.34	10.85	1.5%	6.8%	4.9%	0.06	13.73%	5.4%	42,254	40,968
8204	3.27	3.20	3.36	3.36	-2.1%	5.0%	0.0%	0.02	7.25%	7.1%	40,277	40,664
3315	3.56	3.22	3.04	2.97	-9.6%	-5.6%	-2.3%	0.08	18.34%	7.2%	13,066	40,313
5951	0.34	0.34	0.35	0.39	0.0%	2.9%	11.4%	0.07	14.71%	11.4%	94,838	38,201
2799	4.66	5.05	5.03	4.69	8.4%	-0.4%	-6.8%	0.04	16.15%	15.1%	36,300	36,736
3126	1.17	1.27	1.31	1.36	8.5%	3.1%	3.8%	0.06	16.24%	5.4%	26,511	35,706
6503	2.00	1.98	1.96	2.00	-1.0%	-1.0%	2.0%	0.01	4.10%	3.1%	34,776	34,731
2790	1.58	1.62	1.63	1.80	2.5%	0.6%	10.4%	0.06	13.92%	9.8%	34,746	34,714
3383	1.42	1.48	1.51	1.55	4.2%	2.0%	2.6%	0.04	9.15%	2.2%	32,653	32,741
8263	4.65	4.58	4.33	4.58	-1.5%	-5.5%	5.8%	0.03	13.23%	11.2%	48,854	31,958
8233	1.99	2.05	1.97	1.96	3.0%	-3.9%	-0.5%	0.02	7.58%	6.9%	41,133	30,102
1710	3.10	3.06	3.03	3.28	-1.3%	-1.0%	8.3%	0.04	10.72%	9.5%	25,469	29,825
1654	3.71	3.77	3.47	3.45	1.6%	-8.0%	-0.6%	0.05	10.34%	9.6%	30,265	29,811
4923	0.99	0.93	0.97	0.99	-6.1%	4.3%	2.1%	0.03	12.90%	10.4%	24,030	29,481
2570	4.02	3.87	3.77	3.86	-3.7%	-2.6%	2.4%	0.03	8.95%	6.1%	18,355	29,367
3548	1.52	1.44	1.43	1.48	-5.3%	-0.7%	3.5%	0.03	9.70%	8.8%	25,666	29,206
2623	7.33	6.61	6.02	5.79	-9.8%	-8.9%	-3.8%	0.11	24.20%	6.0%	28,949	28,347
2797	3.69	4.35	4.75	5.07	17.9%	9.2%	6.7%	0.13	37.40%	11.1%	20,129	26,107
4263	4.20	3.59	3.32	3.36	-14.5%	-7.5%	1.2%	0.11	24.62%	15.7%	32,872	25,976
2960	6.56	5.54	5.19	4.97	-15.5%	-6.3%	-4.2%	0.13	28.06%	11.3%	32,383	25,698
9186	16.69	16.85	14.81	13.02	1.0%	-12.1%	-12.1%	0.12	26.86%	13.1%	20,139	25,617
4352	1.72	1.62	1.65	1.66	-5.8%	1.9%	0.6%	0.03	8.43%	7.7%	27,928	25,588
2081	5.65	4.87	4.79	4.79	-13.8%	-1.6%	0.0%	0.08	15.67%	13.8%	33,038	24,879
5491	1.58	1.50	1.54	1.49	-5.1%	2.7%	-3.2%	0.03	11.37%	7.7%	28,258	23,957
8103	2.00	1.93	1.92	2.24	-3.5%	-0.5%	16.7%	0.07	21.38%	20.2%	23,988	23,048
4351	0.78	0.78	0.83	0.89	0.0%	6.4%	7.2%	0.06	14.10%	7.2%	37,094	22,750
2417	1.39	1.29	1.34	1.40	-7.2%	3.9%	4.5%	0.04	16.33%	11.7%	18,677	21,915
3822	3.87	3.62	3.50	3.45	-6.5%	-3.3%	-1.4%	0.05	11.56%	5.0%	12,257	21,264
0016	6.77	5.75	5.19	4.80	-15.1%	-9.7%	-7.5%	0.15	35.76%	7.6%	22,316	19,768
4062	2.44	2.52	2.63	2.67	3.3%	4.4%	1.5%	0.04	9.43%	2.8%	15,157	19,358
0079	5.23	4.24	3.57	3.42	-18.9%	-15.8%	-4.2%	0.20	43.51%	14.7%	23,268	18,494
2835	2.69	2.47	2.22	2.26	-8.2%	-10.1%	1.8%	0.09	21.27%	11.9%	12,044	18,458
2503	1.37	1.43	1.31	1.21	4.4%	-8.4%	-7.6%	0.07	21.78%	12.8%	16,699	18,445
7133	2.13	2.22	2.26	2.57	4.2%	1.8%	13.7%	0.08	20.66%	11.9%	20,250	17,617
3041	4.92	4.44	4.07	3.96	-9.8%	-8.3%	-2.7%	0.10	22.12%	7.1%	15,938	17,115
2065	1.94	1.89	1.75	1.70	-2.6%	-7.4%	-2.9%	0.06	13.32%	4.8%	28,401	15,712
1452	3.48	2.95	2.81	2.96	-15.2%	-4.7%	5.3%	0.10	27.14%	20.6%	15,312	15,332
3118	2.19	2.14	2.05	1.99	-2.3%	-4.2%	-2.9%	0.04	9.70%	1.9%	17,087	15,272
2702	20.10	17.87	15.86	15.80	-11.1%	-11.2%	-0.4%	0.12	24.06%	10.9%	21,077	15,179
6003	4.44	4.17	4.26	4.58	-6.1%	2.2%	7.5%	0.04	16.51%	13.6%	12,110	15,109
4431	1.31	1.27	1.26	1.26	-3.1%	-0.8%	0.0%	0.02	3.86%	3.1%	21,004	14,577
8745	4.65	4.14	3.49	3.19	-11.0%	-15.7%	-8.6%	0.17	39.43%	7.1%	11,780	14,177

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Class Code	Loss Cost				Percent Change			Loss Cost Coef. Var	Absolute Change	Swing Max - Min Change	Payroll (100's)	
	2018	2019	2020	2021	2019	2020	2021				2017	2018
7309	10.88	10.95	10.26	9.20	0.6%	-6.3%	-10.3%	0.08	18.04%	11.0%	13,024	14,170
4581	1.13	1.33	1.58	1.91	17.7%	18.8%	20.9%	0.23	69.03%	3.2%	16,906	13,428
8725	1.83	1.87	1.99	2.05	2.2%	6.4%	3.0%	0.05	12.02%	4.2%	18,964	13,373
2220	1.91	1.90	1.92	2.03	-0.5%	1.1%	5.7%	0.03	7.40%	6.3%	11,397	13,311
3719	1.53	1.17	1.04	0.95	-23.5%	-11.1%	-8.7%	0.22	49.13%	14.9%	1,039	12,536
3027	2.75	2.55	2.45	2.28	-7.3%	-3.9%	-6.9%	0.08	19.21%	3.4%	13,485	12,462
4038	4.97	4.26	3.83	3.71	-14.3%	-10.1%	-3.1%	0.14	29.76%	11.2%	9,396	12,410
1005	3.93	4.68	5.21	5.70	19.1%	11.3%	9.4%	0.16	45.04%	9.7%	14,894	11,957
4665	8.99	8.73	9.01	9.02	-2.9%	3.2%	0.1%	0.02	6.31%	6.1%	16,625	11,430
4206	2.38	2.35	2.34	2.49	-1.3%	-0.4%	6.4%	0.03	8.21%	7.7%	9,045	11,299
0113	6.10	5.04	4.54	4.39	-17.4%	-9.9%	-3.3%	0.15	33.28%	14.1%	8,936	10,830
6216	4.39	4.20	3.96	4.01	-4.3%	-5.7%	1.3%	0.05	11.68%	7.0%	11,090	10,248
7317	7.96	8.38	8.02	7.99	5.3%	-4.3%	-0.4%	0.02	10.21%	9.6%	13,103	10,200
4568	4.63	4.41	3.71	3.30	-4.8%	-15.9%	-11.1%	0.15	34.79%	11.1%	7,605	9,502
7420	7.58	7.18	6.86	6.50	-5.3%	-4.5%	-5.2%	0.07	15.74%	0.8%	9,776	9,353
6045	3.16	2.96	3.12	3.52	-6.3%	5.4%	12.8%	0.07	26.45%	19.1%	8,672	9,266
7350	12.01	11.43	10.48	9.46	-4.8%	-8.3%	-9.7%	0.10	24.59%	4.9%	2,718	9,220
4493	5.78	5.62	4.44	3.66	-2.8%	-21.0%	-17.6%	0.21	46.19%	18.2%	10,009	8,910
1320	1.47	1.46	1.40	1.42	-0.7%	-4.1%	1.4%	0.02	6.32%	5.5%	6,161	8,790
0251	3.56	3.52	3.35	3.38	-1.1%	-4.8%	0.9%	0.03	6.96%	5.7%	8,454	8,788
7402	0.12	0.11	0.10	0.10	-8.3%	-9.1%	0.0%	0.09	18.18%	9.1%	8,326	8,723
2923	1.98	1.91	1.85	1.77	-3.5%	-3.1%	-4.3%	0.05	11.41%	1.2%	9,190	8,646
6235	6.63	5.49	5.33	5.18	-17.2%	-2.9%	-2.8%	0.12	24.00%	14.4%	1,297	8,411
3132	3.80	3.68	3.68	4.45	-3.2%	0.0%	20.9%	0.09	24.74%	24.1%	6,961	8,404
5037	12.09	11.20	10.46	9.86	-7.4%	-6.6%	-5.7%	0.09	21.02%	1.6%	5,910	7,933
9600	2.79	2.83	2.96	3.17	1.4%	4.6%	7.1%	0.06	13.62%	5.7%	2,791	7,855
2413	2.36	2.45	2.52	2.65	3.8%	2.9%	5.2%	0.05	12.29%	2.3%	8,340	7,832
4111	1.83	1.75	1.73	1.79	-4.4%	-1.1%	3.5%	0.02	9.23%	7.8%	88,324	7,466
7222	5.36	5.60	5.63	5.80	4.5%	0.5%	3.0%	0.03	8.21%	3.9%	1,207	7,350
4653	1.34	1.28	1.29	1.41	-4.5%	0.8%	9.3%	0.04	15.09%	13.8%	3,974	7,004
2836	1.97	2.08	2.16	2.48	5.6%	3.8%	14.8%	0.10	25.89%	11.0%	4,598	6,959
5402	3.37	3.31	3.72	4.26	-1.8%	12.4%	14.5%	0.12	30.99%	16.3%	6,349	6,600
2683	1.69	1.81	2.10	2.53	7.1%	16.0%	20.5%	0.18	49.70%	13.4%	15,759	6,413
2105	3.18	3.23	3.42	4.00	1.6%	5.9%	17.0%	0.11	25.79%	15.4%	5,122	6,033
2701	9.01	10.12	10.48	10.42	12.3%	3.6%	-0.6%	0.07	16.98%	12.9%	5,256	5,992
1165	3.72	3.40	3.12	3.00	-8.6%	-8.2%	-3.8%	0.10	22.07%	4.8%	6,649	5,885
4133	1.70	1.85	1.80	1.96	8.8%	-2.7%	8.9%	0.06	21.70%	11.6%	5,379	5,500
3385	0.84	0.81	0.82	0.88	-3.6%	1.2%	7.3%	0.04	12.52%	10.9%	12,589	4,802
3515	2.77	2.65	2.59	2.57	-4.3%	-2.3%	-0.8%	0.03	7.52%	3.6%	4,219	4,588
4021	7.53	6.46	6.19	5.40	-14.2%	-4.2%	-12.8%	0.14	34.17%	10.0%	4,087	4,296
3111	2.33	2.32	2.15	2.08	-0.4%	-7.3%	-3.3%	0.06	11.30%	6.9%	1,118	4,112
8726	1.86	1.88	1.78	1.82	1.1%	-5.3%	2.2%	0.02	8.84%	7.6%	2,101	3,814
7024	2.01	2.21	2.60	2.93	10.0%	17.6%	12.7%	0.17	45.77%	7.7%	1,383	3,805
6882	3.72	3.60	3.32	3.16	-3.2%	-7.8%	-4.8%	0.07	16.62%	4.6%	0	3,785
3240	1.98	2.32	2.71	2.48	17.2%	16.8%	-8.5%	0.13	48.48%	25.7%	8,386	3,708
6237	1.42	1.26	1.19	1.16	-11.3%	-5.6%	-2.5%	0.09	20.41%	8.7%	4,017	3,484
5443	2.80	2.62	2.80	2.82	-6.4%	6.9%	0.7%	0.03	14.55%	13.3%	7,630	3,459
2361	1.88	1.84	1.80	1.74	-2.1%	-2.2%	-3.3%	0.03	7.83%	1.2%	2,573	3,180
2112	3.49	3.64	3.57	3.57	4.3%	-1.9%	0.0%	0.02	6.30%	6.2%	2,865	3,015
9089	1.12	1.04	0.99	0.94	-7.1%	-4.8%	-5.1%	0.08	17.97%	2.3%	2,795	3,011
9019	1.28	1.53	1.80	1.94	19.5%	17.6%	7.8%	0.18	51.56%	11.8%	2,883	2,998
6213	1.46	1.28	1.15	1.11	-12.3%	-10.2%	-3.5%	0.13	28.04%	8.9%	866	2,937
2709	14.43	16.64	16.56	19.92	15.3%	-0.5%	20.3%	0.13	39.38%	20.8%	1,260	2,521
3642	1.32	1.28	1.21	1.12	-3.0%	-5.5%	-7.4%	0.07	16.75%	4.4%	9,557	2,059
8606	1.92	1.78	1.69	1.68	-7.3%	-5.1%	-0.6%	0.06	13.38%	6.7%	1,437	2,039
5703	9.82	9.47	10.02	11.90	-3.6%	5.8%	18.8%	0.11	30.14%	22.3%	879	1,815
2916	4.64	4.03	3.71	3.41	-13.1%	-7.9%	-8.1%	0.13	32.01%	5.2%	4,947	1,782
2362	1.56	1.65	1.73	1.94	5.8%	4.8%	12.1%	0.09	24.36%	7.3%	2,806	1,724
2587	1.84	1.74	1.73	1.95	-5.4%	-0.6%	12.7%	0.06	19.53%	18.2%	11,880	1,653

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	2018	2019	2020	2021	2019	2020	2021				2017	2018
2402	2.27	2.36	2.46	2.54	4.0%	4.2%	3.3%	0.05	11.89%	1.0%	1,238	1,532
7395	3.72	3.73	3.92	4.14	0.3%	5.1%	5.6%	0.05	11.29%	5.3%	361	1,502
4420	4.12	4.09	3.92	3.89	-0.7%	-4.2%	-0.8%	0.03	5.72%	3.4%	53	1,423
6005	5.41	4.86	4.55	4.32	-10.2%	-6.4%	-5.1%	0.10	23.12%	5.1%	611	1,412
8719	2.11	1.91	1.76	1.73	-9.5%	-7.9%	-1.7%	0.09	20.09%	7.8%	1,929	1,353
3827	2.55	2.41	2.35	2.39	-5.5%	-2.5%	1.7%	0.04	9.96%	7.2%	4,495	1,055
7090	5.83	5.95	5.67	5.33	2.1%	-4.7%	-6.0%	0.05	13.27%	8.1%	645	1,035
6872	10.83	10.59	10.12	9.12	-2.2%	-4.4%	-9.9%	0.07	17.30%	7.7%	2,960	845
4131	3.91	3.98	4.55	4.58	1.8%	14.3%	0.7%	0.08	17.14%	13.7%	715	799
3122	2.02	1.96	2.03	2.08	-3.0%	3.6%	2.5%	0.02	9.27%	6.5%	819	740
8709	4.16	4.36	4.35	4.12	4.8%	-0.2%	-5.3%	0.03	10.60%	10.1%	753	736
3119	1.63	1.48	1.37	1.41	-9.2%	-7.4%	2.9%	0.08	20.74%	12.1%	47	735
2380	2.26	2.10	1.98	2.00	-7.1%	-5.7%	1.0%	0.06	14.34%	8.1%	9,834	648
2714	5.06	4.74	4.62	4.50	-6.3%	-2.5%	-2.6%	0.05	11.85%	3.8%	353	608
5705	27.20	24.22	22.38	19.95	-11.0%	-7.6%	-10.9%	0.13	32.35%	3.4%	1,295	505
0913	361.00	381.00	394.00	423.00	5.5%	3.4%	7.4%	0.07	17.17%	3.9%	0	494
3042	5.85	5.01	4.76	4.79	-14.4%	-5.0%	0.6%	0.10	20.82%	15.0%	0	442
8209	4.52	3.69	3.57	3.56	-18.4%	-3.3%	-0.3%	0.12	22.55%	18.1%	4,449	414
2172	1.54	1.53	1.47	1.48	-0.6%	-3.9%	0.7%	0.02	5.31%	4.6%	3,984	379
0908	115.00	121.00	116.00	117.00	5.2%	-4.1%	0.9%	0.02	10.51%	9.3%	0	376
2174	2.95	2.75	2.76	2.93	-6.8%	0.4%	6.2%	0.04	13.77%	12.9%	3,391	158
7540	2.80	2.72	2.55	2.51	-2.9%	-6.3%	-1.6%	0.05	11.00%	4.7%	8	150
3131	1.81	1.84	1.81	1.79	1.7%	-1.6%	-1.1%	0.01	4.46%	3.3%	372	141
2211	11.21	10.16	9.36	8.97	-9.4%	-7.9%	-4.2%	0.10	22.89%	5.2%	131	122
6206	2.33	2.09	2.10	2.28	-10.3%	0.5%	8.6%	0.06	20.33%	18.9%	219	89
2302	1.82	1.72	1.62	1.71	-5.5%	-5.8%	5.6%	0.05	17.83%	11.4%	0	45
7313	3.02	3.28	3.38	3.25	8.6%	3.0%	-3.8%	0.05	16.23%	12.5%	2,671	37
1016	10.54	11.22	12.52	14.64	6.5%	11.6%	16.9%	0.15	38.90%	10.5%	466	31
0170	2.25	2.05	1.99	1.99	-8.9%	-2.9%	0.0%	0.06	12.08%	8.9%	27	31
3004	2.24	1.93	1.77	1.71	-13.8%	-8.3%	-3.4%	0.12	27.46%	10.4%	122	25
1322	6.49	6.25	6.10	6.44	-3.7%	-2.4%	5.6%	0.03	12.11%	9.3%	0	25
6214	1.91	1.68	1.58	1.52	-12.0%	-6.0%	-3.8%	0.10	23.22%	8.2%	0	25
7335	2.00	2.15	2.05	2.19	7.5%	-4.7%	6.8%	0.04	20.18%	12.2%	0	14
7098	10.86	10.66	10.44	10.54	-1.8%	-2.1%	1.0%	0.02	4.94%	3.0%	0	10
6826	4.15	4.34	4.21	3.93	4.6%	-3.0%	-6.7%	0.04	14.87%	11.2%	57	0
4751	1.81	1.70	1.75	2.05	-6.1%	2.9%	17.1%	0.08	27.92%	23.2%	56	0
6835	2.67	2.65	2.59	2.62	-0.7%	-2.3%	1.2%	0.01	4.22%	3.4%	201	0
6884	5.67	5.41	5.16	5.03	-4.6%	-4.6%	-2.5%	0.05	12.18%	2.1%	38	0

NCCI Missouri Loss Cost Filing Effective January 1, 2021
Analysis of the Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by 2018 Absolute Cumulative Change Percent

	Loss Cost				Percent Change			Loss Cost	Absolute	Swing Max - Min	Payroll (100's)	
Class Code	2018	2019	2020	2021	2019	2020	2021	Coef. Var	Change	Change	2017	2018
4581	1.13	1.33	1.58	1.91	17.7%	18.8%	20.9%	0.23	69.03%	3.2%	16,906	13,428
3574	1.80	2.09	1.72	2.08	16.1%	-17.7%	20.9%	0.10	65.27%	38.6%	513,164	1,467,737
3851	4.35	3.40	2.69	2.38	-21.8%	-20.9%	-11.5%	0.27	64.25%	10.3%	457,125	248,517
7502	3.65	3.06	2.47	2.07	-16.2%	-19.3%	-16.2%	0.25	61.00%	3.1%	137,040	84,731
6204	12.64	9.45	8.43	7.30	-25.2%	-10.8%	-13.4%	0.24	57.35%	14.4%	110,201	137,008
8856	0.23	0.26	0.30	0.36	13.0%	15.4%	20.0%	0.20	56.52%	7.0%	388,287	396,928
8602	0.71	0.82	0.96	1.11	15.5%	17.1%	15.6%	0.19	56.34%	1.6%	184,263	195,785
7422	2.56	2.12	1.73	1.52	-17.2%	-18.4%	-12.1%	0.23	55.59%	6.3%	75,072	98,765
9019	1.28	1.53	1.80	1.94	19.5%	17.6%	7.8%	0.18	51.56%	11.8%	2,883	2,998
2683	1.69	1.81	2.10	2.53	7.1%	16.0%	20.5%	0.18	49.70%	13.4%	15,759	6,413
3719	1.53	1.17	1.04	0.95	-23.5%	-11.1%	-8.7%	0.22	49.13%	14.9%	1,039	12,536
3240	1.98	2.32	2.71	2.48	17.2%	16.8%	-8.5%	0.13	48.48%	25.7%	8,386	3,708
8755	0.48	0.37	0.31	0.30	-22.9%	-16.2%	-3.2%	0.23	47.46%	19.7%	638,779	604,627
9522	2.97	3.08	3.60	4.35	3.7%	16.9%	20.8%	0.18	46.46%	17.1%	468,363	354,200
4493	5.78	5.62	4.44	3.66	-2.8%	-21.0%	-17.6%	0.21	46.19%	18.2%	10,009	8,910
7024	2.01	2.21	2.60	2.93	10.0%	17.6%	12.7%	0.17	45.77%	7.7%	1,383	3,805
3865	1.70	1.85	2.05	2.47	8.8%	10.8%	20.5%	0.17	45.29%	11.7%	37,740	49,865
3018	5.93	5.08	4.37	3.87	-14.3%	-14.0%	-11.4%	0.19	45.22%	2.9%	49,612	45,812
1005	3.93	4.68	5.21	5.70	19.1%	11.3%	9.4%	0.16	45.04%	9.7%	14,894	11,957
7539	2.50	2.05	1.69	1.62	-18.0%	-17.6%	-4.1%	0.21	44.47%	13.9%	521,686	536,725
6306	6.93	5.42	4.92	4.53	-21.8%	-9.2%	-7.9%	0.19	43.57%	13.9%	450,582	496,709
0079	5.23	4.24	3.57	3.42	-18.9%	-15.8%	-4.2%	0.20	43.51%	14.7%	23,268	18,494
1624	3.71	3.33	2.90	2.46	-10.2%	-12.9%	-15.2%	0.17	43.36%	4.9%	865,153	866,759
8047	1.16	0.97	0.84	0.77	-16.4%	-13.4%	-8.3%	0.18	42.97%	8.0%	521,274	446,868
9516	3.51	3.07	2.63	2.35	-12.5%	-14.3%	-10.6%	0.18	42.36%	3.7%	496,687	465,572
2021	1.76	1.86	2.06	2.49	5.7%	10.8%	20.9%	0.16	41.48%	15.2%	84,763	102,411
7425	2.71	2.51	2.02	1.82	-7.4%	-19.5%	-9.9%	0.18	41.05%	12.1%	253,715	263,934
5040	14.34	11.95	11.04	9.71	-16.7%	-7.6%	-12.0%	0.17	40.68%	9.1%	110,190	130,019
8745	4.65	4.14	3.49	3.19	-11.0%	-15.7%	-8.6%	0.17	39.43%	7.1%	11,780	14,177
2709	14.43	16.64	16.56	19.92	15.3%	-0.5%	20.3%	0.13	39.38%	20.8%	1,260	2,521
1016	10.54	11.22	12.52	14.64	6.5%	11.6%	16.9%	0.15	38.90%	10.5%	466	31
9012	1.03	0.85	0.77	0.71	-17.5%	-9.4%	-7.8%	0.17	38.55%	9.7%	4,769,208	4,699,112
7390	6.59	5.19	4.84	4.54	-21.2%	-6.7%	-6.2%	0.17	37.44%	15.0%	321,983	357,291
2797	3.69	4.35	4.75	5.07	17.9%	9.2%	6.7%	0.13	37.40%	11.1%	20,129	26,107
3307	4.14	3.58	3.27	2.92	-13.5%	-8.7%	-10.7%	0.15	36.56%	4.9%	69,028	74,091
4304	7.15	6.45	5.73	5.07	-9.8%	-11.2%	-11.5%	0.15	36.10%	1.7%	241,751	236,165
0036	8.35	7.39	6.61	5.93	-11.5%	-10.6%	-10.3%	0.15	35.95%	1.2%	64,154	83,665
0016	6.77	5.75	5.19	4.80	-15.1%	-9.7%	-7.5%	0.15	35.76%	7.6%	22,316	19,768
2586	2.05	2.22	2.50	2.78	8.3%	12.6%	11.2%	0.13	35.61%	4.3%	58,298	60,762
5478	6.18	5.57	5.05	4.41	-9.9%	-9.3%	-12.7%	0.14	35.35%	3.3%	631,459	619,735
4693	0.68	0.75	0.82	0.92	10.3%	9.3%	12.2%	0.13	35.29%	2.9%	169,544	146,235
4568	4.63	4.41	3.71	3.30	-4.8%	-15.9%	-11.1%	0.15	34.79%	11.1%	7,605	9,502
4021	7.53	6.46	6.19	5.40	-14.2%	-4.2%	-12.8%	0.14	34.17%	10.0%	4,087	4,296
8803	0.07	0.06	0.06	0.05	-14.3%	0.0%	-16.7%	0.14	33.33%	16.7%	18,065,042	20,776,388
0113	6.10	5.04	4.54	4.39	-17.4%	-9.9%	-3.3%	0.15	33.28%	14.1%	8,936	10,830
7520	3.50	3.02	2.78	2.55	-13.7%	-7.9%	-8.3%	0.14	32.91%	5.8%	859,352	1,023,762
8720	1.41	1.19	1.04	1.02	-15.6%	-12.6%	-1.9%	0.15	32.68%	13.7%	1,022,911	1,063,427
5610	5.04	4.73	4.25	3.68	-6.2%	-10.1%	-13.4%	0.13	32.60%	7.3%	108,090	127,606
3803	1.72	1.73	2.00	2.28	0.6%	15.6%	14.0%	0.14	32.56%	15.0%	166,857	182,178
6834	3.59	3.40	3.09	2.62	-5.3%	-9.1%	-15.2%	0.13	32.37%	9.9%	377,822	913,322
5705	27.20	24.22	22.38	19.95	-11.0%	-7.6%	-10.9%	0.13	32.35%	3.4%	1,295	505
8728	0.31	0.34	0.37	0.41	9.7%	8.8%	10.8%	0.12	32.26%	2.0%	463,191	483,232
3241	3.56	3.24	2.74	2.60	-9.0%	-15.4%	-5.1%	0.15	32.24%	10.3%	257,941	300,108
2916	4.64	4.03	3.71	3.41	-13.1%	-7.9%	-8.1%	0.13	32.01%	5.2%	4,947	1,782
8820	0.15	0.14	0.13	0.11	-6.7%	-7.1%	-15.4%	0.13	31.87%	8.7%	12,575,621	12,553,533
2305	2.99	2.44	2.26	2.18	-18.4%	-7.4%	-3.5%	0.15	31.63%	14.9%	37,461	99,437
5402	3.37	3.31	3.72	4.26	-1.8%	12.4%	14.5%	0.12	30.99%	16.3%	6,349	6,600
5057	4.08	3.69	3.66	4.34	-9.6%	-0.8%	18.6%	0.08	30.97%	28.1%	325,894	367,382
8799	0.46	0.41	0.35	0.36	-10.9%	-14.6%	2.9%	0.13	30.73%	17.5%	165,314	247,646

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	Loss Cost				Percent Change			Loss Cost	Absolute	Swing Max - Min	Payroll (100's)	
Class Code	2018	2019	2020	2021	2019	2020	2021	Coef. Var	Change	Change	2017	2018
5703	9.82	9.47	10.02	11.90	-3.6%	5.8%	18.8%	0.11	30.14%	22.3%	879	1,815
3638	1.92	1.79	1.88	2.18	-6.8%	5.0%	16.0%	0.09	30.03%	22.7%	133,025	149,464
2121	1.47	1.28	1.18	1.26	-12.9%	-7.8%	6.8%	0.09	30.00%	19.7%	798,918	816,218
4038	4.97	4.26	3.83	3.71	-14.3%	-10.1%	-3.1%	0.14	29.76%	11.2%	9,396	12,410
0034	2.02	2.25	2.41	2.62	11.4%	7.1%	8.7%	0.11	29.70%	4.3%	377,904	480,850
6217	4.18	3.84	3.40	3.15	-8.1%	-11.5%	-7.4%	0.13	29.39%	4.1%	2,323,776	2,377,460
9061	1.66	1.45	1.30	1.25	-12.7%	-10.3%	-3.8%	0.13	29.09%	8.8%	312,823	322,767
7232	5.85	6.66	6.86	7.53	13.8%	3.0%	9.8%	0.10	28.72%	10.8%	287,516	308,032
2960	6.56	5.54	5.19	4.97	-15.5%	-6.3%	-4.2%	0.13	28.06%	11.3%	32,383	25,698
6213	1.46	1.28	1.15	1.11	-12.3%	-10.2%	-3.5%	0.13	28.04%	8.9%	866	2,937
4751	1.81	1.70	1.75	2.05	-6.1%	2.9%	17.1%	0.08	27.92%	23.2%	56	0
8265	5.45	4.68	4.13	4.13	-14.1%	-11.8%	0.0%	0.14	27.54%	14.1%	277,053	308,365
3004	2.24	1.93	1.77	1.71	-13.8%	-8.3%	-3.4%	0.12	27.46%	10.4%	122	25
5348	4.59	3.88	3.73	3.50	-15.5%	-3.9%	-6.2%	0.12	27.33%	11.6%	607,208	676,263
1452	3.48	2.95	2.81	2.96	-15.2%	-4.7%	5.3%	0.10	27.14%	20.6%	15,312	15,332
2688	2.99	2.71	2.42	2.30	-9.4%	-10.7%	-5.0%	0.12	27.07%	5.7%	58,736	62,642
2143	1.82	2.05	2.17	2.31	12.6%	5.9%	6.5%	0.10	26.92%	6.8%	114,218	126,190
9186	16.69	16.85	14.81	13.02	1.0%	-12.1%	-12.1%	0.12	26.86%	13.1%	20,139	25,617
4557	2.29	2.09	2.00	2.23	-8.7%	-4.3%	11.5%	0.06	26.46%	20.2%	229,661	230,195
6045	3.16	2.96	3.12	3.52	-6.3%	5.4%	12.8%	0.07	26.45%	19.1%	8,672	9,266
8215	4.28	3.56	3.50	3.71	-16.8%	-1.7%	6.0%	0.09	25.92%	22.8%	1,009,787	1,113,854
2836	1.97	2.08	2.16	2.48	5.6%	3.8%	14.8%	0.10	25.89%	11.0%	4,598	6,959
2105	3.18	3.23	3.42	4.00	1.6%	5.9%	17.0%	0.11	25.79%	15.4%	5,122	6,033
4361	0.86	0.76	0.71	0.67	-11.6%	-6.6%	-5.6%	0.11	25.67%	6.0%	757,031	746,309
3169	1.98	2.08	2.22	2.48	5.1%	6.7%	11.7%	0.10	25.25%	6.7%	58,056	74,896
1747	1.59	1.69	1.95	1.99	6.3%	15.4%	2.1%	0.11	25.16%	13.3%	23,663	46,192
5213	6.22	6.06	5.39	4.86	-2.6%	-11.1%	-9.8%	0.11	25.11%	8.5%	1,389,996	1,493,212
3132	3.80	3.68	3.68	4.45	-3.2%	0.0%	20.9%	0.09	24.74%	24.1%	6,961	8,404
4263	4.20	3.59	3.32	3.36	-14.5%	-7.5%	1.2%	0.11	24.62%	15.7%	32,872	25,976
7350	12.01	11.43	10.48	9.46	-4.8%	-8.3%	-9.7%	0.10	24.59%	4.9%	2,718	9,220
2362	1.56	1.65	1.73	1.94	5.8%	4.8%	12.1%	0.09	24.36%	7.3%	2,806	1,724
7225	6.19	6.15	6.02	7.28	-0.6%	-2.1%	20.9%	0.09	24.28%	23.0%	0	176,366
2623	7.33	6.61	6.02	5.79	-9.8%	-8.9%	-3.8%	0.11	24.20%	6.0%	28,949	28,347
3110	5.33	4.71	4.21	4.19	-11.6%	-10.6%	-0.5%	0.12	24.07%	11.2%	46,915	46,634
2702	20.10	17.87	15.86	15.80	-11.1%	-11.2%	-0.4%	0.12	24.06%	10.9%	21,077	15,179
3643	2.20	2.18	2.41	2.68	-0.9%	10.6%	11.2%	0.10	24.05%	12.1%	1,329,683	1,935,098
4110	1.47	1.28	1.21	1.16	-12.9%	-5.5%	-4.1%	0.11	24.02%	8.8%	13,047	47,566
6235	6.63	5.49	5.33	5.18	-17.2%	-2.9%	-2.8%	0.12	24.00%	14.4%	1,297	8,411
9093	1.47	1.26	1.23	1.16	-14.3%	-2.4%	-5.7%	0.10	23.67%	11.9%	230,029	232,463
8106	4.07	3.87	4.17	4.56	-4.9%	7.8%	9.4%	0.07	23.62%	14.3%	464,766	506,224
9062	1.41	1.28	1.16	1.20	-9.2%	-9.4%	3.4%	0.09	23.58%	12.8%	96,195	92,644
4686	2.51	2.61	2.41	2.16	4.0%	-7.7%	-10.4%	0.08	23.57%	14.4%	96,361	134,366
3685	1.37	1.22	1.16	1.09	-10.9%	-4.9%	-6.0%	0.10	23.43%	6.0%	1,395,129	1,357,602
6251	3.64	3.42	3.06	2.90	-6.0%	-10.5%	-5.2%	0.10	23.33%	5.3%	37,455	81,624
4828	2.13	1.96	1.82	1.94	-8.0%	-7.1%	6.6%	0.07	23.32%	14.6%	1,170,027	1,365,040
6214	1.91	1.68	1.58	1.52	-12.0%	-6.0%	-3.8%	0.10	23.22%	8.2%	0	25
6005	5.41	4.86	4.55	4.32	-10.2%	-6.4%	-5.1%	0.10	23.12%	5.1%	611	1,412
7403	4.40	3.93	3.88	4.26	-10.7%	-1.3%	9.8%	0.06	23.07%	20.5%	2,042,578	2,146,330
8824	2.36	2.32	1.88	1.91	-1.7%	-19.0%	1.6%	0.12	22.91%	20.6%	1,295,292	1,462,373
2211	11.21	10.16	9.36	8.97	-9.4%	-7.9%	-4.2%	0.10	22.89%	5.2%	131	122
1924	4.14	3.84	3.58	3.32	-7.2%	-6.8%	-7.3%	0.09	22.82%	0.5%	88,820	96,273
8826	1.73	1.62	1.74	1.87	-6.4%	7.4%	7.5%	0.06	22.77%	13.8%	732,634	1,370,394
8387	3.10	2.79	2.55	2.48	-10.0%	-8.6%	-2.7%	0.10	22.74%	7.3%	1,982,326	2,070,582
8209	4.52	3.69	3.57	3.56	-18.4%	-3.3%	-0.3%	0.12	22.55%	18.1%	4,449	414
6319	4.12	3.63	3.42	3.30	-11.9%	-5.8%	-3.5%	0.10	22.52%	8.4%	597,604	555,867
9063	0.77	0.72	0.69	0.76	-6.5%	-4.2%	10.1%	0.05	22.18%	16.6%	2,271,633	2,262,010
3041	4.92	4.44	4.07	3.96	-9.8%	-8.3%	-2.7%	0.10	22.12%	7.1%	15,938	17,115
5223	6.16	5.78	5.27	4.97	-6.2%	-8.8%	-5.7%	0.10	22.11%	3.1%	126,156	141,231
0042	6.19	5.34	5.32	5.69	-13.7%	-0.4%	7.0%	0.07	22.10%	20.7%	657,098	677,173

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Class Code	Loss Cost				Percent Change			Loss Cost	Absolute	Swing Max - Min	Payroll (100's)	
	2018	2019	2020	2021	2019	2020	2021	Coef. Var	Change	Change	2017	2018
4902	2.91	2.60	2.39	2.34	-10.7%	-8.1%	-2.1%	0.10	22.09%	8.6%	123,640	125,907
1165	3.72	3.40	3.12	3.00	-8.6%	-8.2%	-3.8%	0.10	22.07%	4.8%	6,649	5,885
3028	4.34	3.79	3.60	3.71	-12.7%	-5.0%	3.1%	0.09	21.94%	15.7%	408,667	192,548
9521	3.87	3.53	3.29	3.45	-8.8%	-6.8%	4.9%	0.07	21.83%	13.6%	170,514	183,284
2503	1.37	1.43	1.31	1.21	4.4%	-8.4%	-7.6%	0.07	21.78%	12.8%	16,699	18,445
2002	2.53	2.80	2.91	3.08	10.7%	3.9%	5.8%	0.08	21.74%	6.7%	286,338	224,260
2288	4.03	3.68	3.55	3.84	-8.7%	-3.5%	8.2%	0.05	21.72%	16.9%	111,919	102,587
8304	3.50	3.57	4.03	4.26	2.0%	12.9%	5.7%	0.10	21.71%	10.9%	283,147	267,651
4133	1.70	1.85	1.80	1.96	8.8%	-2.7%	8.9%	0.06	21.70%	11.6%	5,379	5,500
4740	0.83	0.89	0.98	1.01	7.2%	10.1%	3.1%	0.09	21.69%	7.1%	57,329	84,049
6252	3.45	3.08	2.95	2.79	-10.7%	-4.2%	-5.4%	0.09	21.66%	6.5%	28,828	51,057
3824	4.84	4.59	4.04	3.91	-5.2%	-12.0%	-3.2%	0.10	21.56%	8.8%	778,106	921,884
3085	5.15	4.37	4.41	4.61	-15.1%	0.9%	4.5%	0.08	21.47%	19.7%	644,461	624,796
5192	2.16	2.13	2.19	2.55	-1.4%	2.8%	16.4%	0.09	21.38%	17.8%	547,627	545,002
8103	2.00	1.93	1.92	2.24	-3.5%	-0.5%	16.7%	0.07	21.38%	20.2%	23,988	23,048
0106	6.18	6.78	7.12	6.74	9.7%	5.0%	-5.3%	0.06	21.36%	15.0%	733,553	721,994
2157	6.56	6.25	5.97	5.32	-4.7%	-4.5%	-10.9%	0.09	21.33%	6.4%	678,966	709,316
4720	1.69	1.78	1.93	2.05	5.3%	8.4%	6.2%	0.09	21.30%	3.1%	1,172,580	862,040
2835	2.69	2.47	2.22	2.26	-8.2%	-10.1%	1.8%	0.09	21.27%	11.9%	12,044	18,458
9180	3.36	3.95	3.85	3.87	17.6%	-2.5%	0.5%	0.07	21.16%	20.1%	189,396	211,831
5037	12.09	11.20	10.46	9.86	-7.4%	-6.6%	-5.7%	0.09	21.02%	1.6%	5,910	7,933
4036	2.76	2.62	2.40	2.25	-5.1%	-8.4%	-6.3%	0.09	21.01%	3.3%	41,436	47,994
3081	3.53	3.85	3.95	4.27	9.1%	2.6%	8.1%	0.08	20.96%	6.5%	104,760	102,361
7431	0.86	0.94	0.99	1.04	9.3%	5.3%	5.1%	0.08	20.93%	4.3%	218,864	236,558
1463	10.84	9.29	9.01	8.77	-14.3%	-3.0%	-2.7%	0.10	20.88%	11.6%	148,785	133,566
3042	5.85	5.01	4.76	4.79	-14.4%	-5.0%	0.6%	0.10	20.82%	15.0%	0	442
2710	15.12	13.52	12.46	12.62	-10.6%	-7.8%	1.3%	0.09	20.78%	11.9%	135,590	129,721
7580	2.07	2.17	2.23	2.50	4.8%	2.8%	12.1%	0.08	20.77%	9.3%	292,739	310,382
3119	1.63	1.48	1.37	1.41	-9.2%	-7.4%	2.9%	0.08	20.74%	12.1%	47	735
8102	2.24	2.03	1.92	2.01	-9.4%	-5.4%	4.7%	0.07	20.71%	14.1%	150,959	197,122
4000	4.91	4.89	4.50	3.99	-0.4%	-8.0%	-11.3%	0.09	20.70%	10.9%	144,124	173,835
8031	1.75	2.03	1.98	2.01	16.0%	-2.5%	1.5%	0.07	20.66%	18.5%	170,284	188,559
7133	2.13	2.22	2.26	2.57	4.2%	1.8%	13.7%	0.08	20.66%	11.9%	20,250	17,617
6237	1.42	1.26	1.19	1.16	-11.3%	-5.6%	-2.5%	0.09	20.41%	8.7%	4,017	3,484
4240	3.00	3.49	3.48	3.37	16.3%	-0.3%	-3.2%	0.07	20.35%	19.5%	79,837	76,927
6206	2.33	2.09	2.10	2.28	-10.3%	0.5%	8.6%	0.06	20.33%	18.9%	219	89
7335	2.00	2.15	2.05	2.19	7.5%	-4.7%	6.8%	0.04	20.18%	12.2%	0	14
8719	2.11	1.91	1.76	1.73	-9.5%	-7.9%	-1.7%	0.09	20.09%	7.8%	1,929	1,353
2095	2.85	2.87	3.23	3.42	0.7%	12.5%	5.9%	0.09	20.00%	11.8%	1,663,499	1,714,751
8742	0.28	0.25	0.24	0.25	-10.7%	-4.0%	4.2%	0.07	19.94%	14.9%	60,950,716	62,480,616
4244	2.63	2.36	2.32	2.48	-10.3%	-1.7%	6.9%	0.06	19.87%	17.2%	897,624	1,065,506
8034	2.22	2.09	1.92	2.01	-5.9%	-8.1%	4.7%	0.06	19.83%	12.8%	184,107	207,880
9554	9.01	8.04	7.50	7.40	-10.8%	-6.7%	-1.3%	0.09	19.78%	9.4%	173,440	186,348
5160	2.38	2.16	2.02	1.96	-9.2%	-6.5%	-3.0%	0.09	19.78%	6.3%	424,211	425,156
8748	0.57	0.52	0.49	0.51	-8.8%	-5.8%	4.1%	0.07	19.74%	12.9%	3,211,586	3,342,328
9154	1.44	1.40	1.47	1.63	-2.8%	5.0%	10.9%	0.07	19.66%	13.7%	930,979	1,030,761
2587	1.84	1.74	1.73	1.95	-5.4%	-0.6%	12.7%	0.06	19.53%	18.2%	11,880	1,653
4283	1.55	1.42	1.38	1.28	-8.4%	-2.8%	-7.2%	0.08	19.52%	5.6%	239,305	221,402
3114	2.81	3.06	3.25	3.35	8.9%	6.2%	3.1%	0.08	19.22%	5.8%	29,702	55,022
3027	2.75	2.55	2.45	2.28	-7.3%	-3.9%	-6.9%	0.08	19.21%	3.4%	13,485	12,462
0035	1.77	1.88	2.07	2.03	6.2%	10.1%	-1.9%	0.07	19.21%	12.0%	195,375	181,933
8045	0.47	0.50	0.54	0.52	6.4%	8.0%	-3.7%	0.06	19.15%	11.7%	4,541,227	4,434,065
9084	1.30	1.20	1.12	1.16	-7.7%	-6.7%	3.6%	0.06	18.97%	11.3%	759,618	848,646
5059	28.25	25.77	24.30	23.46	-8.8%	-5.7%	-3.5%	0.08	18.96%	5.3%	45,627	58,420
5472	5.25	5.09	4.55	4.36	-3.0%	-10.6%	-4.2%	0.09	18.74%	7.6%	78,001	84,931
3372	3.59	3.41	3.13	2.99	-5.0%	-8.2%	-4.5%	0.08	18.72%	3.7%	246,152	158,036
8002	1.50	1.58	1.62	1.78	5.3%	2.5%	9.9%	0.07	18.67%	7.3%	683,403	614,729
2735	3.92	3.72	3.48	3.69	-5.1%	-6.5%	6.0%	0.05	18.63%	12.5%	42,339	46,555
8037	1.80	1.75	1.61	1.72	-2.8%	-8.0%	6.8%	0.05	18.58%	14.8%	9,810,553	9,949,723

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	2018	2019	2020	2021	2019	2020	2021				2017	2018
0917	3.97	3.67	3.39	3.31	-7.6%	-7.6%	-2.4%	0.08	18.49%	5.3%	178,221	175,754
1642	2.71	2.47	2.43	2.60	-8.9%	-1.6%	7.0%	0.05	18.36%	15.9%	338,385	221,769
9586	0.58	0.50	0.48	0.48	-13.8%	-4.0%	0.0%	0.09	18.34%	13.8%	1,586,477	1,620,778
3315	3.56	3.22	3.04	2.97	-9.6%	-5.6%	-2.3%	0.08	18.34%	7.2%	13,066	40,313
5537	3.69	3.53	3.83	3.66	-4.3%	8.5%	-4.4%	0.03	18.23%	12.9%	3,534,958	3,906,367
7402	0.12	0.11	0.10	0.10	-8.3%	-9.1%	0.0%	0.09	18.18%	9.1%	8,326	8,723
8293	8.49	7.75	7.18	7.09	-8.7%	-7.4%	-1.3%	0.08	18.17%	7.5%	881,264	826,655
8010	1.75	1.56	1.53	1.60	-10.9%	-1.9%	4.6%	0.06	18.16%	15.4%	2,634,299	2,742,818
7309	10.88	10.95	10.26	9.20	0.6%	-6.3%	-10.3%	0.08	18.04%	11.0%	13,024	14,170
5437	3.77	3.91	4.04	4.45	3.7%	3.3%	10.1%	0.07	18.04%	6.8%	1,306,098	1,329,660
7421	0.53	0.51	0.55	0.58	-3.8%	7.8%	5.5%	0.06	18.02%	11.6%	311,890	345,832
9089	1.12	1.04	0.99	0.94	-7.1%	-4.8%	-5.1%	0.08	17.97%	2.3%	2,795	3,011
8015	0.81	0.78	0.73	0.68	-3.7%	-6.4%	-6.8%	0.08	17.91%	3.1%	381,701	375,450
8353	3.55	3.31	3.21	3.44	-6.8%	-3.0%	7.2%	0.04	17.87%	13.9%	282,971	262,169
2302	1.82	1.72	1.62	1.71	-5.5%	-5.8%	5.6%	0.05	17.83%	11.4%	0	45
9058	1.51	1.41	1.33	1.39	-6.6%	-5.7%	4.5%	0.05	17.75%	11.1%	1,016,126	1,040,888
3303	2.31	1.98	2.01	2.04	-14.3%	1.5%	1.5%	0.07	17.75%	15.8%	189,230	255,363
8385	1.79	1.71	1.68	1.86	-4.5%	-1.8%	10.7%	0.05	17.69%	15.2%	582,277	566,506
9101	3.45	3.36	3.13	3.36	-2.6%	-6.8%	7.3%	0.04	17.69%	14.2%	2,644,715	2,697,997
3365	3.92	3.47	3.31	3.28	-11.5%	-4.6%	-0.9%	0.08	17.68%	10.6%	225,721	296,511
3373	5.22	4.62	4.45	4.37	-11.5%	-3.7%	-1.8%	0.08	17.68%	9.7%	66,663	75,282
3724	3.84	3.27	3.20	3.19	-14.8%	-2.1%	-0.3%	0.09	17.67%	14.5%	2,544,942	2,542,469
6233	1.76	1.79	1.89	2.07	1.7%	5.6%	9.5%	0.07	17.61%	7.8%	123,598	172,497
7370	4.78	4.50	4.12	4.02	-5.9%	-8.4%	-2.4%	0.08	17.58%	6.0%	141,593	150,342
3629	1.76	1.62	1.51	1.48	-8.0%	-6.8%	-2.0%	0.08	17.58%	6.0%	888,991	933,329
0005	3.31	2.98	2.84	2.90	-10.0%	-4.7%	2.1%	0.07	17.57%	12.1%	181,264	175,222
9110	2.99	2.82	2.62	2.52	-5.7%	-7.1%	-3.8%	0.08	17.50%	3.3%	805,703	904,155
6872	10.83	10.59	10.12	9.12	-2.2%	-4.4%	-9.9%	0.07	17.30%	7.7%	2,960	845
3821	5.16	4.67	4.46	4.57	-9.5%	-4.5%	2.5%	0.07	17.24%	12.0%	218,433	258,621
4109	0.63	0.56	0.55	0.57	-11.1%	-1.8%	3.6%	0.06	17.21%	14.7%	153,854	88,907
4583	3.78	3.95	4.08	4.43	4.5%	3.3%	8.6%	0.07	17.20%	5.3%	299,699	304,754
7515	0.95	1.03	0.99	0.95	8.4%	-3.9%	-4.0%	0.04	17.18%	12.5%	332,705	357,489
0913	361.00	381.00	394.00	423.00	5.5%	3.4%	7.4%	0.07	17.17%	3.9%	0	494
4131	3.91	3.98	4.55	4.58	1.8%	14.3%	0.7%	0.08	17.14%	13.7%	715	799
7705	3.36	3.83	3.76	3.79	14.0%	-1.8%	0.8%	0.06	17.00%	15.8%	1,095,461	1,214,707
2701	9.01	10.12	10.48	10.42	12.3%	3.6%	-0.6%	0.07	16.98%	12.9%	5,256	5,992
3040	5.62	5.18	4.84	4.76	-7.8%	-6.6%	-1.7%	0.08	16.81%	6.2%	270,429	290,156
3642	1.32	1.28	1.21	1.12	-3.0%	-5.5%	-7.4%	0.07	16.75%	4.4%	9,557	2,059
5102	5.84	5.49	5.20	4.96	-6.0%	-5.3%	-4.6%	0.07	16.74%	1.4%	368,358	416,529
8810	0.13	0.12	0.11	0.11	-7.7%	-8.3%	0.0%	0.08	16.67%	8.3%	255,211,347	266,583,997
8603	0.06	0.06	0.06	0.07	0.0%	0.0%	16.7%	0.08	16.67%	16.7%	4,584,789	5,072,703
4511	0.36	0.39	0.41	0.40	8.3%	5.1%	-2.4%	0.06	16.67%	10.8%	3,512,990	3,168,542
4114	3.68	3.29	3.11	3.11	-10.6%	-5.5%	0.0%	0.08	16.65%	10.6%	306,076	313,206
6882	3.72	3.60	3.32	3.16	-3.2%	-7.8%	-4.8%	0.07	16.62%	4.6%	0	3,785
6003	4.44	4.17	4.26	4.58	-6.1%	2.2%	7.5%	0.04	16.51%	13.6%	12,110	15,109
9410	3.00	2.75	2.63	2.71	-8.3%	-4.4%	3.0%	0.06	16.50%	11.4%	212,555	210,689
4484	2.43	2.35	2.47	2.65	-3.3%	5.1%	7.3%	0.05	16.48%	10.6%	4,004,186	4,585,157
6400	4.45	4.49	5.06	4.94	0.9%	12.7%	-2.4%	0.07	16.40%	15.1%	193,922	203,337
2417	1.39	1.29	1.34	1.40	-7.2%	3.9%	4.5%	0.04	16.33%	11.7%	18,677	21,915
3022	3.85	3.54	3.44	3.28	-8.1%	-2.8%	-4.7%	0.07	16.27%	5.2%	119,430	136,717
3126	1.17	1.27	1.31	1.36	8.5%	3.1%	3.8%	0.06	16.24%	5.4%	26,511	35,706
7313	3.02	3.28	3.38	3.25	8.6%	3.0%	-3.8%	0.05	16.23%	12.5%	2,671	37
2799	4.66	5.05	5.03	4.69	8.4%	-0.4%	-6.8%	0.04	16.15%	15.1%	36,300	36,736
4703	2.20	1.96	1.91	1.87	-10.9%	-2.6%	-2.1%	0.07	16.12%	8.8%	185,415	189,722
0008	2.80	2.60	2.53	2.39	-7.1%	-2.7%	-5.5%	0.07	16.12%	4.5%	72,693	72,044
2014	3.98	4.50	4.52	4.62	13.1%	0.4%	2.2%	0.07	16.08%	12.6%	698,213	740,966
9014	2.31	2.27	2.43	2.27	-1.7%	7.0%	-6.6%	0.03	16.07%	13.6%	4,710,137	4,999,682
1699	2.93	2.80	2.56	2.50	-4.4%	-8.6%	-2.3%	0.07	16.05%	6.2%	74,357	192,836
8116	2.31	1.98	1.97	1.99	-14.3%	-0.5%	1.0%	0.08	16.03%	15.3%	832,412	877,510

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	2018	2019	2020	2021	2019	2020	2021	Coef. Var	Change	Change	2017	2018
3188	2.15	2.31	2.16	2.19	7.4%	-6.5%	1.4%	0.03	16.01%	13.9%	280,118	270,958
4307	1.58	1.70	1.68	1.79	7.6%	-1.2%	6.5%	0.05	15.99%	8.8%	101,471	83,489
5535	6.10	5.43	5.36	5.52	-11.0%	-1.3%	3.0%	0.06	15.77%	14.0%	1,004,638	964,396
7420	7.58	7.18	6.86	6.50	-5.3%	-4.5%	-5.2%	0.07	15.74%	0.8%	9,776	9,353
3807	2.03	2.00	2.02	2.28	-1.5%	1.0%	12.9%	0.06	15.68%	14.3%	216,020	222,545
2081	5.65	4.87	4.79	4.79	-13.8%	-1.6%	0.0%	0.08	15.67%	13.8%	33,038	24,879
1438	12.34	11.66	12.64	12.78	-5.5%	8.4%	1.1%	0.04	15.65%	13.9%	49,458	295,545
4611	1.04	0.99	0.98	1.07	-4.8%	-1.0%	9.2%	0.04	15.59%	14.0%	3,157,722	3,066,941
2841	3.70	3.55	3.55	3.94	-4.1%	0.0%	11.0%	0.05	15.49%	15.0%	47,794	51,211
5183	3.02	2.75	2.65	2.59	-8.9%	-3.6%	-2.3%	0.07	15.46%	6.7%	4,282,023	4,403,481
8227	3.27	2.93	2.85	2.90	-10.4%	-2.7%	1.8%	0.06	15.40%	12.2%	1,122,259	1,170,064
2016	2.62	2.93	2.88	2.84	11.8%	-1.7%	-1.4%	0.05	15.32%	13.5%	223,858	246,791
8039	1.11	1.07	1.11	1.19	-3.6%	3.7%	7.2%	0.04	15.22%	10.8%	1,152,381	1,056,295
5474	5.48	5.06	4.73	4.75	-7.7%	-6.5%	0.4%	0.07	15.17%	8.1%	1,933,498	1,918,313
5445	4.62	4.42	4.38	3.97	-4.3%	-0.9%	-9.4%	0.06	15.13%	8.5%	1,805,940	1,792,945
3881	4.15	3.77	3.69	3.57	-9.2%	-2.1%	-3.3%	0.07	15.10%	7.0%	183,066	197,796
4653	1.34	1.28	1.29	1.41	-4.5%	0.8%	9.3%	0.04	15.09%	13.8%	3,974	7,004
4741	2.29	2.14	2.22	2.31	-6.6%	3.7%	4.1%	0.03	15.01%	10.6%	123,956	80,853
6836	2.99	3.19	3.02	3.09	6.7%	-5.3%	2.3%	0.03	14.98%	12.0%	129,200	162,068
9102	2.56	2.71	2.50	2.48	5.9%	-7.7%	-0.8%	0.04	14.98%	13.6%	2,248,866	2,435,098
6825	2.91	2.95	2.74	2.58	1.4%	-7.1%	-5.8%	0.06	14.93%	8.5%	311,921	155,418
6826	4.15	4.34	4.21	3.93	4.6%	-3.0%	-6.7%	0.04	14.87%	11.2%	57	0
3581	1.22	1.16	1.22	1.27	-4.9%	5.2%	4.1%	0.04	14.87%	10.1%	85,685	67,303
5479	7.13	6.44	6.14	6.14	-9.7%	-4.7%	0.0%	0.07	14.79%	9.7%	154,867	168,359
4149	0.89	0.86	0.82	0.77	-3.4%	-4.7%	-6.1%	0.06	14.77%	2.7%	159,696	173,629
3826	0.97	1.02	1.00	1.07	5.2%	-2.0%	7.0%	0.04	14.72%	9.0%	138,465	123,855
5951	0.34	0.34	0.35	0.39	0.0%	2.9%	11.4%	0.07	14.71%	11.4%	94,838	38,201
6325	3.24	3.06	2.83	2.80	-5.6%	-7.5%	-1.1%	0.07	14.69%	6.5%	544,279	601,593
5551	15.17	13.75	13.67	14.25	-9.4%	-0.6%	4.2%	0.05	14.66%	13.6%	867,605	813,620
5443	2.80	2.62	2.80	2.82	-6.4%	6.9%	0.7%	0.03	14.55%	13.3%	7,630	3,459
8292	3.61	3.32	3.42	3.52	-8.0%	3.0%	2.9%	0.04	14.54%	11.0%	1,465,865	1,596,860
3064	3.32	3.16	3.32	3.45	-4.8%	5.1%	3.9%	0.04	14.44%	9.9%	131,653	147,299
7720	2.58	2.47	2.53	2.71	-4.3%	2.4%	7.1%	0.04	14.39%	11.4%	3,432,603	3,694,716
5462	5.39	5.37	4.99	4.67	-0.4%	-7.1%	-6.4%	0.07	14.37%	6.7%	372,133	338,706
4635	3.19	3.01	2.94	2.77	-5.6%	-2.3%	-5.8%	0.06	14.35%	3.5%	326,682	348,178
2380	2.26	2.10	1.98	2.00	-7.1%	-5.7%	1.0%	0.06	14.34%	8.1%	9,834	648
2881	3.20	3.12	2.93	2.78	-2.5%	-6.1%	-5.1%	0.06	14.31%	3.6%	227,858	218,987
8601	0.21	0.23	0.22	0.22	9.5%	-4.3%	0.0%	0.04	14.29%	13.9%	10,878,465	11,011,091
8871	0.07	0.07	0.06	0.06	0.0%	-14.3%	0.0%	0.09	14.29%	14.3%	2,456,877	3,116,084
3336	2.92	2.78	2.63	2.72	-4.8%	-5.4%	3.4%	0.04	14.23%	8.8%	75,594	87,932
4243	2.20	2.06	2.06	2.21	-6.4%	0.0%	7.3%	0.04	14.11%	13.6%	490,558	528,667
4351	0.78	0.78	0.83	0.89	0.0%	6.4%	7.2%	0.06	14.10%	7.2%	37,094	22,750
9156	1.92	2.04	2.10	2.19	6.3%	2.9%	4.3%	0.05	14.06%	3.3%	383,059	420,251
8061	1.78	1.66	1.61	1.55	-6.7%	-3.0%	-3.7%	0.06	14.05%	3.7%	1,776,589	1,819,651
8001	1.77	1.74	1.88	1.95	-1.7%	8.0%	3.7%	0.05	13.97%	9.7%	384,731	398,020
9519	3.21	3.30	3.15	3.34	2.8%	-4.5%	6.0%	0.03	13.96%	10.6%	464,515	474,050
1701	3.38	3.10	3.08	2.94	-8.3%	-0.6%	-4.5%	0.06	13.94%	7.6%	772,916	856,510
5221	3.95	3.79	3.94	4.15	-4.1%	4.0%	5.3%	0.04	13.93%	9.4%	2,685,246	2,795,021
2790	1.58	1.62	1.63	1.80	2.5%	0.6%	10.4%	0.06	13.92%	9.8%	34,746	34,714
7610	0.36	0.37	0.39	0.41	2.8%	5.4%	5.1%	0.06	13.89%	2.6%	2,660,830	2,845,344
8393	1.31	1.22	1.24	1.30	-6.9%	1.6%	4.8%	0.03	13.88%	11.7%	1,760,453	1,983,339
4410	2.82	2.95	2.88	3.06	4.6%	-2.4%	6.3%	0.04	13.79%	8.6%	1,310,351	1,404,240
2174	2.95	2.75	2.76	2.93	-6.8%	0.4%	6.2%	0.04	13.77%	12.9%	3,391	158
3220	2.42	2.22	2.15	2.19	-8.3%	-3.2%	1.9%	0.05	13.76%	10.1%	290,975	283,325
3270	4.18	3.67	3.65	3.62	-12.2%	-0.5%	-0.8%	0.07	13.74%	11.7%	135,829	154,153
9170	9.54	9.68	10.34	10.85	1.5%	6.8%	4.9%	0.06	13.73%	5.4%	42,254	40,968
9600	2.79	2.83	2.96	3.17	1.4%	4.6%	7.1%	0.06	13.62%	5.7%	2,791	7,855
3634	1.59	1.65	1.54	1.50	3.8%	-6.7%	-2.6%	0.04	13.57%	10.4%	410,059	487,492
9505	3.62	3.99	3.98	3.87	10.2%	-0.3%	-2.8%	0.04	13.55%	13.0%	82,453	95,533

NCCI Missouri Loss Cost Filing Effective January 1, 2021

Analysis of the Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by 2018 Absolute Cumulative Change Percent

Class Code	Loss Cost				Percent Change			Loss Cost Coef. Var	Absolute Change	Swing Max - Min Change	Payroll (100's)	
	2018	2019	2020	2021	2019	2020	2021				2017	2018
8021	3.03	2.83	2.67	2.69	-6.6%	-5.7%	0.7%	0.06	13.47%	7.3%	394,553	403,684
5507	3.58	3.21	3.20	3.28	-10.3%	-0.3%	2.5%	0.05	13.45%	12.8%	122,683	170,856
4717	1.86	1.99	2.05	2.11	7.0%	3.0%	2.9%	0.05	13.44%	4.1%	80,736	79,869
8861	1.18	1.16	1.14	1.25	-1.7%	-1.7%	9.6%	0.04	13.43%	11.4%	5,358,532	5,866,339
8606	1.92	1.78	1.69	1.68	-7.3%	-5.1%	-0.6%	0.06	13.38%	6.7%	1,437	2,039
8855	0.16	0.15	0.14	0.14	-6.3%	-6.7%	0.0%	0.06	13.33%	6.7%	25,075,510	28,781,844
9060	1.14	1.11	1.06	1.12	-2.6%	-4.5%	5.7%	0.03	13.33%	10.2%	1,341,056	1,420,876
2065	1.94	1.89	1.75	1.70	-2.6%	-7.4%	-2.9%	0.06	13.32%	4.8%	28,401	15,712
7090	5.83	5.95	5.67	5.33	2.1%	-4.7%	-6.0%	0.05	13.27%	8.1%	645	1,035
8263	4.65	4.58	4.33	4.58	-1.5%	-5.5%	5.8%	0.03	13.23%	11.2%	48,854	31,958
2651	1.97	2.13	2.21	2.23	8.1%	3.8%	0.9%	0.06	13.20%	7.2%	85,208	75,814
8264	5.05	4.63	4.52	4.43	-8.3%	-2.4%	-2.0%	0.06	13.10%	6.3%	215,577	235,491
3179	2.21	2.04	2.01	2.08	-7.7%	-1.5%	3.5%	0.04	13.08%	11.2%	1,643,733	1,922,409
2110	2.00	1.89	1.80	1.76	-5.5%	-4.8%	-2.2%	0.06	12.98%	3.3%	54,858	45,327
4239	1.80	1.79	1.90	2.01	-0.6%	6.1%	5.8%	0.05	12.91%	6.7%	85,368	90,397
4923	0.99	0.93	0.97	0.99	-6.1%	4.3%	2.1%	0.03	12.90%	10.4%	24,030	29,481
7405	1.21	1.26	1.19	1.22	4.1%	-5.6%	2.5%	0.02	12.69%	9.7%	832,298	891,314
8058	2.25	2.23	2.33	2.49	-0.9%	4.5%	6.9%	0.05	12.65%	7.8%	1,902,765	1,974,099
9620	1.10	1.02	1.01	1.05	-7.3%	-1.0%	4.0%	0.04	12.61%	11.2%	549,067	527,209
3145	2.48	2.31	2.26	2.33	-6.9%	-2.2%	3.1%	0.04	12.55%	10.0%	106,383	120,429
3385	0.84	0.81	0.82	0.88	-3.6%	1.2%	7.3%	0.04	12.52%	10.9%	12,589	4,802
5473	7.67	7.13	6.81	6.85	-7.0%	-4.5%	0.6%	0.06	12.50%	7.6%	103,032	101,666
8013	0.34	0.32	0.32	0.34	-5.9%	0.0%	6.3%	0.03	12.50%	12.1%	1,397,188	1,338,764
9182	1.71	1.63	1.67	1.75	-4.7%	2.5%	4.8%	0.03	12.38%	9.5%	450,631	526,654
4452	2.79	2.73	2.59	2.47	-2.2%	-5.1%	-4.6%	0.05	12.36%	3.0%	515,162	631,243
2413	2.36	2.45	2.52	2.65	3.8%	2.9%	5.2%	0.05	12.29%	2.3%	8,340	7,832
4299	2.21	2.13	2.07	1.96	-3.6%	-2.8%	-5.3%	0.05	12.20%	2.5%	2,380,979	2,263,942
6884	5.67	5.41	5.16	5.03	-4.6%	-4.6%	-2.5%	0.05	12.18%	2.1%	38	0
8391	2.11	1.97	1.94	2.01	-6.6%	-1.5%	3.6%	0.04	12.17%	10.2%	7,833,459	8,388,318
4034	6.48	6.77	6.33	6.28	4.5%	-6.5%	-0.8%	0.03	12.14%	11.0%	382,878	398,026
8381	2.33	2.31	2.10	2.06	-0.9%	-9.1%	-1.9%	0.06	12.12%	8.2%	73,001	78,251
1322	6.49	6.25	6.10	6.44	-3.7%	-2.4%	5.6%	0.03	12.11%	9.3%	0	25
4273	2.48	2.32	2.27	2.34	-6.5%	-2.2%	3.1%	0.04	12.10%	9.5%	644,283	644,740
9402	3.72	3.81	3.87	4.17	2.4%	1.6%	7.8%	0.05	12.10%	6.2%	438,231	525,603
2731	3.51	3.49	3.68	3.47	-0.6%	5.4%	-5.7%	0.03	12.10%	11.2%	394,027	409,352
0170	2.25	2.05	1.99	1.99	-8.9%	-2.9%	0.0%	0.06	12.08%	8.9%	27	31
3648	1.48	1.43	1.46	1.55	-3.4%	2.1%	6.2%	0.03	12.05%	9.5%	88,748	94,392
8725	1.83	1.87	1.99	2.05	2.2%	6.4%	3.0%	0.05	12.02%	4.2%	18,964	13,373
3113	1.85	1.85	1.76	1.64	0.0%	-4.9%	-6.8%	0.06	12.01%	6.8%	1,426,505	1,438,343
2501	2.26	2.35	2.45	2.53	4.0%	4.3%	3.3%	0.05	11.95%	1.0%	1,077,937	1,113,976
4683	4.01	3.73	3.58	3.60	-7.0%	-4.0%	0.6%	0.05	11.91%	7.5%	6,143	54,677
3681	0.81	0.77	0.73	0.72	-4.9%	-5.2%	-1.4%	0.05	11.90%	3.8%	2,446,154	3,200,660
2402	2.27	2.36	2.46	2.54	4.0%	4.2%	3.3%	0.05	11.89%	1.0%	1,238	1,532
2714	5.06	4.74	4.62	4.50	-6.3%	-2.5%	-2.6%	0.05	11.85%	3.8%	353	608
8901	0.18	0.18	0.17	0.16	0.0%	-5.6%	-5.9%	0.06	11.76%	5.9%	11,414,928	10,920,541
6216	4.39	4.20	3.96	4.01	-4.3%	-5.7%	1.3%	0.05	11.68%	7.0%	11,090	10,248
8008	0.91	0.86	0.88	0.91	-5.5%	2.3%	3.4%	0.03	11.63%	8.9%	3,667,061	3,637,119
8392	2.36	2.17	2.12	2.10	-8.1%	-2.3%	-0.9%	0.05	11.58%	7.1%	323,614	346,897
3822	3.87	3.62	3.50	3.45	-6.5%	-3.3%	-1.4%	0.05	11.56%	5.0%	12,257	21,264
3300	3.84	3.92	3.93	4.28	2.1%	0.3%	8.9%	0.05	11.46%	8.7%	350,380	346,189
2923	1.98	1.91	1.85	1.77	-3.5%	-3.1%	-4.3%	0.05	11.41%	1.2%	9,190	8,646
8835	1.95	1.90	1.76	1.74	-2.6%	-7.4%	-1.1%	0.06	11.37%	6.2%	5,714,031	5,932,084
5491	1.58	1.50	1.54	1.49	-5.1%	2.7%	-3.2%	0.03	11.37%	7.7%	28,258	23,957
2131	2.33	2.21	2.22	2.34	-5.2%	0.5%	5.4%	0.03	11.34%	10.6%	86,271	86,494
5403	5.51	5.12	4.98	4.92	-7.1%	-2.7%	-1.2%	0.05	11.33%	5.9%	2,787,745	2,937,941
8232	5.39	4.90	5.00	5.00	-9.1%	2.0%	0.0%	0.04	11.32%	11.1%	2,831,565	2,975,514
3111	2.33	2.32	2.15	2.08	-0.4%	-7.3%	-3.3%	0.06	11.30%	6.9%	1,118	4,112
3647	2.48	2.49	2.49	2.76	0.4%	0.0%	10.8%	0.05	11.29%	10.8%	1,110,849	1,135,140
7395	3.72	3.73	3.92	4.14	0.3%	5.1%	5.6%	0.05	11.29%	5.3%	361	1,502

NCCI Missouri Loss Cost Filing Effective January 1, 2021
Analysis of the Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by 2018 Absolute Cumulative Change Percent

Class Code	Loss Cost 2018	2019	2020	2021	Percent Change 2019	2020	2021	Loss Cost Coef. Var	Absolute Change	Swing Max - Min Change	Payroll (100's) 2017	2018
2039	2.41	2.49	2.50	2.68	3.3%	0.4%	7.2%	0.05	11.20%	6.8%	433,000	427,493
8370	3.74	3.43	3.45	3.52	-8.3%	0.6%	2.0%	0.04	11.13%	10.3%	494,192	503,368
2070	4.31	4.03	3.91	3.86	-6.5%	-3.0%	-1.3%	0.05	11.07%	5.2%	531,989	996,794
8032	1.84	1.74	1.70	1.75	-5.4%	-2.3%	2.9%	0.03	11.03%	8.4%	277,539	344,297
7540	2.80	2.72	2.55	2.51	-2.9%	-6.3%	-1.6%	0.05	11.00%	4.7%	8	150
5020	4.48	4.51	4.23	4.07	0.7%	-6.2%	-3.8%	0.05	10.96%	6.9%	97,758	86,170
4459	2.42	2.29	2.40	2.39	-5.4%	4.8%	-0.4%	0.02	10.89%	10.2%	793,725	1,103,493
8235	3.23	3.54	3.54	3.58	9.6%	0.0%	1.1%	0.05	10.84%	9.6%	127,854	127,599
9403	6.20	6.58	6.79	6.87	6.1%	3.2%	1.2%	0.05	10.81%	5.0%	1,342,733	1,385,486
1710	3.10	3.06	3.03	3.28	-1.3%	-1.0%	8.3%	0.04	10.72%	9.5%	25,469	29,825
7230	6.05	6.20	6.01	6.30	2.5%	-3.1%	4.8%	0.02	10.72%	7.9%	281,679	366,248
7605	1.85	1.70	1.66	1.66	-8.1%	-2.4%	0.0%	0.05	10.65%	8.1%	935,580	953,794
8709	4.16	4.36	4.35	4.12	4.8%	-0.2%	-5.3%	0.03	10.60%	10.1%	753	736
8288	7.60	6.94	6.89	6.96	-8.7%	-0.7%	1.0%	0.05	10.58%	9.7%	159,929	145,159
4018	4.91	4.87	4.95	5.34	-0.8%	1.6%	7.9%	0.04	10.54%	8.7%	144,069	156,589
0908	115.00	121.00	116.00	117.00	5.2%	-4.1%	0.9%	0.02	10.51%	9.3%	0	376
8018	2.15	2.12	2.19	2.31	-1.4%	3.3%	5.5%	0.04	10.48%	6.9%	5,246,371	5,668,336
8831	1.27	1.15	1.14	1.14	-9.4%	-0.9%	0.0%	0.05	10.40%	9.4%	2,526,353	2,668,226
1654	3.71	3.77	3.47	3.45	1.6%	-8.0%	-0.6%	0.05	10.34%	9.6%	30,265	29,811
4692	0.78	0.81	0.82	0.86	3.8%	1.2%	4.9%	0.04	10.26%	3.6%	282,864	296,451
7317	7.96	8.38	8.02	7.99	5.3%	-4.3%	-0.4%	0.02	10.21%	9.6%	13,103	10,200
7590	2.83	2.70	2.59	2.62	-4.6%	-4.1%	1.2%	0.04	10.12%	5.8%	121,854	126,450
6229	4.07	4.03	3.91	4.14	-1.0%	-3.0%	5.9%	0.02	10.11%	8.9%	99,095	96,852
9083	0.94	0.92	0.91	0.97	-2.1%	-1.1%	6.6%	0.03	10.04%	8.7%	11,249,827	11,831,285
7382	4.42	4.32	4.07	4.14	-2.3%	-5.8%	1.7%	0.04	10.04%	7.5%	1,327,485	1,371,359
8291	3.08	3.01	2.89	2.99	-2.3%	-4.0%	3.5%	0.03	10.03%	7.4%	265,911	291,865
0050	4.84	4.46	4.48	4.55	-7.9%	0.4%	1.6%	0.04	10.03%	9.4%	132,497	157,934
3827	2.55	2.41	2.35	2.39	-5.5%	-2.5%	1.7%	0.04	9.96%	7.2%	4,495	1,055
2883	2.90	2.96	2.83	2.74	2.1%	-4.4%	-3.2%	0.03	9.94%	6.5%	1,273,831	1,362,081
7538	5.39	5.51	5.13	5.10	2.2%	-6.9%	-0.6%	0.04	9.92%	9.1%	759,145	781,649
9534	4.40	4.17	4.02	3.99	-5.2%	-3.6%	-0.7%	0.05	9.83%	4.5%	151,341	169,394
3808	3.76	3.55	3.50	3.59	-5.6%	-1.4%	2.6%	0.03	9.83%	8.2%	303,619	326,249
8279	5.42	5.21	5.01	5.10	-3.9%	-3.8%	1.8%	0.03	9.80%	5.7%	61,467	45,079
0037	3.30	3.25	3.02	2.99	-1.5%	-7.1%	-1.0%	0.05	9.78%	6.1%	467,083	516,031
8017	1.41	1.38	1.31	1.28	-2.1%	-5.1%	-2.3%	0.04	9.77%	2.9%	8,750,505	9,161,584
5645	9.27	8.92	9.19	8.95	-3.8%	3.0%	-2.6%	0.02	9.71%	6.8%	2,236,385	2,302,360
3118	2.19	2.14	2.05	1.99	-2.3%	-4.2%	-2.9%	0.04	9.70%	1.9%	17,087	15,272
3548	1.52	1.44	1.43	1.48	-5.3%	-0.7%	3.5%	0.03	9.70%	8.8%	25,666	29,206
9178	10.97	10.78	10.14	10.32	-1.7%	-5.9%	1.8%	0.04	9.68%	7.7%	114,952	111,418
8800	1.27	1.30	1.23	1.21	2.4%	-5.4%	-1.6%	0.03	9.63%	7.7%	349,466	414,247
1430	5.21	5.15	5.40	5.22	-1.2%	4.9%	-3.3%	0.02	9.60%	8.2%	177,994	186,536
4558	1.87	1.79	1.71	1.72	-4.3%	-4.5%	0.6%	0.04	9.58%	5.1%	441,207	460,416
5506	4.82	4.56	4.68	4.62	-5.4%	2.6%	-1.3%	0.02	9.55%	8.0%	1,835,083	1,910,702
3632	3.07	2.86	2.80	2.81	-6.8%	-2.1%	0.4%	0.04	9.47%	7.2%	3,679,662	4,028,332
4062	2.44	2.52	2.63	2.67	3.3%	4.4%	1.5%	0.04	9.43%	2.8%	15,157	19,358
8350	5.75	5.36	5.32	5.23	-6.8%	-0.7%	-1.7%	0.04	9.40%	6.0%	717,830	768,075
7360	3.94	3.73	3.66	3.73	-5.3%	-1.9%	1.9%	0.03	9.36%	7.2%	249,567	336,705
5191	0.67	0.65	0.66	0.69	-3.0%	1.5%	4.5%	0.03	9.32%	7.5%	3,463,112	3,400,487
3122	2.02	1.96	2.03	2.08	-3.0%	3.6%	2.5%	0.02	9.27%	6.5%	819	740
4130	3.32	3.17	3.09	3.03	-4.5%	-2.5%	-1.9%	0.04	9.24%	2.6%	151,569	156,853
4111	1.83	1.75	1.73	1.79	-4.4%	-1.1%	3.5%	0.02	9.23%	7.8%	88,324	7,466
2089	3.43	3.33	3.17	3.13	-2.9%	-4.8%	-1.3%	0.04	9.22%	3.5%	1,986,321	2,186,544
3383	1.42	1.48	1.51	1.55	4.2%	2.0%	2.6%	0.04	9.15%	2.2%	32,653	32,741
9016	2.63	2.74	2.85	2.83	4.2%	4.0%	-0.7%	0.04	9.13%	4.9%	385,208	431,316
3726	3.40	3.32	3.18	3.25	-2.4%	-4.2%	2.2%	0.03	9.02%	6.4%	159,054	226,003
3180	2.69	2.78	2.64	2.65	3.3%	-5.0%	0.4%	0.02	8.96%	8.4%	171,174	222,390
2570	4.02	3.87	3.77	3.86	-3.7%	-2.6%	2.4%	0.03	8.95%	6.1%	18,355	29,367
4279	2.18	2.16	2.24	2.33	-0.9%	3.7%	4.0%	0.03	8.86%	4.9%	306,460	341,103
1164	4.64	4.59	4.39	4.25	-1.1%	-4.4%	-3.2%	0.04	8.85%	3.3%	628,282	880,843

NCCI Missouri Loss Cost Filing Effective January 1, 2021

Analysis of the Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by 2018 Absolute Cumulative Change Percent

Class Code	Loss Cost				Percent Change			Loss Cost Coef. Var	Absolute Change	Swing Max - Min Change	Payroll (100's)	
	2018	2019	2020	2021	2019	2020	2021				2017	2018
8726	1.86	1.88	1.78	1.82	1.1%	-5.3%	2.2%	0.02	8.84%	7.6%	2,101	3,814
9044	0.94	0.88	0.88	0.90	-6.4%	0.0%	2.3%	0.03	8.80%	8.7%	2,539,398	1,641,392
7231	7.47	7.46	6.91	6.99	-0.1%	-7.4%	1.2%	0.04	8.76%	8.5%	428,051	518,188
3612	2.14	2.01	1.97	1.96	-6.1%	-2.0%	-0.5%	0.04	8.73%	5.6%	790,319	725,583
2111	2.16	2.15	2.06	1.98	-0.5%	-4.2%	-3.9%	0.04	8.73%	3.7%	298,315	363,152
7855	3.28	3.09	3.10	3.17	-5.8%	0.3%	2.3%	0.03	8.53%	8.1%	236,200	270,051
3030	4.13	4.25	4.32	4.48	2.9%	1.6%	3.7%	0.03	8.47%	2.1%	785,052	839,145
5188	2.51	2.50	2.64	2.58	-0.4%	5.6%	-2.3%	0.03	8.43%	7.9%	562,891	548,196
4352	1.72	1.62	1.65	1.66	-5.8%	1.9%	0.6%	0.03	8.43%	7.7%	27,928	25,588
8869	0.97	0.89	0.89	0.89	-8.2%	0.0%	0.0%	0.04	8.25%	8.2%	3,318,827	3,463,127
9015	2.56	2.68	2.66	2.73	4.7%	-0.7%	2.6%	0.03	8.24%	5.4%	3,729,910	3,923,390
4206	2.38	2.35	2.34	2.49	-1.3%	-0.4%	6.4%	0.03	8.21%	7.7%	9,045	11,299
7222	5.36	5.60	5.63	5.80	4.5%	0.5%	3.0%	0.03	8.21%	3.9%	1,207	7,350
9501	2.90	2.83	2.84	2.99	-2.4%	0.4%	5.3%	0.03	8.20%	7.7%	215,197	238,259
3146	2.08	2.19	2.22	2.25	5.3%	1.4%	1.4%	0.03	8.17%	3.9%	445,040	444,986
8833	1.01	1.00	1.04	1.07	-1.0%	4.0%	2.9%	0.03	8.06%	5.0%	18,604,651	19,708,990
8832	0.25	0.25	0.23	0.23	0.0%	-8.0%	0.0%	0.05	8.00%	8.0%	36,664,231	39,494,429
0083	4.50	4.55	4.34	4.25	1.1%	-4.6%	-2.1%	0.03	7.97%	5.7%	791,132	856,882
3507	2.40	2.41	2.57	2.59	0.4%	6.6%	0.8%	0.04	7.92%	6.2%	809,408	890,324
5146	4.65	4.56	4.38	4.46	-1.9%	-3.9%	1.8%	0.03	7.89%	5.8%	359,801	386,755
1472	2.54	2.55	2.68	2.74	0.4%	5.1%	2.2%	0.04	7.87%	4.7%	206,977	226,639
2361	1.88	1.84	1.80	1.74	-2.1%	-2.2%	-3.3%	0.03	7.83%	1.2%	2,573	3,180
4829	1.03	1.06	1.07	1.11	2.9%	0.9%	3.7%	0.03	7.77%	2.8%	1,431,459	1,668,028
9179	17.25	16.95	17.37	17.95	-1.7%	2.5%	3.3%	0.02	7.74%	5.1%	88,002	89,250
2802	5.28	4.92	4.92	4.88	-6.8%	0.0%	-0.8%	0.04	7.69%	6.8%	302,048	322,298
3400	4.18	4.09	4.20	4.31	-2.2%	2.7%	2.6%	0.02	7.65%	4.8%	1,326,392	1,078,320
3227	2.95	3.00	2.89	2.83	1.7%	-3.7%	-2.1%	0.03	7.61%	5.4%	228,764	300,731
4250	1.77	1.68	1.68	1.72	-5.1%	0.0%	2.4%	0.02	7.59%	7.5%	109,533	88,457
8233	1.99	2.05	1.97	1.96	3.0%	-3.9%	-0.5%	0.02	7.58%	6.9%	41,133	30,102
3515	2.77	2.65	2.59	2.57	-4.3%	-2.3%	-0.8%	0.03	7.52%	3.6%	4,219	4,588
2220	1.91	1.90	1.92	2.03	-0.5%	1.1%	5.7%	0.03	7.40%	6.3%	11,397	13,311
4101	2.32	2.35	2.22	2.21	1.3%	-5.5%	-0.5%	0.03	7.38%	6.8%	69,377	98,258
9033	1.63	1.66	1.73	1.71	1.8%	4.2%	-1.2%	0.03	7.36%	5.4%	314,514	316,271
8204	3.27	3.20	3.36	3.36	-2.1%	5.0%	0.0%	0.02	7.25%	7.1%	40,277	40,664
8046	2.18	2.13	2.06	2.09	-2.3%	-3.3%	1.5%	0.02	7.19%	4.7%	2,219,568	2,192,045
5222	7.20	6.85	6.74	6.70	-4.9%	-1.6%	-0.6%	0.03	7.18%	4.3%	234,569	261,292
5606	1.16	1.15	1.10	1.12	-0.9%	-4.3%	1.8%	0.02	7.16%	6.2%	5,198,512	5,466,731
2003	3.64	3.63	3.52	3.65	-0.3%	-3.0%	3.7%	0.02	7.13%	6.7%	540,593	738,283
9220	3.62	3.62	3.45	3.53	0.0%	-4.7%	2.3%	0.02	7.12%	7.0%	169,496	179,998
1803	7.43	7.08	7.16	7.24	-4.7%	1.1%	1.1%	0.02	7.08%	5.8%	160,263	175,706
9082	1.18	1.15	1.11	1.12	-2.5%	-3.5%	0.9%	0.03	7.07%	4.4%	15,779,625	16,479,495
3334	1.92	1.86	1.80	1.79	-3.1%	-3.2%	-0.6%	0.03	7.04%	2.7%	100,198	105,217
0251	3.56	3.52	3.35	3.38	-1.1%	-4.8%	0.9%	0.03	6.96%	5.7%	8,454	8,788
2585	3.13	3.14	3.08	2.94	0.3%	-1.9%	-4.5%	0.03	6.88%	4.9%	964,313	1,070,479
0401	10.08	10.31	10.47	10.77	2.3%	1.6%	2.9%	0.03	6.85%	1.3%	59,383	66,858
4771	2.36	2.51	2.52	2.52	6.4%	0.4%	0.0%	0.03	6.78%	6.4%	334,620	334,143
4251	3.37	3.36	3.28	3.41	-0.3%	-2.4%	4.0%	0.02	6.75%	6.3%	115,984	148,058
3076	2.82	2.86	3.00	2.99	1.4%	4.9%	-0.3%	0.03	6.74%	5.2%	5,081,301	5,007,821
8723	0.15	0.14	0.14	0.14	-6.7%	0.0%	0.0%	0.04	6.67%	6.7%	19,563,323	20,034,704
7380	4.35	4.27	4.26	4.45	-1.8%	-0.2%	4.5%	0.02	6.63%	6.3%	4,660,879	5,031,599
7600	3.14	3.11	3.04	3.14	-1.0%	-2.3%	3.3%	0.02	6.62%	5.5%	3,544,445	3,320,363
2660	2.74	2.70	2.70	2.83	-1.5%	0.0%	4.8%	0.02	6.34%	6.3%	192,307	265,003
1320	1.47	1.46	1.40	1.42	-0.7%	-4.1%	1.4%	0.02	6.32%	5.5%	6,161	8,790
4665	8.99	8.73	9.01	9.02	-2.9%	3.2%	0.1%	0.02	6.31%	6.1%	16,625	11,430
2112	3.49	3.64	3.57	3.57	4.3%	-1.9%	0.0%	0.02	6.30%	6.2%	2,865	3,015
9040	3.32	3.25	3.29	3.38	-2.1%	1.2%	2.7%	0.02	6.19%	4.8%	834,652	873,196
8033	1.56	1.52	1.51	1.55	-2.6%	-0.7%	2.6%	0.02	5.97%	5.2%	5,774,305	5,452,137
2130	1.74	1.72	1.68	1.72	-1.1%	-2.3%	2.4%	0.01	5.97%	4.7%	179,138	205,956
3082	4.71	4.60	4.61	4.76	-2.3%	0.2%	3.3%	0.02	5.89%	5.6%	36,493	48,570

NCCI Missouri Loss Cost Filing Effective January 1, 2021
Analysis of the Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by 2018 Absolute Cumulative Change Percent

Class Code	Loss Cost 2018	Loss Cost 2019	Loss Cost 2020	Loss Cost 2021	Percent Change 2019	Percent Change 2020	Percent Change 2021	Loss Cost Coef. Var	Absolute Change	Swing Max - Min Change	Payroll (100's) 2017	Payroll (100's) 2018
2589	1.91	1.91	1.88	1.96	0.0%	-1.6%	4.3%	0.02	5.89%	5.8%	214,680	197,809
3830	0.68	0.71	0.70	0.70	4.4%	-1.4%	0.0%	0.02	5.88%	5.8%	9,096,560	9,338,774
8107	2.46	2.44	2.35	2.32	-0.8%	-3.7%	-1.3%	0.03	5.87%	2.9%	1,818,342	1,999,771
8111	1.61	1.57	1.54	1.52	-2.5%	-1.9%	-1.3%	0.03	5.80%	1.2%	707,498	670,382
4470	2.07	2.10	2.17	2.15	1.4%	3.3%	-0.9%	0.02	5.80%	4.3%	82,885	89,371
8044	2.33	2.30	2.26	2.20	-1.3%	-1.7%	-2.7%	0.02	5.78%	1.4%	1,590,757	1,655,183
4420	4.12	4.09	3.92	3.89	-0.7%	-4.2%	-0.8%	0.03	5.72%	3.4%	53	1,423
3559	2.40	2.32	2.36	2.35	-3.3%	1.7%	-0.4%	0.01	5.56%	5.1%	57,249	56,885
8500	4.81	4.83	4.60	4.61	0.4%	-4.8%	0.2%	0.03	5.43%	5.2%	83,296	88,584
8868	0.37	0.37	0.38	0.39	0.0%	2.7%	2.6%	0.03	5.41%	2.7%	35,525,434	36,697,133
5480	5.16	5.17	5.08	4.91	0.2%	-1.7%	-3.3%	0.02	5.35%	3.5%	48,066	53,295
2172	1.54	1.53	1.47	1.48	-0.6%	-3.9%	0.7%	0.02	5.31%	4.6%	3,984	379
2759	6.23	6.19	6.08	5.91	-0.6%	-1.8%	-2.8%	0.02	5.29%	2.2%	283,849	315,694
4825	0.76	0.72	0.72	0.72	-5.3%	0.0%	0.0%	0.03	5.26%	5.3%	2,061,898	2,183,200
3635	2.19	2.13	2.10	2.08	-2.7%	-1.4%	-1.0%	0.02	5.18%	1.8%	59,697	52,178
4777	4.06	4.05	3.89	3.86	-0.2%	-4.0%	-0.8%	0.03	5.01%	3.7%	17,196	55,415
1925	3.27	3.23	3.25	3.35	-1.2%	0.6%	3.1%	0.02	4.98%	4.3%	256,802	285,772
7098	10.86	10.66	10.44	10.54	-1.8%	-2.1%	1.0%	0.02	4.94%	3.0%	0	10
9052	1.72	1.70	1.71	1.66	-1.2%	0.6%	-2.9%	0.02	4.73%	3.5%	4,041,664	4,595,055
3131	1.81	1.84	1.81	1.79	1.7%	-1.6%	-1.1%	0.01	4.46%	3.3%	372	141
6504	2.27	2.31	2.29	2.25	1.8%	-0.9%	-1.7%	0.01	4.44%	3.5%	3,686,151	4,309,722
5215	5.08	4.89	4.87	4.86	-3.7%	-0.4%	-0.2%	0.02	4.38%	3.5%	548,826	536,178
6835	2.67	2.65	2.59	2.62	-0.7%	-2.3%	1.2%	0.01	4.22%	3.4%	201	0
3257	2.44	2.50	2.47	2.48	2.5%	-1.2%	0.4%	0.01	4.11%	3.7%	365,001	413,677
6503	2.00	1.98	1.96	2.00	-1.0%	-1.0%	2.0%	0.01	4.10%	3.1%	34,776	34,731
8721	0.25	0.25	0.25	0.26	0.0%	0.0%	4.0%	0.02	4.00%	4.0%	252,408	254,205
4431	1.31	1.27	1.26	1.26	-3.1%	-0.8%	0.0%	0.02	3.86%	3.1%	21,004	14,577
5022	5.47	5.46	5.46	5.66	-0.2%	0.0%	3.7%	0.02	3.85%	3.8%	1,295,269	1,286,616
8072	0.53	0.52	0.51	0.51	-1.9%	-1.9%	0.0%	0.02	3.85%	1.9%	252,465	254,751
8006	1.62	1.61	1.58	1.60	-0.6%	-1.9%	1.3%	0.01	3.79%	3.1%	2,635,938	2,778,162
2041	2.47	2.46	2.47	2.54	-0.4%	0.4%	2.8%	0.01	3.67%	3.2%	69,127	64,450
2388	1.50	1.50	1.52	1.55	0.0%	1.3%	2.0%	0.02	3.33%	2.0%	72,010	95,244
8203	5.79	5.89	5.92	5.86	1.7%	0.5%	-1.0%	0.01	3.28%	2.7%	77,363	78,032
7219	6.49	6.54	6.43	6.38	0.8%	-1.7%	-0.8%	0.01	3.26%	2.5%	12,166,683	12,624,490
5190	2.57	2.50	2.50	2.49	-2.7%	0.0%	-0.4%	0.01	3.13%	2.7%	5,150,803	5,343,238
7710	4.00	4.06	4.08	4.12	1.5%	0.5%	1.0%	0.01	3.00%	1.0%	1,085,275	1,245,520
7711	4.00	4.06	4.08	4.12	1.5%	0.5%	1.0%	0.01	3.00%	1.0%	155,950	155,177
3620	3.67	3.68	3.69	3.64	0.3%	0.3%	-1.4%	0.01	1.91%	1.6%	523,729	546,839

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Class Code	Loss Cost				Percent Change			Loss Cost Coef. Var	Absolute Change	Swing Max - Min Change	Payroll (100's)	
	2018	2019	2020	2021	2019	2020	2021				2017	2018
3574	1.80	2.09	1.72	2.08	16.1%	-17.7%	20.9%	0.10	65.27%	38.6%	513,164	1,467,737
5057	4.08	3.69	3.66	4.34	-9.6%	-0.8%	18.6%	0.08	30.97%	28.1%	325,894	367,382
3240	1.98	2.32	2.71	2.48	17.2%	16.8%	-8.5%	0.13	48.48%	25.7%	8,386	3,708
3132	3.80	3.68	3.68	4.45	-3.2%	0.0%	20.9%	0.09	24.74%	24.1%	6,961	8,404
4751	1.81	1.70	1.75	2.05	-6.1%	2.9%	17.1%	0.08	27.92%	23.2%	56	0
7225	6.19	6.15	6.02	7.28	-0.6%	-2.1%	20.9%	0.09	24.28%	23.0%	0	176,366
8215	4.28	3.56	3.50	3.71	-16.8%	-1.7%	6.0%	0.09	25.92%	22.8%	1,009,787	1,113,854
3638	1.92	1.79	1.88	2.18	-6.8%	5.0%	16.0%	0.09	30.03%	22.7%	133,025	149,464
5703	9.82	9.47	10.02	11.90	-3.6%	5.8%	18.8%	0.11	30.14%	22.3%	879	1,815
2709	14.43	16.64	16.56	19.92	15.3%	-0.5%	20.3%	0.13	39.38%	20.8%	1,260	2,521
0042	6.19	5.34	5.32	5.69	-13.7%	-0.4%	7.0%	0.07	22.10%	20.7%	657,098	677,173
1452	3.48	2.95	2.81	2.96	-15.2%	-4.7%	5.3%	0.10	27.14%	20.6%	15,312	15,332
8824	2.36	2.32	1.88	1.91	-1.7%	-19.0%	1.6%	0.12	22.91%	20.6%	1,295,292	1,462,373
7403	4.40	3.93	3.88	4.26	-10.7%	-1.3%	9.8%	0.06	23.07%	20.5%	2,042,578	2,146,330
4557	2.29	2.09	2.00	2.23	-8.7%	-4.3%	11.5%	0.06	26.46%	20.2%	229,661	230,195
8103	2.00	1.93	1.92	2.24	-3.5%	-0.5%	16.7%	0.07	21.38%	20.2%	23,988	23,048
9180	3.36	3.95	3.85	3.87	17.6%	-2.5%	0.5%	0.07	21.16%	20.1%	189,396	211,831
2121	1.47	1.28	1.18	1.26	-12.9%	-7.8%	6.8%	0.09	30.00%	19.7%	798,918	816,218
8755	0.48	0.37	0.31	0.30	-22.9%	-16.2%	-3.2%	0.23	47.46%	19.7%	638,779	604,627
3085	5.15	4.37	4.41	4.61	-15.1%	0.9%	4.5%	0.08	21.47%	19.7%	644,461	624,796
4240	3.00	3.49	3.48	3.37	16.3%	-0.3%	-3.2%	0.07	20.35%	19.5%	79,837	76,927
6045	3.16	2.96	3.12	3.52	-6.3%	5.4%	12.8%	0.07	26.45%	19.1%	8,672	9,266
6206	2.33	2.09	2.10	2.28	-10.3%	0.5%	8.6%	0.06	20.33%	18.9%	219	89
8031	1.75	2.03	1.98	2.01	16.0%	-2.5%	1.5%	0.07	20.66%	18.5%	170,284	188,559
4493	5.78	5.62	4.44	3.66	-2.8%	-21.0%	-17.6%	0.21	46.19%	18.2%	10,009	8,910
2587	1.84	1.74	1.73	1.95	-5.4%	-0.6%	12.7%	0.06	19.53%	18.2%	11,880	1,653
8209	4.52	3.69	3.57	3.56	-18.4%	-3.3%	-0.3%	0.12	22.55%	18.1%	4,449	414
5192	2.16	2.13	2.19	2.55	-1.4%	2.8%	16.4%	0.09	21.38%	17.8%	547,627	545,002
8799	0.46	0.41	0.35	0.36	-10.9%	-14.6%	2.9%	0.13	30.73%	17.5%	165,314	247,646
4244	2.63	2.36	2.32	2.48	-10.3%	-1.7%	6.9%	0.06	19.87%	17.2%	897,624	1,065,506
9522	2.97	3.08	3.60	4.35	3.7%	16.9%	20.8%	0.18	46.46%	17.1%	468,363	354,200
2288	4.03	3.68	3.55	3.84	-8.7%	-3.5%	8.2%	0.05	21.72%	16.9%	111,919	102,587
8603	0.06	0.06	0.06	0.07	0.0%	0.0%	16.7%	0.08	16.67%	16.7%	4,584,789	5,072,703
8803	0.07	0.06	0.06	0.05	-14.3%	0.0%	-16.7%	0.14	33.33%	16.7%	18,065,042	20,776,388
9063	0.77	0.72	0.69	0.76	-6.5%	-4.2%	10.1%	0.05	22.18%	16.6%	2,271,633	2,262,010
5402	3.37	3.31	3.72	4.26	-1.8%	12.4%	14.5%	0.12	30.99%	16.3%	6,349	6,600
1642	2.71	2.47	2.43	2.60	-8.9%	-1.6%	7.0%	0.05	18.36%	15.9%	338,385	221,769
7705	3.36	3.83	3.76	3.79	14.0%	-1.8%	0.8%	0.06	17.00%	15.8%	1,095,461	1,214,707
3303	2.31	1.98	2.01	2.04	-14.3%	1.5%	1.5%	0.07	17.75%	15.8%	189,230	255,363
4263	4.20	3.59	3.32	3.36	-14.5%	-7.5%	1.2%	0.11	24.62%	15.7%	32,872	25,976
3028	4.34	3.79	3.60	3.71	-12.7%	-5.0%	3.1%	0.09	21.94%	15.7%	408,667	192,548
8010	1.75	1.56	1.53	1.60	-10.9%	-1.9%	4.6%	0.06	18.16%	15.4%	2,634,299	2,742,818
2105	3.18	3.23	3.42	4.00	1.6%	5.9%	17.0%	0.11	25.79%	15.4%	5,122	6,033
8116	2.31	1.98	1.97	1.99	-14.3%	-0.5%	1.0%	0.08	16.03%	15.3%	832,412	877,510
2021	1.76	1.86	2.06	2.49	5.7%	10.8%	20.9%	0.16	41.48%	15.2%	84,763	102,411
8385	1.79	1.71	1.68	1.86	-4.5%	-1.8%	10.7%	0.05	17.69%	15.2%	582,277	566,506
2799	4.66	5.05	5.03	4.69	8.4%	-0.4%	-6.8%	0.04	16.15%	15.1%	36,300	36,736
6400	4.45	4.49	5.06	4.94	0.9%	12.7%	-2.4%	0.07	16.40%	15.1%	193,922	203,337
7390	6.59	5.19	4.84	4.54	-21.2%	-6.7%	-6.2%	0.17	37.44%	15.0%	321,983	357,291
0106	6.18	6.78	7.12	6.74	9.7%	5.0%	-5.3%	0.06	21.36%	15.0%	733,553	721,994
2841	3.70	3.55	3.55	3.94	-4.1%	0.0%	11.0%	0.05	15.49%	15.0%	47,794	51,211
3803	1.72	1.73	2.00	2.28	0.6%	15.6%	14.0%	0.14	32.56%	15.0%	166,857	182,178
3042	5.85	5.01	4.76	4.79	-14.4%	-5.0%	0.6%	0.10	20.82%	15.0%	0	442
8742	0.28	0.25	0.24	0.25	-10.7%	-4.0%	4.2%	0.07	19.94%	14.9%	60,950,716	62,480,616
3719	1.53	1.17	1.04	0.95	-23.5%	-11.1%	-8.7%	0.22	49.13%	14.9%	1,039	12,536
2305	2.99	2.44	2.26	2.18	-18.4%	-7.4%	-3.5%	0.15	31.63%	14.9%	37,461	99,437
8037	1.80	1.75	1.61	1.72	-2.8%	-8.0%	6.8%	0.05	18.58%	14.8%	9,810,553	9,949,723
4109	0.63	0.56	0.55	0.57	-11.1%	-1.8%	3.6%	0.06	17.21%	14.7%	153,854	88,907
0079	5.23	4.24	3.57	3.42	-18.9%	-15.8%	-4.2%	0.20	43.51%	14.7%	23,268	18,494

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	2018	2019	2020	2021	2019	2020	2021				2017	2018
4828	2.13	1.96	1.82	1.94	-8.0%	-7.1%	6.6%	0.07	23.32%	14.6%	1,170,027	1,365,040
3724	3.84	3.27	3.20	3.19	-14.8%	-2.1%	-0.3%	0.09	17.67%	14.5%	2,544,942	2,542,469
6204	12.64	9.45	8.43	7.30	-25.2%	-10.8%	-13.4%	0.24	57.35%	14.4%	110,201	137,008
6235	6.63	5.49	5.33	5.18	-17.2%	-2.9%	-2.8%	0.12	24.00%	14.4%	1,297	8,411
4686	2.51	2.61	2.41	2.16	4.0%	-7.7%	-10.4%	0.08	23.57%	14.4%	96,361	134,366
3807	2.03	2.00	2.02	2.28	-1.5%	1.0%	12.9%	0.06	15.68%	14.3%	216,020	222,545
8871	0.07	0.07	0.06	0.06	0.0%	-14.3%	0.0%	0.09	14.29%	14.3%	2,456,877	3,116,084
8106	4.07	3.87	4.17	4.56	-4.9%	7.8%	9.4%	0.07	23.62%	14.3%	464,766	506,224
9101	3.45	3.36	3.13	3.36	-2.6%	-6.8%	7.3%	0.04	17.69%	14.2%	2,644,715	2,697,997
8265	5.45	4.68	4.13	4.13	-14.1%	-11.8%	0.0%	0.14	27.54%	14.1%	277,053	308,365
0113	6.10	5.04	4.54	4.39	-17.4%	-9.9%	-3.3%	0.15	33.28%	14.1%	8,936	10,830
8102	2.24	2.03	1.92	2.01	-9.4%	-5.4%	4.7%	0.07	20.71%	14.1%	150,959	197,122
4611	1.04	0.99	0.98	1.07	-4.8%	-1.0%	9.2%	0.04	15.59%	14.0%	3,157,722	3,066,941
5535	6.10	5.43	5.36	5.52	-11.0%	-1.3%	3.0%	0.06	15.77%	14.0%	1,004,638	964,396
3188	2.15	2.31	2.16	2.19	7.4%	-6.5%	1.4%	0.03	16.01%	13.9%	280,118	270,958
8353	3.55	3.31	3.21	3.44	-6.8%	-3.0%	7.2%	0.04	17.87%	13.9%	282,971	262,169
1438	12.34	11.66	12.64	12.78	-5.5%	8.4%	1.1%	0.04	15.65%	13.9%	49,458	295,545
8601	0.21	0.23	0.22	0.22	9.5%	-4.3%	0.0%	0.04	14.29%	13.9%	10,878,465	11,011,091
6306	6.93	5.42	4.92	4.53	-21.8%	-9.2%	-7.9%	0.19	43.57%	13.9%	450,582	496,709
7539	2.50	2.05	1.69	1.62	-18.0%	-17.6%	-4.1%	0.21	44.47%	13.9%	521,686	536,725
8826	1.73	1.62	1.74	1.87	-6.4%	7.4%	7.5%	0.06	22.77%	13.8%	732,634	1,370,394
2081	5.65	4.87	4.79	4.79	-13.8%	-1.6%	0.0%	0.08	15.67%	13.8%	33,038	24,879
9586	0.58	0.50	0.48	0.48	-13.8%	-4.0%	0.0%	0.09	18.34%	13.8%	1,586,477	1,620,778
4653	1.34	1.28	1.29	1.41	-4.5%	0.8%	9.3%	0.04	15.09%	13.8%	3,974	7,004
8720	1.41	1.19	1.04	1.02	-15.6%	-12.6%	-1.9%	0.15	32.68%	13.7%	1,022,911	1,063,427
4131	3.91	3.98	4.55	4.58	1.8%	14.3%	0.7%	0.08	17.14%	13.7%	715	799
9154	1.44	1.40	1.47	1.63	-2.8%	5.0%	10.9%	0.07	19.66%	13.7%	930,979	1,030,761
9521	3.87	3.53	3.29	3.45	-8.8%	-6.8%	4.9%	0.07	21.83%	13.6%	170,514	183,284
4243	2.20	2.06	2.06	2.21	-6.4%	0.0%	7.3%	0.04	14.11%	13.6%	490,558	528,667
9014	2.31	2.27	2.43	2.27	-1.7%	7.0%	-6.6%	0.03	16.07%	13.6%	4,710,137	4,999,682
9102	2.56	2.71	2.50	2.48	5.9%	-7.7%	-0.8%	0.04	14.98%	13.6%	2,248,866	2,435,098
5551	15.17	13.75	13.67	14.25	-9.4%	-0.6%	4.2%	0.05	14.66%	13.6%	867,605	813,620
6003	4.44	4.17	4.26	4.58	-6.1%	2.2%	7.5%	0.04	16.51%	13.6%	12,110	15,109
2016	2.62	2.93	2.88	2.84	11.8%	-1.7%	-1.4%	0.05	15.32%	13.5%	223,858	246,791
2683	1.69	1.81	2.10	2.53	7.1%	16.0%	20.5%	0.18	49.70%	13.4%	15,759	6,413
1747	1.59	1.69	1.95	1.99	6.3%	15.4%	2.1%	0.11	25.16%	13.3%	23,663	46,192
5443	2.80	2.62	2.80	2.82	-6.4%	6.9%	0.7%	0.03	14.55%	13.3%	7,630	3,459
9186	16.69	16.85	14.81	13.02	1.0%	-12.1%	-12.1%	0.12	26.86%	13.1%	20,139	25,617
9505	3.62	3.99	3.98	3.87	10.2%	-0.3%	-2.8%	0.04	13.55%	13.0%	82,453	95,533
2174	2.95	2.75	2.76	2.93	-6.8%	0.4%	6.2%	0.04	13.77%	12.9%	3,391	158
5537	3.69	3.53	3.83	3.66	-4.3%	8.5%	-4.4%	0.03	18.23%	12.9%	3,534,958	3,906,367
2701	9.01	10.12	10.48	10.42	12.3%	3.6%	-0.6%	0.07	16.98%	12.9%	5,256	5,992
8748	0.57	0.52	0.49	0.51	-8.8%	-5.8%	4.1%	0.07	19.74%	12.9%	3,211,586	3,342,328
5507	3.58	3.21	3.20	3.28	-10.3%	-0.3%	2.5%	0.05	13.45%	12.8%	122,683	170,856
9062	1.41	1.28	1.16	1.20	-9.2%	-9.4%	3.4%	0.09	23.58%	12.8%	96,195	92,644
8034	2.22	2.09	1.92	2.01	-5.9%	-8.1%	4.7%	0.06	19.83%	12.8%	184,107	207,880
2503	1.37	1.43	1.31	1.21	4.4%	-8.4%	-7.6%	0.07	21.78%	12.8%	16,699	18,445
2014	3.98	4.50	4.52	4.62	13.1%	0.4%	2.2%	0.07	16.08%	12.6%	698,213	740,966
2735	3.92	3.72	3.48	3.69	-5.1%	-6.5%	6.0%	0.05	18.63%	12.5%	42,339	46,555
7515	0.95	1.03	0.99	0.95	8.4%	-3.9%	-4.0%	0.04	17.18%	12.5%	332,705	357,489
7313	3.02	3.28	3.38	3.25	8.6%	3.0%	-3.8%	0.05	16.23%	12.5%	2,671	37
8227	3.27	2.93	2.85	2.90	-10.4%	-2.7%	1.8%	0.06	15.40%	12.2%	1,122,259	1,170,064
7335	2.00	2.15	2.05	2.19	7.5%	-4.7%	6.8%	0.04	20.18%	12.2%	0	14
7425	2.71	2.51	2.02	1.82	-7.4%	-19.5%	-9.9%	0.18	41.05%	12.1%	253,715	263,934
8013	0.34	0.32	0.32	0.34	-5.9%	0.0%	6.3%	0.03	12.50%	12.1%	1,397,188	1,338,764
3119	1.63	1.48	1.37	1.41	-9.2%	-7.4%	2.9%	0.08	20.74%	12.1%	47	735
3643	2.20	2.18	2.41	2.68	-0.9%	10.6%	11.2%	0.10	24.05%	12.1%	1,329,683	1,935,098
0005	3.31	2.98	2.84	2.90	-10.0%	-4.7%	2.1%	0.07	17.57%	12.1%	181,264	175,222
0035	1.77	1.88	2.07	2.03	6.2%	10.1%	-1.9%	0.07	19.21%	12.0%	195,375	181,933

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	2018	2019	2020	2021	2019	2020	2021				2017	2018
6836	2.99	3.19	3.02	3.09	6.7%	-5.3%	2.3%	0.03	14.98%	12.0%	129,200	162,068
3821	5.16	4.67	4.46	4.57	-9.5%	-4.5%	2.5%	0.07	17.24%	12.0%	218,433	258,621
2835	2.69	2.47	2.22	2.26	-8.2%	-10.1%	1.8%	0.09	21.27%	11.9%	12,044	18,458
7133	2.13	2.22	2.26	2.57	4.2%	1.8%	13.7%	0.08	20.66%	11.9%	20,250	17,617
9093	1.47	1.26	1.23	1.16	-14.3%	-2.4%	-5.7%	0.10	23.67%	11.9%	230,029	232,463
2710	15.12	13.52	12.46	12.62	-10.6%	-7.8%	1.3%	0.09	20.78%	11.9%	135,590	129,721
2095	2.85	2.87	3.23	3.42	0.7%	12.5%	5.9%	0.09	20.00%	11.8%	1,663,499	1,714,751
9019	1.28	1.53	1.80	1.94	19.5%	17.6%	7.8%	0.18	51.56%	11.8%	2,883	2,998
8393	1.31	1.22	1.24	1.30	-6.9%	1.6%	4.8%	0.03	13.88%	11.7%	1,760,453	1,983,339
8045	0.47	0.50	0.54	0.52	6.4%	8.0%	-3.7%	0.06	19.15%	11.7%	4,541,227	4,434,065
2417	1.39	1.29	1.34	1.40	-7.2%	3.9%	4.5%	0.04	16.33%	11.7%	18,677	21,915
3865	1.70	1.85	2.05	2.47	8.8%	10.8%	20.5%	0.17	45.29%	11.7%	37,740	49,865
3270	4.18	3.67	3.65	3.62	-12.2%	-0.5%	-0.8%	0.07	13.74%	11.7%	135,829	154,153
1463	10.84	9.29	9.01	8.77	-14.3%	-3.0%	-2.7%	0.10	20.88%	11.6%	148,785	133,566
7421	0.53	0.51	0.55	0.58	-3.8%	7.8%	5.5%	0.06	18.02%	11.6%	311,890	345,832
5348	4.59	3.88	3.73	3.50	-15.5%	-3.9%	-6.2%	0.12	27.33%	11.6%	607,208	676,263
4133	1.70	1.85	1.80	1.96	8.8%	-2.7%	8.9%	0.06	21.70%	11.6%	5,379	5,500
5951	0.34	0.34	0.35	0.39	0.0%	2.9%	11.4%	0.07	14.71%	11.4%	94,838	38,201
7720	2.58	2.47	2.53	2.71	-4.3%	2.4%	7.1%	0.04	14.39%	11.4%	3,432,603	3,694,716
9410	3.00	2.75	2.63	2.71	-8.3%	-4.4%	3.0%	0.06	16.50%	11.4%	212,555	210,689
8861	1.18	1.16	1.14	1.25	-1.7%	-1.7%	9.6%	0.04	13.43%	11.4%	5,358,532	5,866,339
2302	1.82	1.72	1.62	1.71	-5.5%	-5.8%	5.6%	0.05	17.83%	11.4%	0	45
2960	6.56	5.54	5.19	4.97	-15.5%	-6.3%	-4.2%	0.13	28.06%	11.3%	32,383	25,698
9084	1.30	1.20	1.12	1.16	-7.7%	-6.7%	3.6%	0.06	18.97%	11.3%	759,618	848,646
9620	1.10	1.02	1.01	1.05	-7.3%	-1.0%	4.0%	0.04	12.61%	11.2%	549,067	527,209
8263	4.65	4.58	4.33	4.58	-1.5%	-5.5%	5.8%	0.03	13.23%	11.2%	48,854	31,958
6826	4.15	4.34	4.21	3.93	4.6%	-3.0%	-6.7%	0.04	14.87%	11.2%	57	0
3179	2.21	2.04	2.01	2.08	-7.7%	-1.5%	3.5%	0.04	13.08%	11.2%	1,643,733	1,922,409
3110	5.33	4.71	4.21	4.19	-11.6%	-10.6%	-0.5%	0.12	24.07%	11.2%	46,915	46,634
4038	4.97	4.26	3.83	3.71	-14.3%	-10.1%	-3.1%	0.14	29.76%	11.2%	9,396	12,410
2731	3.51	3.49	3.68	3.47	-0.6%	5.4%	-5.7%	0.03	12.10%	11.2%	394,027	409,352
2797	3.69	4.35	4.75	5.07	17.9%	9.2%	6.7%	0.13	37.40%	11.1%	20,129	26,107
9058	1.51	1.41	1.33	1.39	-6.6%	-5.7%	4.5%	0.05	17.75%	11.1%	1,016,126	1,040,888
8232	5.39	4.90	5.00	5.00	-9.1%	2.0%	0.0%	0.04	11.32%	11.1%	2,831,565	2,975,514
4568	4.63	4.41	3.71	3.30	-4.8%	-15.9%	-11.1%	0.15	34.79%	11.1%	7,605	9,502
8292	3.61	3.32	3.42	3.52	-8.0%	3.0%	2.9%	0.04	14.54%	11.0%	1,465,865	1,596,860
7309	10.88	10.95	10.26	9.20	0.6%	-6.3%	-10.3%	0.08	18.04%	11.0%	13,024	14,170
4034	6.48	6.77	6.33	6.28	4.5%	-6.5%	-0.8%	0.03	12.14%	11.0%	382,878	398,026
2836	1.97	2.08	2.16	2.48	5.6%	3.8%	14.8%	0.10	25.89%	11.0%	4,598	6,959
4000	4.91	4.89	4.50	3.99	-0.4%	-8.0%	-11.3%	0.09	20.70%	10.9%	144,124	173,835
3385	0.84	0.81	0.82	0.88	-3.6%	1.2%	7.3%	0.04	12.52%	10.9%	12,589	4,802
8304	3.50	3.57	4.03	4.26	2.0%	12.9%	5.7%	0.10	21.71%	10.9%	283,147	267,651
2702	20.10	17.87	15.86	15.80	-11.1%	-11.2%	-0.4%	0.12	24.06%	10.9%	21,077	15,179
3647	2.48	2.49	2.49	2.76	0.4%	0.0%	10.8%	0.05	11.29%	10.8%	1,110,849	1,135,140
7232	5.85	6.66	6.86	7.53	13.8%	3.0%	9.8%	0.10	28.72%	10.8%	287,516	308,032
8039	1.11	1.07	1.11	1.19	-3.6%	3.7%	7.2%	0.04	15.22%	10.8%	1,152,381	1,056,295
4511	0.36	0.39	0.41	0.40	8.3%	5.1%	-2.4%	0.06	16.67%	10.8%	3,512,990	3,168,542
4741	2.29	2.14	2.22	2.31	-6.6%	3.7%	4.1%	0.03	15.01%	10.6%	123,956	80,853
4114	3.68	3.29	3.11	3.11	-10.6%	-5.5%	0.0%	0.08	16.65%	10.6%	306,076	313,206
4484	2.43	2.35	2.47	2.65	-3.3%	5.1%	7.3%	0.05	16.48%	10.6%	4,004,186	4,585,157
9519	3.21	3.30	3.15	3.34	2.8%	-4.5%	6.0%	0.03	13.96%	10.6%	464,515	474,050
3365	3.92	3.47	3.31	3.28	-11.5%	-4.6%	-0.9%	0.08	17.68%	10.6%	225,721	296,511
2131	2.33	2.21	2.22	2.34	-5.2%	0.5%	5.4%	0.03	11.34%	10.6%	86,271	86,494
1016	10.54	11.22	12.52	14.64	6.5%	11.6%	16.9%	0.15	38.90%	10.5%	466	31
3004	2.24	1.93	1.77	1.71	-13.8%	-8.3%	-3.4%	0.12	27.46%	10.4%	122	25
3634	1.59	1.65	1.54	1.50	3.8%	-6.7%	-2.6%	0.04	13.57%	10.4%	410,059	487,492
4923	0.99	0.93	0.97	0.99	-6.1%	4.3%	2.1%	0.03	12.90%	10.4%	24,030	29,481
3241	3.56	3.24	2.74	2.60	-9.0%	-15.4%	-5.1%	0.15	32.24%	10.3%	257,941	300,108
8370	3.74	3.43	3.45	3.52	-8.3%	0.6%	2.0%	0.04	11.13%	10.3%	494,192	503,368

NCCI Missouri Loss Cost Filing Effective January 1, 2021
Analysis of the Absolute Loss Cost Change from Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by Swing

Class Code	Loss Cost				Percent Change			Loss Cost	Absolute	Swing Max - Min	Payroll (100's)	
	2018	2019	2020	2021	2019	2020	2021	Coef. Var	Change	Change	2017	2018
3851	4.35	3.40	2.69	2.38	-21.8%	-20.9%	-11.5%	0.27	64.25%	10.3%	457,125	248,517
8391	2.11	1.97	1.94	2.01	-6.6%	-1.5%	3.6%	0.04	12.17%	10.2%	7,833,459	8,388,318
4459	2.42	2.29	2.40	2.39	-5.4%	4.8%	-0.4%	0.02	10.89%	10.2%	793,725	1,103,493
9060	1.14	1.11	1.06	1.12	-2.6%	-4.5%	5.7%	0.03	13.33%	10.2%	1,341,056	1,420,876
3220	2.42	2.22	2.15	2.19	-8.3%	-3.2%	1.9%	0.05	13.76%	10.1%	290,975	283,325
8709	4.16	4.36	4.35	4.12	4.8%	-0.2%	-5.3%	0.03	10.60%	10.1%	753	736
3581	1.22	1.16	1.22	1.27	-4.9%	5.2%	4.1%	0.04	14.87%	10.1%	85,685	67,303
4021	7.53	6.46	6.19	5.40	-14.2%	-4.2%	-12.8%	0.14	34.17%	10.0%	4,087	4,296
3145	2.48	2.31	2.26	2.33	-6.9%	-2.2%	3.1%	0.04	12.55%	10.0%	106,383	120,429
6834	3.59	3.40	3.09	2.62	-5.3%	-9.1%	-15.2%	0.13	32.37%	9.9%	377,822	913,322
3064	3.32	3.16	3.32	3.45	-4.8%	5.1%	3.9%	0.04	14.44%	9.9%	131,653	147,299
2790	1.58	1.62	1.63	1.80	2.5%	0.6%	10.4%	0.06	13.92%	9.8%	34,746	34,714
8001	1.77	1.74	1.88	1.95	-1.7%	8.0%	3.7%	0.05	13.97%	9.7%	384,731	398,020
8288	7.60	6.94	6.89	6.96	-8.7%	-0.7%	1.0%	0.05	10.58%	9.7%	159,929	145,159
3373	5.22	4.62	4.45	4.37	-11.5%	-3.7%	-1.8%	0.08	17.68%	9.7%	66,663	75,282
7405	1.21	1.26	1.19	1.22	4.1%	-5.6%	2.5%	0.02	12.69%	9.7%	832,298	891,314
9012	1.03	0.85	0.77	0.71	-17.5%	-9.4%	-7.8%	0.17	38.55%	9.7%	4,769,208	4,699,112
1005	3.93	4.68	5.21	5.70	19.1%	11.3%	9.4%	0.16	45.04%	9.7%	14,894	11,957
5479	7.13	6.44	6.14	6.14	-9.7%	-4.7%	0.0%	0.07	14.79%	9.7%	154,867	168,359
8235	3.23	3.54	3.54	3.58	9.6%	0.0%	1.1%	0.05	10.84%	9.6%	127,854	127,599
1654	3.71	3.77	3.47	3.45	1.6%	-8.0%	-0.6%	0.05	10.34%	9.6%	30,265	29,811
7317	7.96	8.38	8.02	7.99	5.3%	-4.3%	-0.4%	0.02	10.21%	9.6%	13,103	10,200
3648	1.48	1.43	1.46	1.55	-3.4%	2.1%	6.2%	0.03	12.05%	9.5%	88,748	94,392
1710	3.10	3.06	3.03	3.28	-1.3%	-1.0%	8.3%	0.04	10.72%	9.5%	25,469	29,825
4273	2.48	2.32	2.27	2.34	-6.5%	-2.2%	3.1%	0.04	12.10%	9.5%	644,283	644,740
9182	1.71	1.63	1.67	1.75	-4.7%	2.5%	4.8%	0.03	12.38%	9.5%	450,631	526,654
8831	1.27	1.15	1.14	1.14	-9.4%	-0.9%	0.0%	0.05	10.40%	9.4%	2,526,353	2,668,226
9554	9.01	8.04	7.50	7.40	-10.8%	-6.7%	-1.3%	0.09	19.78%	9.4%	173,440	186,348
0050	4.84	4.46	4.48	4.55	-7.9%	0.4%	1.6%	0.04	10.03%	9.4%	132,497	157,934
5221	3.95	3.79	3.94	4.15	-4.1%	4.0%	5.3%	0.04	13.93%	9.4%	2,685,246	2,795,021
0908	115.00	121.00	116.00	117.00	5.2%	-4.1%	0.9%	0.02	10.51%	9.3%	0	376
7580	2.07	2.17	2.23	2.50	4.8%	2.8%	12.1%	0.08	20.77%	9.3%	292,739	310,382
1322	6.49	6.25	6.10	6.44	-3.7%	-2.4%	5.6%	0.03	12.11%	9.3%	0	25
7538	5.39	5.51	5.13	5.10	2.2%	-6.9%	-0.6%	0.04	9.92%	9.1%	759,145	781,649
7402	0.12	0.11	0.10	0.10	-8.3%	-9.1%	0.0%	0.09	18.18%	9.1%	8,326	8,723
5040	14.34	11.95	11.04	9.71	-16.7%	-7.6%	-12.0%	0.17	40.68%	9.1%	110,190	130,019
3826	0.97	1.02	1.00	1.07	5.2%	-2.0%	7.0%	0.04	14.72%	9.0%	138,465	123,855
8008	0.91	0.86	0.88	0.91	-5.5%	2.3%	3.4%	0.03	11.63%	8.9%	3,667,061	3,637,119
0170	2.25	2.05	1.99	1.99	-8.9%	-2.9%	0.0%	0.06	12.08%	8.9%	27	31
6229	4.07	4.03	3.91	4.14	-1.0%	-3.0%	5.9%	0.02	10.11%	8.9%	99,095	96,852
6213	1.46	1.28	1.15	1.11	-12.3%	-10.2%	-3.5%	0.13	28.04%	8.9%	866	2,937
3336	2.92	2.78	2.63	2.72	-4.8%	-5.4%	3.4%	0.04	14.23%	8.8%	75,594	87,932
4703	2.20	1.96	1.91	1.87	-10.9%	-2.6%	-2.1%	0.07	16.12%	8.8%	185,415	189,722
9061	1.66	1.45	1.30	1.25	-12.7%	-10.3%	-3.8%	0.13	29.09%	8.8%	312,823	322,767
4110	1.47	1.28	1.21	1.16	-12.9%	-5.5%	-4.1%	0.11	24.02%	8.8%	13,047	47,566
4307	1.58	1.70	1.68	1.79	7.6%	-1.2%	6.5%	0.05	15.99%	8.8%	101,471	83,489
3824	4.84	4.59	4.04	3.91	-5.2%	-12.0%	-3.2%	0.10	21.56%	8.8%	778,106	921,884
3548	1.52	1.44	1.43	1.48	-5.3%	-0.7%	3.5%	0.03	9.70%	8.8%	25,666	29,206
6237	1.42	1.26	1.19	1.16	-11.3%	-5.6%	-2.5%	0.09	20.41%	8.7%	4,017	3,484
9083	0.94	0.92	0.91	0.97	-2.1%	-1.1%	6.6%	0.03	10.04%	8.7%	11,249,827	11,831,285
8820	0.15	0.14	0.13	0.11	-6.7%	-7.1%	-15.4%	0.13	31.87%	8.7%	12,575,621	12,553,533
4018	4.91	4.87	4.95	5.34	-0.8%	1.6%	7.9%	0.04	10.54%	8.7%	144,069	156,589
9044	0.94	0.88	0.88	0.90	-6.4%	0.0%	2.3%	0.03	8.80%	8.7%	2,539,398	1,641,392
3300	3.84	3.92	3.93	4.28	2.1%	0.3%	8.9%	0.05	11.46%	8.7%	350,380	346,189
4410	2.82	2.95	2.88	3.06	4.6%	-2.4%	6.3%	0.04	13.79%	8.6%	1,310,351	1,404,240
4902	2.91	2.60	2.39	2.34	-10.7%	-8.1%	-2.1%	0.10	22.09%	8.6%	123,640	125,907
7231	7.47	7.46	6.91	6.99	-0.1%	-7.4%	1.2%	0.04	8.76%	8.5%	428,051	518,188
6825	2.91	2.95	2.74	2.58	1.4%	-7.1%	-5.8%	0.06	14.93%	8.5%	311,921	155,418
5213	6.22	6.06	5.39	4.86	-2.6%	-11.1%	-9.8%	0.11	25.11%	8.5%	1,389,996	1,493,212

NCCI Missouri Loss Cost Filing Effective January 1, 2021
Analysis of the Absolute Loss Cost Change from Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by Swing

| Class Code | Loss Cost | | | | Percent Change | | | Loss Cost | Absolute | Swing Max - Min | Payroll (100's) | |
	2018	2019	2020	2021	2019	2020	2021	Coef. Var	Change	Change	2017	2018
5445	4.62	4.42	4.38	3.97	-4.3%	-0.9%	-9.4%	0.06	15.13%	8.5%	1,805,940	1,792,945
6319	4.12	3.63	3.42	3.30	-11.9%	-5.8%	-3.5%	0.10	22.52%	8.4%	597,604	555,867
3180	2.69	2.78	2.64	2.65	3.3%	-5.0%	0.4%	0.02	8.96%	8.4%	171,174	222,390
8032	1.84	1.74	1.70	1.75	-5.4%	-2.3%	2.9%	0.03	11.03%	8.4%	277,539	344,297
8810	0.13	0.12	0.11	0.11	-7.7%	-8.3%	0.0%	0.08	16.67%	8.3%	255,211,347	266,583,997
8869	0.97	0.89	0.89	0.89	-8.2%	0.0%	0.0%	0.04	8.25%	8.2%	3,318,827	3,463,127
6214	1.91	1.68	1.58	1.52	-12.0%	-6.0%	-3.8%	0.10	23.22%	8.2%	0	25
8381	2.33	2.31	2.10	2.06	-0.9%	-9.1%	-1.9%	0.06	12.12%	8.2%	73,001	78,251
1430	5.21	5.15	5.40	5.22	-1.2%	4.9%	-3.3%	0.02	9.60%	8.2%	177,994	186,536
3808	3.76	3.55	3.50	3.59	-5.6%	-1.4%	2.6%	0.03	9.83%	8.2%	303,619	326,249
7605	1.85	1.70	1.66	1.66	-8.1%	-2.4%	0.0%	0.05	10.65%	8.1%	935,580	953,794
2380	2.26	2.10	1.98	2.00	-7.1%	-5.7%	1.0%	0.06	14.34%	8.1%	9,834	648
5474	5.48	5.06	4.73	4.75	-7.7%	-6.5%	0.4%	0.07	15.17%	8.1%	1,933,498	1,918,313
7090	5.83	5.95	5.67	5.33	2.1%	-4.7%	-6.0%	0.05	13.27%	8.1%	645	1,035
7855	3.28	3.09	3.10	3.17	-5.8%	0.3%	2.3%	0.03	8.53%	8.1%	236,200	270,051
8047	1.16	0.97	0.84	0.77	-16.4%	-13.4%	-8.3%	0.18	42.97%	8.0%	521,274	446,868
5506	4.82	4.56	4.68	4.62	-5.4%	2.6%	-1.3%	0.02	9.55%	8.0%	1,835,083	1,910,702
8832	0.25	0.25	0.23	0.23	0.0%	-8.0%	0.0%	0.05	8.00%	8.0%	36,664,231	39,494,429
7230	6.05	6.20	6.01	6.30	2.5%	-3.1%	4.8%	0.02	10.72%	7.9%	281,679	366,248
5188	2.51	2.50	2.64	2.58	-0.4%	5.6%	-2.3%	0.03	8.43%	7.9%	562,891	548,196
4111	1.83	1.75	1.73	1.79	-4.4%	-1.1%	3.5%	0.02	9.23%	7.8%	88,324	7,466
6233	1.76	1.79	1.89	2.07	1.7%	5.6%	9.5%	0.07	17.61%	7.8%	123,598	172,497
8719	2.11	1.91	1.76	1.73	-9.5%	-7.9%	-1.7%	0.09	20.09%	7.8%	1,929	1,353
8058	2.25	2.23	2.33	2.49	-0.9%	4.5%	6.9%	0.05	12.65%	7.8%	1,902,765	1,974,099
8800	1.27	1.30	1.23	1.21	2.4%	-5.4%	-1.6%	0.03	9.63%	7.7%	349,466	414,247
5491	1.58	1.50	1.54	1.49	-5.1%	2.7%	-3.2%	0.03	11.37%	7.7%	28,258	23,957
9178	10.97	10.78	10.14	10.32	-1.7%	-5.9%	1.8%	0.04	9.68%	7.7%	114,952	111,418
7024	2.01	2.21	2.60	2.93	10.0%	17.6%	12.7%	0.17	45.77%	7.7%	1,383	3,805
9501	2.90	2.83	2.84	2.99	-2.4%	0.4%	5.3%	0.03	8.20%	7.7%	215,197	238,259
4206	2.38	2.35	2.34	2.49	-1.3%	-0.4%	6.4%	0.03	8.21%	7.7%	9,045	11,299
4352	1.72	1.62	1.65	1.66	-5.8%	1.9%	0.6%	0.03	8.43%	7.7%	27,928	25,588
6872	10.83	10.59	10.12	9.12	-2.2%	-4.4%	-9.9%	0.07	17.30%	7.7%	2,960	845
1701	3.38	3.10	3.08	2.94	-8.3%	-0.6%	-4.5%	0.06	13.94%	7.6%	772,916	856,510
5473	7.67	7.13	6.81	6.85	-7.0%	-4.5%	0.6%	0.06	12.50%	7.6%	103,032	101,666
8726	1.86	1.88	1.78	1.82	1.1%	-5.3%	2.2%	0.02	8.84%	7.6%	2,101	3,814
5472	5.25	5.09	4.55	4.36	-3.0%	-10.6%	-4.2%	0.09	18.74%	7.6%	78,001	84,931
0016	6.77	5.75	5.19	4.80	-15.1%	-9.7%	-7.5%	0.15	35.76%	7.6%	22,316	19,768
4683	4.01	3.73	3.58	3.60	-7.0%	-4.0%	0.6%	0.05	11.91%	7.5%	6,143	54,677
5191	0.67	0.65	0.66	0.69	-3.0%	1.5%	4.5%	0.03	9.32%	7.5%	3,463,112	3,400,487
7382	4.42	4.32	4.07	4.14	-2.3%	-5.8%	1.7%	0.04	10.04%	7.5%	1,327,485	1,371,359
4250	1.77	1.68	1.68	1.72	-5.1%	0.0%	2.4%	0.02	7.59%	7.5%	109,533	88,457
8293	8.49	7.75	7.18	7.09	-8.7%	-7.4%	-1.3%	0.08	18.17%	7.5%	881,264	826,655
8291	3.08	3.01	2.89	2.99	-2.3%	-4.0%	3.5%	0.03	10.03%	7.4%	265,911	291,865
8021	3.03	2.83	2.67	2.69	-6.6%	-5.7%	0.7%	0.06	13.47%	7.3%	394,553	403,684
8002	1.50	1.58	1.62	1.78	5.3%	2.5%	9.9%	0.07	18.67%	7.3%	683,403	614,729
2362	1.56	1.65	1.73	1.94	5.8%	4.8%	12.1%	0.09	24.36%	7.3%	2,806	1,724
5610	5.04	4.73	4.25	3.68	-6.2%	-10.1%	-13.4%	0.13	32.60%	7.3%	108,090	127,606
8387	3.10	2.79	2.55	2.48	-10.0%	-8.6%	-2.7%	0.10	22.74%	7.3%	1,982,326	2,070,582
3315	3.56	3.22	3.04	2.97	-9.6%	-5.6%	-2.3%	0.08	18.34%	7.2%	13,066	40,313
7360	3.94	3.73	3.66	3.73	-5.3%	-1.9%	1.9%	0.03	9.36%	7.2%	249,567	336,705
4351	0.78	0.78	0.83	0.89	0.0%	6.4%	7.2%	0.06	14.10%	7.2%	37,094	22,750
2651	1.97	2.13	2.21	2.23	8.1%	3.8%	0.9%	0.06	13.20%	7.2%	85,208	75,814
3632	3.07	2.86	2.80	2.81	-6.8%	-2.1%	0.4%	0.04	9.47%	7.2%	3,679,662	4,028,332
3827	2.55	2.41	2.35	2.39	-5.5%	-2.5%	1.7%	0.04	9.96%	7.2%	4,495	1,055
8204	3.27	3.20	3.36	3.36	-2.1%	5.0%	0.0%	0.02	7.25%	7.1%	40,277	40,664
8392	2.36	2.17	2.12	2.10	-8.1%	-2.3%	-0.9%	0.05	11.58%	7.1%	323,614	346,897
8745	4.65	4.14	3.49	3.19	-11.0%	-15.7%	-8.6%	0.17	39.43%	7.1%	11,780	14,177
3041	4.92	4.44	4.07	3.96	-9.8%	-8.3%	-2.7%	0.10	22.12%	7.1%	15,938	17,115
4740	0.83	0.89	0.98	1.01	7.2%	10.1%	3.1%	0.09	21.69%	7.1%	57,329	84,049

NCCI Missouri Loss Cost Filing Effective January 1, 2021
Analysis of the Absolute Loss Cost Change from Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by Swing

| Class Code | Loss Cost | | | | Percent Change | | | Loss Cost | Absolute | Swing Max - Min | Payroll (100's) | |
	2018	2019	2020	2021	2019	2020	2021	Coef. Var	Change	Change	2017	2018
3881	4.15	3.77	3.69	3.57	-9.2%	-2.1%	-3.3%	0.07	15.10%	7.0%	183,066	197,796
9220	3.62	3.62	3.45	3.53	0.0%	-4.7%	2.3%	0.02	7.12%	7.0%	169,496	179,998
6216	4.39	4.20	3.96	4.01	-4.3%	-5.7%	1.3%	0.05	11.68%	7.0%	11,090	10,248
8856	0.23	0.26	0.30	0.36	13.0%	15.4%	20.0%	0.20	56.52%	7.0%	388,287	396,928
8233	1.99	2.05	1.97	1.96	3.0%	-3.9%	-0.5%	0.02	7.58%	6.9%	41,133	30,102
3111	2.33	2.32	2.15	2.08	-0.4%	-7.3%	-3.3%	0.06	11.30%	6.9%	1,118	4,112
5020	4.48	4.51	4.23	4.07	0.7%	-6.2%	-3.8%	0.05	10.96%	6.9%	97,758	86,170
8018	2.15	2.12	2.19	2.31	-1.4%	3.3%	5.5%	0.04	10.48%	6.9%	5,246,371	5,668,336
4101	2.32	2.35	2.22	2.21	1.3%	-5.5%	-0.5%	0.03	7.38%	6.8%	69,377	98,258
5437	3.77	3.91	4.04	4.45	3.7%	3.3%	10.1%	0.07	18.04%	6.8%	1,306,098	1,329,660
3113	1.85	1.85	1.76	1.64	0.0%	-4.9%	-6.8%	0.06	12.01%	6.8%	1,426,505	1,438,343
2802	5.28	4.92	4.92	4.88	-6.8%	0.0%	-0.8%	0.04	7.69%	6.8%	302,048	322,298
5645	9.27	8.92	9.19	8.95	-3.8%	3.0%	-2.6%	0.02	9.71%	6.8%	2,236,385	2,302,360
2039	2.41	2.49	2.50	2.68	3.3%	0.4%	7.2%	0.05	11.20%	6.8%	433,000	427,493
2143	1.82	2.05	2.17	2.31	12.6%	5.9%	6.5%	0.10	26.92%	6.8%	114,218	126,190
2002	2.53	2.80	2.91	3.08	10.7%	3.9%	5.8%	0.08	21.74%	6.7%	286,338	224,260
2003	3.64	3.63	3.52	3.65	-0.3%	-3.0%	3.7%	0.02	7.13%	6.7%	540,593	738,283
5462	5.39	5.37	4.99	4.67	-0.4%	-7.1%	-6.4%	0.07	14.37%	6.7%	372,133	338,706
4239	1.80	1.79	1.90	2.01	-0.6%	6.1%	5.8%	0.05	12.91%	6.7%	85,368	90,397
8606	1.92	1.78	1.69	1.68	-7.3%	-5.1%	-0.6%	0.06	13.38%	6.7%	1,437	2,039
5183	3.02	2.75	2.65	2.59	-8.9%	-3.6%	-2.3%	0.07	15.46%	6.7%	4,282,023	4,403,481
8855	0.16	0.15	0.14	0.14	-6.3%	-6.7%	0.0%	0.06	13.33%	6.7%	25,075,510	28,781,844
8723	0.15	0.14	0.14	0.14	-6.7%	0.0%	0.0%	0.04	6.67%	6.7%	19,563,323	20,034,704
3169	1.98	2.08	2.22	2.48	5.1%	6.7%	11.7%	0.10	25.25%	6.7%	58,056	74,896
3122	2.02	1.96	2.03	2.08	-3.0%	3.6%	2.5%	0.02	9.27%	6.5%	819	740
6252	3.45	3.08	2.95	2.79	-10.7%	-4.2%	-5.4%	0.09	21.66%	6.5%	28,828	51,057
3081	3.53	3.85	3.95	4.27	9.1%	2.6%	8.1%	0.08	20.96%	6.5%	104,760	102,361
2883	2.90	2.96	2.83	2.74	2.1%	-4.4%	-3.2%	0.03	9.94%	6.5%	1,273,831	1,362,081
6325	3.24	3.06	2.83	2.80	-5.6%	-7.5%	-1.1%	0.07	14.69%	6.5%	544,279	601,593
3726	3.40	3.32	3.18	3.25	-2.4%	-4.2%	2.2%	0.03	9.02%	6.4%	159,054	226,003
2157	6.56	6.25	5.97	5.32	-4.7%	-4.5%	-10.9%	0.09	21.33%	6.4%	678,966	709,316
4771	2.36	2.51	2.52	2.52	6.4%	0.4%	0.0%	0.03	6.78%	6.4%	334,620	334,143
4251	3.37	3.36	3.28	3.41	-0.3%	-2.4%	4.0%	0.02	6.75%	6.3%	115,984	148,058
8264	5.05	4.63	4.52	4.43	-8.3%	-2.4%	-2.0%	0.06	13.10%	6.3%	215,577	235,491
7380	4.35	4.27	4.26	4.45	-1.8%	-0.2%	4.5%	0.02	6.63%	6.3%	4,660,879	5,031,599
2660	2.74	2.70	2.70	2.83	-1.5%	0.0%	4.8%	0.02	6.34%	6.3%	192,307	265,003
5160	2.38	2.16	2.02	1.96	-9.2%	-6.5%	-3.0%	0.09	19.78%	6.3%	424,211	425,156
7422	2.56	2.12	1.73	1.52	-17.2%	-18.4%	-12.1%	0.23	55.59%	6.3%	75,072	98,765
2220	1.91	1.90	1.92	2.03	-0.5%	1.1%	5.7%	0.03	7.40%	6.3%	11,397	13,311
8835	1.95	1.90	1.76	1.74	-2.6%	-7.4%	-1.1%	0.06	11.37%	6.2%	5,714,031	5,932,084
1699	2.93	2.80	2.56	2.50	-4.4%	-8.6%	-2.3%	0.07	16.05%	6.2%	74,357	192,836
3507	2.40	2.41	2.57	2.59	0.4%	6.6%	0.8%	0.04	7.92%	6.2%	809,408	890,324
2112	3.49	3.64	3.57	3.57	4.3%	-1.9%	0.0%	0.02	6.30%	6.2%	2,865	3,015
9402	3.72	3.81	3.87	4.17	2.4%	1.6%	7.8%	0.05	12.10%	6.2%	438,231	525,603
3040	5.62	5.18	4.84	4.76	-7.8%	-6.6%	-1.7%	0.08	16.81%	6.2%	270,429	290,156
5606	1.16	1.15	1.10	1.12	-0.9%	-4.3%	1.8%	0.02	7.16%	6.2%	5,198,512	5,466,731
2570	4.02	3.87	3.77	3.86	-3.7%	-2.6%	2.4%	0.03	8.95%	6.1%	18,355	29,367
4665	8.99	8.73	9.01	9.02	-2.9%	3.2%	0.1%	0.02	6.31%	6.1%	16,625	11,430
0037	3.30	3.25	3.02	2.99	-1.5%	-7.1%	-1.0%	0.05	9.78%	6.1%	467,083	516,031
8350	5.75	5.36	5.32	5.23	-6.8%	-0.7%	-1.7%	0.04	9.40%	6.0%	717,830	768,075
3685	1.37	1.22	1.16	1.09	-10.9%	-4.9%	-6.0%	0.10	23.43%	6.0%	1,395,129	1,357,602
7370	4.78	4.50	4.12	4.02	-5.9%	-8.4%	-2.4%	0.08	17.58%	6.0%	141,593	150,342
2623	7.33	6.61	6.02	5.79	-9.8%	-8.9%	-3.8%	0.11	24.20%	6.0%	28,949	28,347
4361	0.86	0.76	0.71	0.67	-11.6%	-6.6%	-5.6%	0.11	25.67%	6.0%	757,031	746,309
3629	1.76	1.62	1.51	1.48	-8.0%	-6.8%	-2.0%	0.08	17.58%	6.0%	888,991	933,329
8901	0.18	0.18	0.17	0.16	0.0%	-5.6%	-5.9%	0.06	11.76%	5.9%	11,414,928	10,920,541
5403	5.51	5.12	4.98	4.92	-7.1%	-2.7%	-1.2%	0.05	11.33%	5.9%	2,787,745	2,937,941
1803	7.43	7.08	7.16	7.24	-4.7%	1.1%	1.1%	0.02	7.08%	5.8%	160,263	175,706
2589	1.91	1.91	1.88	1.96	0.0%	-1.6%	4.3%	0.02	5.89%	5.8%	214,680	197,809

NCCI Missouri Loss Cost Filing Effective January 1, 2021
Analysis of the Absolute Loss Cost Change from Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by Swing

Class Code	Loss Cost				Percent Change			Loss Cost Coef. Var	Absolute Change	Swing Max - Min Change	Payroll (100's)	
	2018	2019	2020	2021	2019	2020	2021				2017	2018
3830	0.68	0.71	0.70	0.70	4.4%	-1.4%	0.0%	0.02	5.88%	5.8%	9,096,560	9,338,774
3114	2.81	3.06	3.25	3.35	8.9%	6.2%	3.1%	0.08	19.22%	5.8%	29,702	55,022
5146	4.65	4.56	4.38	4.46	-1.9%	-3.9%	1.8%	0.03	7.89%	5.8%	359,801	386,755
7520	3.50	3.02	2.78	2.55	-13.7%	-7.9%	-8.3%	0.14	32.91%	5.8%	859,352	1,023,762
7590	2.83	2.70	2.59	2.62	-4.6%	-4.1%	1.2%	0.04	10.12%	5.8%	121,854	126,450
2688	2.99	2.71	2.42	2.30	-9.4%	-10.7%	-5.0%	0.12	27.07%	5.7%	58,736	62,642
0083	4.50	4.55	4.34	4.25	1.1%	-4.6%	-2.1%	0.03	7.97%	5.7%	791,132	856,882
0251	3.56	3.52	3.35	3.38	-1.1%	-4.8%	0.9%	0.03	6.96%	5.7%	8,454	8,788
8279	5.42	5.21	5.01	5.10	-3.9%	-3.8%	1.8%	0.03	9.80%	5.7%	61,467	45,079
9600	2.79	2.83	2.96	3.17	1.4%	4.6%	7.1%	0.06	13.62%	5.7%	2,791	7,855
3082	4.71	4.60	4.61	4.76	-2.3%	0.2%	3.3%	0.02	5.89%	5.6%	36,493	48,570
4283	1.55	1.42	1.38	1.28	-8.4%	-2.8%	-7.2%	0.08	19.52%	5.6%	239,305	221,402
3612	2.14	2.01	1.97	1.96	-6.1%	-2.0%	-0.5%	0.04	8.73%	5.6%	790,319	725,583
7600	3.14	3.11	3.04	3.14	-1.0%	-2.3%	3.3%	0.02	6.62%	5.5%	3,544,445	3,320,363
1320	1.47	1.46	1.40	1.42	-0.7%	-4.1%	1.4%	0.02	6.32%	5.5%	6,161	8,790
9015	2.56	2.68	2.66	2.73	4.7%	-0.7%	2.6%	0.03	8.24%	5.4%	3,729,910	3,923,390
3126	1.17	1.27	1.31	1.36	8.5%	3.1%	3.8%	0.06	16.24%	5.4%	26,511	35,706
9033	1.63	1.66	1.73	1.71	1.8%	4.2%	-1.2%	0.03	7.36%	5.4%	314,514	316,271
3227	2.95	3.00	2.89	2.83	1.7%	-3.7%	-2.1%	0.03	7.61%	5.4%	228,764	300,731
9170	9.54	9.68	10.34	10.85	1.5%	6.8%	4.9%	0.06	13.73%	5.4%	42,254	40,968
7395	3.72	3.73	3.92	4.14	0.3%	5.1%	5.6%	0.05	11.29%	5.3%	361	1,502
5059	28.25	25.77	24.30	23.46	-8.8%	-5.7%	-3.5%	0.08	18.96%	5.3%	45,627	58,420
6251	3.64	3.42	3.06	2.90	-6.0%	-10.5%	-5.2%	0.10	23.33%	5.3%	37,455	81,624
4583	3.78	3.95	4.08	4.43	4.5%	3.3%	8.6%	0.07	17.20%	5.3%	299,699	304,754
0917	3.97	3.67	3.39	3.31	-7.6%	-7.6%	-2.4%	0.08	18.49%	5.3%	178,221	175,754
4825	0.76	0.72	0.72	0.72	-5.3%	0.0%	0.0%	0.03	5.26%	5.3%	2,061,898	2,183,200
3076	2.82	2.86	3.00	2.99	1.4%	4.9%	-0.3%	0.03	6.74%	5.2%	5,081,301	5,007,821
3022	3.85	3.54	3.44	3.28	-8.1%	-2.8%	-4.7%	0.07	16.27%	5.2%	119,430	136,717
2070	4.31	4.03	3.91	3.86	-6.5%	-3.0%	-1.3%	0.05	11.07%	5.2%	531,989	996,794
8033	1.56	1.52	1.51	1.55	-2.6%	-0.7%	2.6%	0.02	5.97%	5.2%	5,774,305	5,452,137
2916	4.64	4.03	3.71	3.41	-13.1%	-7.9%	-8.1%	0.13	32.01%	5.2%	4,947	1,782
2211	11.21	10.16	9.36	8.97	-9.4%	-7.9%	-4.2%	0.10	22.89%	5.2%	131	122
8500	4.81	4.83	4.60	4.61	0.4%	-4.8%	0.2%	0.03	5.43%	5.2%	83,296	88,584
6005	5.41	4.86	4.55	4.32	-10.2%	-6.4%	-5.1%	0.10	23.12%	5.1%	611	1,412
9179	17.25	16.95	17.37	17.95	-1.7%	2.5%	3.3%	0.02	7.74%	5.1%	88,002	89,250
3559	2.40	2.32	2.36	2.35	-3.3%	1.7%	-0.4%	0.01	5.56%	5.1%	57,249	56,885
4558	1.87	1.79	1.71	1.72	-4.3%	-4.5%	0.6%	0.04	9.58%	5.1%	441,207	460,416
3822	3.87	3.62	3.50	3.45	-6.5%	-3.3%	-1.4%	0.05	11.56%	5.0%	12,257	21,264
8833	1.01	1.00	1.04	1.07	-1.0%	4.0%	2.9%	0.03	8.06%	5.0%	18,604,651	19,708,990
9403	6.20	6.58	6.79	6.87	6.1%	3.2%	1.2%	0.05	10.81%	5.0%	1,342,733	1,385,486
4279	2.18	2.16	2.24	2.33	-0.9%	3.7%	4.0%	0.03	8.86%	4.9%	306,460	341,103
1624	3.71	3.33	2.90	2.46	-10.2%	-12.9%	-15.2%	0.17	43.36%	4.9%	865,153	866,759
7350	12.01	11.43	10.48	9.46	-4.8%	-8.3%	-9.7%	0.10	24.59%	4.9%	2,718	9,220
9016	2.63	2.74	2.85	2.83	4.2%	4.0%	-0.7%	0.04	9.13%	4.9%	385,208	431,316
3307	4.14	3.58	3.27	2.92	-13.5%	-8.7%	-10.7%	0.15	36.56%	4.9%	69,028	74,091
2585	3.13	3.14	3.08	2.94	0.3%	-1.9%	-4.5%	0.03	6.88%	4.9%	964,313	1,070,479
9040	3.32	3.25	3.29	3.38	-2.1%	1.2%	2.7%	0.02	6.19%	4.8%	834,652	873,196
3400	4.18	4.09	4.20	4.31	-2.2%	2.7%	2.6%	0.02	7.65%	4.8%	1,326,392	1,078,320
2065	1.94	1.89	1.75	1.70	-2.6%	-7.4%	-2.9%	0.06	13.32%	4.8%	28,401	15,712
1165	3.72	3.40	3.12	3.00	-8.6%	-8.2%	-3.8%	0.10	22.07%	4.8%	6,649	5,885
8046	2.18	2.13	2.06	2.09	-2.3%	-3.3%	1.5%	0.02	7.19%	4.7%	2,219,568	2,192,045
2130	1.74	1.72	1.68	1.72	-1.1%	-2.3%	2.4%	0.01	5.97%	4.7%	179,138	205,956
1472	2.54	2.55	2.68	2.74	0.4%	5.1%	2.2%	0.04	7.87%	4.7%	206,977	226,639
7540	2.80	2.72	2.55	2.51	-2.9%	-6.3%	-1.6%	0.05	11.00%	4.7%	8	150
2172	1.54	1.53	1.47	1.48	-0.6%	-3.9%	0.7%	0.02	5.31%	4.6%	3,984	379
6882	3.72	3.60	3.32	3.16	-3.2%	-7.8%	-4.8%	0.07	16.62%	4.6%	0	3,785
9534	4.40	4.17	4.02	3.99	-5.2%	-3.6%	-0.7%	0.05	9.83%	4.5%	151,341	169,394
0008	2.80	2.60	2.53	2.39	-7.1%	-2.7%	-5.5%	0.07	16.12%	4.5%	72,693	72,044
3642	1.32	1.28	1.21	1.12	-3.0%	-5.5%	-7.4%	0.07	16.75%	4.4%	9,557	2,059

NCCI Missouri Loss Cost Filing Effective January 1, 2021
Analysis of the Absolute Loss Cost Change from Loss Costs that are Effective from January 1, 2018 to January 1, 2021 Sorted by Swing

Class Code	Loss Cost				Percent Change			Loss Cost Coef. Var	Absolute Change	Swing Max - Min Change	Payroll (100's)	
	2018	2019	2020	2021	2019	2020	2021				2017	2018
9082	1.18	1.15	1.11	1.12	-2.5%	-3.5%	0.9%	0.03	7.07%	4.4%	15,779,625	16,479,495
2586	2.05	2.22	2.50	2.78	8.3%	12.6%	11.2%	0.13	35.61%	4.3%	58,298	60,762
1925	3.27	3.23	3.25	3.35	-1.2%	0.6%	3.1%	0.02	4.98%	4.3%	256,802	285,772
0034	2.02	2.25	2.41	2.62	11.4%	7.1%	8.7%	0.11	29.70%	4.3%	377,904	480,850
5222	7.20	6.85	6.74	6.70	-4.9%	-1.6%	-0.6%	0.03	7.18%	4.3%	234,569	261,292
4470	2.07	2.10	2.17	2.15	1.4%	3.3%	-0.9%	0.02	5.80%	4.3%	82,885	89,371
7431	0.86	0.94	0.99	1.04	9.3%	5.3%	5.1%	0.08	20.93%	4.3%	218,864	236,558
8725	1.83	1.87	1.99	2.05	2.2%	6.4%	3.0%	0.05	12.02%	4.2%	18,964	13,373
6217	4.18	3.84	3.40	3.15	-8.1%	-11.5%	-7.4%	0.13	29.39%	4.1%	2,323,776	2,377,460
4717	1.86	1.99	2.05	2.11	7.0%	3.0%	2.9%	0.05	13.44%	4.1%	80,736	79,869
8721	0.25	0.25	0.25	0.26	0.0%	0.0%	4.0%	0.02	4.00%	4.0%	252,408	254,205
0913	361.00	381.00	394.00	423.00	5.5%	3.4%	7.4%	0.07	17.17%	3.9%	0	494
7222	5.36	5.60	5.63	5.80	4.5%	0.5%	3.0%	0.03	8.21%	3.9%	1,207	7,350
3146	2.08	2.19	2.22	2.25	5.3%	1.4%	1.4%	0.03	8.17%	3.9%	445,040	444,986
5022	5.47	5.46	5.46	5.66	-0.2%	0.0%	3.7%	0.02	3.85%	3.8%	1,295,269	1,286,616
3681	0.81	0.77	0.73	0.72	-4.9%	-5.2%	-1.4%	0.05	11.90%	3.8%	2,446,154	3,200,660
2714	5.06	4.74	4.62	4.50	-6.3%	-2.5%	-2.6%	0.05	11.85%	3.8%	353	608
3372	3.59	3.41	3.13	2.99	-5.0%	-8.2%	-4.5%	0.08	18.72%	3.7%	246,152	158,036
8061	1.78	1.66	1.61	1.55	-6.7%	-3.0%	-3.7%	0.06	14.05%	3.7%	1,776,589	1,819,651
2111	2.16	2.15	2.06	1.98	-0.5%	-4.2%	-3.9%	0.04	8.73%	3.7%	298,315	363,152
4777	4.06	4.05	3.89	3.86	-0.2%	-4.0%	-0.8%	0.03	5.01%	3.7%	17,196	55,415
9516	3.51	3.07	2.63	2.35	-12.5%	-14.3%	-10.6%	0.18	42.36%	3.7%	496,687	465,572
3257	2.44	2.50	2.47	2.48	2.5%	-1.2%	0.4%	0.01	4.11%	3.7%	365,001	413,677
4692	0.78	0.81	0.82	0.86	3.8%	1.2%	4.9%	0.04	10.26%	3.6%	282,864	296,451
2881	3.20	3.12	2.93	2.78	-2.5%	-6.1%	-5.1%	0.06	14.31%	3.6%	227,858	218,987
3515	2.77	2.65	2.59	2.57	-4.3%	-2.3%	-0.8%	0.03	7.52%	3.6%	4,219	4,588
2089	3.43	3.33	3.17	3.13	-2.9%	-4.8%	-1.3%	0.04	9.22%	3.5%	1,986,321	2,186,544
5480	5.16	5.17	5.08	4.91	0.2%	-1.7%	-3.3%	0.02	5.35%	3.5%	48,066	53,295
5215	5.08	4.89	4.87	4.86	-3.7%	-0.4%	-0.2%	0.02	4.38%	3.5%	548,826	536,178
9052	1.72	1.70	1.71	1.66	-1.2%	0.6%	-2.9%	0.02	4.73%	3.5%	4,041,664	4,595,055
6504	2.27	2.31	2.29	2.25	1.8%	-0.9%	-1.7%	0.01	4.44%	3.5%	3,686,151	4,309,722
4635	3.19	3.01	2.94	2.77	-5.6%	-2.3%	-5.8%	0.06	14.35%	3.5%	326,682	348,178
4420	4.12	4.09	3.92	3.89	-0.7%	-4.2%	-0.8%	0.03	5.72%	3.4%	53	1,423
6835	2.67	2.65	2.59	2.62	-0.7%	-2.3%	1.2%	0.01	4.22%	3.4%	201	0
5705	27.20	24.22	22.38	19.95	-11.0%	-7.6%	-10.9%	0.13	32.35%	3.4%	1,295	505
3027	2.75	2.55	2.45	2.28	-7.3%	-3.9%	-6.9%	0.08	19.21%	3.4%	13,485	12,462
5478	6.18	5.57	5.05	4.41	-9.9%	-9.3%	-12.7%	0.14	35.35%	3.3%	631,459	619,735
4036	2.76	2.62	2.40	2.25	-5.1%	-8.4%	-6.3%	0.09	21.01%	3.3%	41,436	47,994
9156	1.92	2.04	2.10	2.19	6.3%	2.9%	4.3%	0.05	14.06%	3.3%	383,059	420,251
3131	1.81	1.84	1.81	1.79	1.7%	-1.6%	-1.1%	0.01	4.46%	3.3%	372	141
1164	4.64	4.59	4.39	4.25	-1.1%	-4.4%	-3.2%	0.04	8.85%	3.3%	628,282	880,843
2110	2.00	1.89	1.80	1.76	-5.5%	-4.8%	-2.2%	0.06	12.98%	3.3%	54,858	45,327
9110	2.99	2.82	2.62	2.52	-5.7%	-7.1%	-3.8%	0.08	17.50%	3.3%	805,703	904,155
2041	2.47	2.46	2.47	2.54	-0.4%	0.4%	2.8%	0.01	3.67%	3.2%	69,127	64,450
4581	1.13	1.33	1.58	1.91	17.7%	18.8%	20.9%	0.23	69.03%	3.2%	16,906	13,428
8015	0.81	0.78	0.73	0.68	-3.7%	-6.4%	-6.8%	0.08	17.91%	3.1%	381,701	375,450
5223	6.16	5.78	5.27	4.97	-6.2%	-8.8%	-5.7%	0.10	22.11%	3.1%	126,156	141,231
8006	1.62	1.61	1.58	1.60	-0.6%	-1.9%	1.3%	0.01	3.79%	3.1%	2,635,938	2,778,162
7502	3.65	3.06	2.47	2.07	-16.2%	-19.3%	-16.2%	0.25	61.00%	3.1%	137,040	84,731
4720	1.69	1.78	1.93	2.05	5.3%	8.4%	6.2%	0.09	21.30%	3.1%	1,172,580	862,040
4431	1.31	1.27	1.26	1.26	-3.1%	-0.8%	0.0%	0.02	3.86%	3.1%	21,004	14,577
6503	2.00	1.98	1.96	2.00	-1.0%	-1.0%	2.0%	0.01	4.10%	3.1%	34,776	34,731
7098	10.86	10.66	10.44	10.54	-1.8%	-2.1%	1.0%	0.02	4.94%	3.0%	0	10
4452	2.79	2.73	2.59	2.47	-2.2%	-5.1%	-4.6%	0.05	12.36%	3.0%	515,162	631,243
8017	1.41	1.38	1.31	1.28	-2.1%	-5.1%	-2.3%	0.04	9.77%	2.9%	8,750,505	9,161,584
3018	5.93	5.08	4.37	3.87	-14.3%	-14.0%	-11.4%	0.19	45.22%	2.9%	49,612	45,812
8107	2.46	2.44	2.35	2.32	-0.8%	-3.7%	-1.3%	0.03	5.87%	2.9%	1,818,342	1,999,771
4693	0.68	0.75	0.82	0.92	10.3%	9.3%	12.2%	0.13	35.29%	2.9%	169,544	146,235
4062	2.44	2.52	2.63	2.67	3.3%	4.4%	1.5%	0.04	9.43%	2.8%	15,157	19,358

NCCI Missouri Loss Cost Filing Effective January 1, 2021
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Class Code	Loss Cost				Percent Change			Loss Cost Coef. Var	Absolute Change	Swing Max - Min Change	Payroll (100's)	
	2018	2019	2020	2021	2019	2020	2021				2017	2018
4829	1.03	1.06	1.07	1.11	2.9%	0.9%	3.7%	0.03	7.77%	2.8%	1,431,459	1,668,028
8203	5.79	5.89	5.92	5.86	1.7%	0.5%	-1.0%	0.01	3.28%	2.7%	77,363	78,032
4149	0.89	0.86	0.82	0.77	-3.4%	-4.7%	-6.1%	0.06	14.77%	2.7%	159,696	173,629
5190	2.57	2.50	2.50	2.49	-2.7%	0.0%	-0.4%	0.01	3.13%	2.7%	5,150,803	5,343,238
8868	0.37	0.37	0.38	0.39	0.0%	2.7%	2.6%	0.03	5.41%	2.7%	35,525,434	36,697,133
3334	1.92	1.86	1.80	1.79	-3.1%	-3.2%	-0.6%	0.03	7.04%	2.7%	100,198	105,217
7610	0.36	0.37	0.39	0.41	2.8%	5.4%	5.1%	0.06	13.89%	2.6%	2,660,830	2,845,344
4130	3.32	3.17	3.09	3.03	-4.5%	-2.5%	-1.9%	0.04	9.24%	2.6%	151,569	156,853
4299	2.21	2.13	2.07	1.96	-3.6%	-2.8%	-5.3%	0.05	12.20%	2.5%	2,380,979	2,263,942
7219	6.49	6.54	6.43	6.38	0.8%	-1.7%	-0.8%	0.01	3.26%	2.5%	12,166,683	12,624,490
9089	1.12	1.04	0.99	0.94	-7.1%	-4.8%	-5.1%	0.08	17.97%	2.3%	2,795	3,011
2413	2.36	2.45	2.52	2.65	3.8%	2.9%	5.2%	0.05	12.29%	2.3%	8,340	7,832
3383	1.42	1.48	1.51	1.55	4.2%	2.0%	2.6%	0.04	9.15%	2.2%	32,653	32,741
2759	6.23	6.19	6.08	5.91	-0.6%	-1.8%	-2.8%	0.02	5.29%	2.2%	283,849	315,694
6884	5.67	5.41	5.16	5.03	-4.6%	-4.6%	-2.5%	0.05	12.18%	2.1%	38	0
3030	4.13	4.25	4.32	4.48	2.9%	1.6%	3.7%	0.03	8.47%	2.1%	785,052	839,145
8728	0.31	0.34	0.37	0.41	9.7%	8.8%	10.8%	0.12	32.26%	2.0%	463,191	483,232
2388	1.50	1.50	1.52	1.55	0.0%	1.3%	2.0%	0.02	3.33%	2.0%	72,010	95,244
8072	0.53	0.52	0.51	0.51	-1.9%	-1.9%	0.0%	0.02	3.85%	1.9%	252,465	254,751
3118	2.19	2.14	2.05	1.99	-2.3%	-4.2%	-2.9%	0.04	9.70%	1.9%	17,087	15,272
3635	2.19	2.13	2.10	2.08	-2.7%	-1.4%	-1.0%	0.02	5.18%	1.8%	59,697	52,178
4304	7.15	6.45	5.73	5.07	-9.8%	-11.2%	-11.5%	0.15	36.10%	1.7%	241,751	236,165
3620	3.67	3.68	3.69	3.64	0.3%	0.3%	-1.4%	0.01	1.91%	1.6%	523,729	546,839
5037	12.09	11.20	10.46	9.86	-7.4%	-6.6%	-5.7%	0.09	21.02%	1.6%	5,910	7,933
8602	0.71	0.82	0.96	1.11	15.5%	17.1%	15.6%	0.19	56.34%	1.6%	184,263	195,785
5102	5.84	5.49	5.20	4.96	-6.0%	-5.3%	-4.6%	0.07	16.74%	1.4%	368,358	416,529
8044	2.33	2.30	2.26	2.20	-1.3%	-1.7%	-2.7%	0.02	5.78%	1.4%	1,590,757	1,655,183
0401	10.08	10.31	10.47	10.77	2.3%	1.6%	2.9%	0.03	6.85%	1.3%	59,383	66,858
0036	8.35	7.39	6.61	5.93	-11.5%	-10.6%	-10.3%	0.15	35.95%	1.2%	64,154	83,665
2361	1.88	1.84	1.80	1.74	-2.1%	-2.2%	-3.3%	0.03	7.83%	1.2%	2,573	3,180
8111	1.61	1.57	1.54	1.52	-2.5%	-1.9%	-1.3%	0.03	5.80%	1.2%	707,498	670,382
2923	1.98	1.91	1.85	1.77	-3.5%	-3.1%	-4.3%	0.05	11.41%	1.2%	9,190	8,646
7710	4.00	4.06	4.08	4.12	1.5%	0.5%	1.0%	0.01	3.00%	1.0%	1,085,275	1,245,520
7711	4.00	4.06	4.08	4.12	1.5%	0.5%	1.0%	0.01	3.00%	1.0%	155,950	155,177
2501	2.26	2.35	2.45	2.53	4.0%	4.3%	3.3%	0.05	11.95%	1.0%	1,077,937	1,113,976
2402	2.27	2.36	2.46	2.54	4.0%	4.2%	3.3%	0.05	11.89%	1.0%	1,238	1,532
7420	7.58	7.18	6.86	6.50	-5.3%	-4.5%	-5.2%	0.07	15.74%	0.8%	9,776	9,353
1924	4.14	3.84	3.58	3.32	-7.2%	-6.8%	-7.3%	0.09	22.82%	0.5%	88,820	96,273