

State: Missouri **Filing Company:** NCCI Inc
TOI/Sub-TOI: 16.0 Workers Compensation/16.0004 Standard WC
Product Name: Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2020
Project Name/Number: /

Filing at a Glance

Company: NCCI Inc
Product Name: Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2020
State: Missouri
TOI: 16.0 Workers Compensation
Sub-TOI: 16.0004 Standard WC
Filing Type: Rate
Date Submitted: 08/13/2019
SERFF Tr Num: NCCI-132044956
SERFF Status: Closed-REVIEWED
State Tr Num: 112
State Status: REVIEWED
Co Tr Num: MISSOURI LC 01012020

Effective Date: 01/01/2020
Requested (New):
Effective Date: 01/01/2020
Requested (Renewal):
Author(s): Lesley O'Brien, Frank Gnolfo, Kevin Ott, Whitney Quailey
Reviewer(s): Patrick Lennon (primary), Julie Lederer
Disposition Date: 10/30/2019
Disposition Status: REVIEWED
Effective Date (New): 01/01/2020
Effective Date (Renewal): 01/01/2020

State Filing Description:

State: Missouri **Filing Company:** NCCI Inc
TOI/Sub-TOI: 16.0 Workers Compensation/16.0004 Standard WC
Product Name: Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2020
Project Name/Number: /

General Information

Project Name: Status of Filing in Domicile:
 Project Number: Domicile Status Comments:
 Reference Organization: Reference Number:
 Reference Title: Advisory Org. Circular:
 Filing Status Changed: 10/30/2019
 State Status Changed: 10/30/2019 Deemer Date:
 Created By: Frank Gnolfo Submitted By: Frank Gnolfo
 Corresponding Filing Tracking Number:
 State TOI: 16.0 Workers Compensation State Sub-TOI: 16.0004 Standard WC

Filing Description:
 Enclosed are the NCCI Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2020.

Company and Contact

Filing Contact Information

Carla Townsend, State Relations Executive carla_townsend@ncci.com
 901 Peninsula Corporate Circle 561-893-3819 [Phone]
 Boca Raton, FL 33487-1362 561-893-5779 [FAX]

Filing Company Information

NCCI Inc CoCode: State of Domicile: Florida
 901 Peninsula Corporate Circle Group Code: Company Type:
 Boca Raton, FL 33487 Group Name: State ID Number: 9999-8500
 (561) 893-3186 ext. [Phone] FEIN Number: 65-0439698

Filing Fees

Fee Required? Yes
 Fee Amount: \$150.00
 Retaliatory? No
 Fee Explanation:
 Per Company: Yes

Company	Amount	Date Processed	Transaction #
NCCI Inc	\$150.00	08/13/2019	164078933

Check Number	Check Amount	Check Date
	\$0.00	

State Specific

NAIC Number: NA
 Have you reviewed the General Instructions document? (yes/no)(General Instructions updated 06/16/2017): Yes
 If this is a rate filing, was rate data added on the rate/rule schedule? (yes/no): Yes
 Are you paying the \$150 per company per submission filing fee electronically using EFT? The utilization of SERFF and EFT for filings of papers, documents, and reports is now required, per 20 CSR 100-1.900.: Yes

State: Missouri Filing Company: NCCI Inc
TOI/Sub-TOI: 16.0 Workers Compensation/16.0004 Standard WC
Product Name: Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2020
Project Name/Number: /

Correspondence Summary

Dispositions

Status	Created By	Created On	Date Submitted
REVIEWED	Patrick Lennon	10/30/2019	10/30/2019

State: Missouri Filing Company: NCCI Inc
 TOI/Sub-TOI: 16.0 Workers Compensation/16.0004 Standard WC
 Product Name: Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2020
 Project Name/Number: /

Disposition

Disposition Date: 10/30/2019
 Effective Date (New): 01/01/2020
 Effective Date (Renewal): 01/01/2020
 Status: REVIEWED

Comment:
 Thank you for your filing submission. At this point in time, I do not have any further questions and am concluding my review of this filing. Please note that the closure of this filing review does not constitute an approval by the Department and does not mean the Department is precluded from initiating future inquiries or from taking further administrative or legal action. Ultimately, the insurance company is responsible for ensuring it is in compliance with Missouri insurance law through its administration of insurance policies and handling of claims.

Company Name:	Overall % Indicated Change:	Overall % Rate Impact:	Written Premium Change for this Program:	Number of Policy Holders Affected for this Program:	Written Premium for this Program:	Maximum % Change (where req'd):	Minimum % Change (where req'd):
NCCI Inc	-1.600%	-1.600%	\$0	0	\$0	19.000%	-22.000%

Schedule Supporting Document	Schedule Item	Schedule Item Status	Public Access
Supporting Document	Actuarial Justification	REVIEWED	Yes
Supporting Document	Electronic Rate Submission	REVIEWED	Yes
Supporting Document	Exhibits A & B (20 CSR 500-6.950)(2)	REVIEWED	Yes
Supporting Document	Filing Memorandum	REVIEWED	Yes
Rate	New Filing	REVIEWED	Yes

State: Missouri
 Filing Company: NCCI Inc
 TOI/Sub-TOI: 16.0 Workers Compensation/16.0004 Standard WC
 Product Name: Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2020
 Project Name/Number: /

Rate Information

Rate data applies to filing.

Filing Method: SERFF
 Rate Change Type: Decrease
 Overall Percentage of Last Rate Revision: -3.500%
 Effective Date of Last Rate Revision: 01/01/2019
 Filing Method of Last Filing: SERFF
 SERFF Tracking Number of Last Filing: NCCI-131614716

Company Rate Information

Company Name:	Overall % Indicated Change:	Overall % Rate Impact:	Written Premium Change for this Program:	Number of Policy Holders Affected for this Program:	Written Premium for this Program:	Maximum % Change (where req'd):	Minimum % Change (where req'd):
NCCI Inc	-1.600%	-1.600%	\$0	0	\$0	19.000%	-22.000%

State: Missouri Filing Company: NCCI Inc
 TOI/Sub-TOI: 16.0 Workers Compensation/16.0004 Standard WC
 Product Name: Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2020
 Project Name/Number: /

Rate/Rule Schedule

Item No.	Schedule Item Status	Exhibit Name	Rule # or Page #	Rate Action	Previous State Filing Number	Attachments
1	REVIEWED 10/30/2019	New Filing	MO-2018-02	Replacement	117	MO 1.1.2020 Filing.pdf



Missouri

Advisory Loss Costs and
Rating Values Filing

Proposed Effective January 1, 2020



Carla Townsend
Regulatory Division
(P) 561-893-3819 (F) 561-893-5779
Email: Carla_Townsend@ncci.com

August 13, 2019

The Honorable Chlora Lindley-Myers
Director
Missouri Department of Insurance,
Financial Institutions and Professional Registration
Harry S Truman Bldg, Room 530
P.O. Box 690
Jefferson City, Missouri 65102

Re: Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2020

Dear Director Lindley-Myers:

In accordance with the applicable statutes and regulations of the state of Missouri, we are filing advisory voluntary loss costs for Missouri to be effective January 1, 2020 for new and renewal policies.

This filing proposes an average overall change of -1.6% in the voluntary loss costs from the January 1, 2019 NCCI Voluntary Loss Costs Including Trend. Enclosed are the NCCI Voluntary Loss Costs Including Trend proposed to be effective January 1, 2020.

Please note the following in connection with this filing:

- As a result of Item B-1397, effective January 1, 2008, a single combined loss cost is still calculated for Class Codes 7710 and 7711 via a payroll-weighted average of the separately indicated loss costs for these two Class Codes.
- As a result of Item B-1435, effective January 1, 2018:
 - Class Codes 1642 and 1655 are combined to reflect the final year of a three-year transition program, and Class Code 1655 is discontinued.
 - Class Codes 5040 and 5067 are combined to reflect the final year of a three-year transition program, and Class Code 5067 is discontinued.
 - Class Codes 5505 and 5506 are combined to reflect the final year of a three-year transition program, and Class Code 5505 is discontinued.
- As a result of Item B-1436, effective January 1, 2019:
 - Class Codes 8825 and 8826 are combined to reflect the final year of a two-year transition program, and Class Code 8825 is discontinued.
 - Class Code 8829 is discontinued and the loss cost for Class Code 8824 is payroll weighted to reflect the combined experience of Class Codes 8824 and 8829
- As a result of Item B-1437, effective January 1, 2020:
 - Class Codes 2286 and 2220 are combined to reflect the first year of a two-year transition program. In the second year of the transition, Class Code 2286 will be discontinued.

- Class Codes 2670 and 2688 are combined to reflect the first year of a two-year transition program. In the second year of the transition, Class Code 2670 will be discontinued.
- Class Code 4360 is discontinued and the loss cost for Class Code 7610 is payroll weighted to reflect the combined experience of Class Codes 4360 and 7610.
- Class Code 4670 is discontinued and the loss cost for Class Code 4683 is payroll weighted to reflect the combined experience of Class Codes 4670 and 4683.
- Class Code 5508 is discontinued and the loss cost for Class Code 5507 is payroll weighted to reflect the combined experience of Class Codes 5508 and 5507.
- As a result of Item R-1417, the retrospective rating plan parameters were updated.

I hereby certify that I am familiar with the insurance laws, rules and regulations of the State of Missouri, and to the best of my knowledge, information, and belief, this filing complies in all respects to such laws, rules, and regulations. This filing is made on behalf of the members and subscribers of the National Council on Compensation Insurance, Inc., who are now writing or will write workers compensation insurance in Missouri.

This filing is made exclusively on behalf of the companies that have given valid consideration for the express purpose of fulfilling regulatory rate or pure premium filing requirements and other private use of this information.

In the enclosed appendix is a list of companies, which as of the time this filing is submitted, are eligible to reference this information. The inclusion of a company on this list merely indicates that the company, or the group to which it belongs, is affiliated with NCCI in this state, or has licensed this information as a non-affiliate, and is not intended to indicate whether the company is currently writing business or is even licensed to write business in this state.

Please contact me (561-893-3819) if you have any questions or need any further information.

Sincerely,



Carla Townsend
State Relations Executive



© Copyright 2019 National Council on Compensation Insurance, Inc. All Rights Reserved.

These materials are comprised of NCCI actuarial judgment and proprietary and confidential information which are valuable assets of NCCI and are protected by copyright and other intellectual property laws. Any persons in the legal possession of these materials are required to maintain them in the strictest confidence and shall implement sufficient safeguards to protect the confidentiality of such materials in the same respect as it protects its own intellectual property. NCCI will seek appropriate legal remedies for any unauthorized use, sale, reproduction, distribution, preparation of derivative works, or transfer of this material, or any part thereof in any media. Authorized uses of these materials are governed by one or more agreements between NCCI and an end user. Unless expressly authorized by NCCI, you may not copy, create derivative works (by way of example, create or supplement your own works, or other materials), display, perform, or use the materials, in whole or in part, in any media and in any manner including posting to a web site.

NCCI MAKES NO REPRESENTATIONS OR WARRANTIES RELATING TO THESE MATERIALS, INCLUDING ANY EXPRESS, STATUTORY OR IMPLIED WARRANTIES INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. ADDITIONALLY, AUTHORIZED END USERS ASSUME RESPONSIBILITY FOR THE USE OF, AND FOR ANY AND ALL RESULTS DERIVED OR OBTAINED THROUGH THE USE OF SUCH MATERIALS.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Actuarial Certification

I, James R. Davis, am an Executive Director and Actuary for the National Council on Compensation Insurance, Inc. I am an Associate of the Casualty Actuarial Society and a member of the American Academy of Actuaries, and I meet the Qualification Standards of the American Academy of Actuaries to provide the actuarial report contained herein.

The information contained in this report has been prepared under my direction in accordance with applicable Actuarial Standards of Practice as promulgated by the Actuarial Standards Board. The Actuarial Standards Board is vested by the U.S.-based actuarial organizations with the responsibility for promulgating Actuarial Standards of Practice for actuaries providing professional services in the United States. Each of these organizations requires its members, through its Code of Professional Conduct, to observe the Actuarial Standards of Practice when practicing in the United States.

A handwritten signature in cursive script that reads "James R. Davis".

James R. Davis, ACAS, MAAA
Executive Director and Actuary
Actuarial and Economic Services



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Disclosures

Purpose of the Report

The purpose of this report is to provide the proposed voluntary loss costs for workers compensation policies in Missouri, proposed to be effective January 1, 2020. The intended users of this report are:

- The Missouri Department of Insurance, Financial Institutions and Professional Registration
- Affiliated carriers, for their reference in determining workers compensation rates

Scope

The prospective loss costs are intended to cover the indemnity and medical benefits provided under the system, as well as some of the expenses associated with providing these benefits (loss adjustment expenses). They do not, however, contemplate any other costs associated with providing workers compensation insurance (such as commissions, taxes, etc.).

Each insurance company offering workers compensation insurance in Missouri that uses NCCI loss costs may file a loss cost multiplier to be applied to the advisory prospective loss costs in order to compute the final workers compensation rates they intend to charge. This multiplier is intended to cover the other costs associated with providing workers compensation insurance that are not already part of the advisory prospective loss costs.

Data Sources and Dates

The overall average loss cost level change is based on a review of Financial Call Data, which is an aggregation of workers compensation data annually reported to NCCI. In this filing, Financial Call Data submissions received after June 11, 2019 were not considered for inclusion in the analysis.

Loss cost level changes at the classification code level are based on Unit Statistical Data, which is the audited exposure, premium and loss information reported to NCCI on a policy level. In this filing, Unit Statistical Data submissions received after June 26, 2019 were not considered for inclusion in the analysis.

In some areas, NCCI's analysis also relies on other data sources, which are reviewed for reasonableness and are referenced in the filing where applicable.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Disclosures

This filing was prepared as of July 12, 2019. Therefore, events that occurred after this date that may have a material impact on workers compensation costs in this jurisdiction have not been considered in the analysis.

NCCI maintains several data reporting initiatives and programs to assist carriers to report data and to ensure that the data that is reported to NCCI is complete, accurate, and reported in a timely fashion. Occasionally, a carrier's data submission is not available for use in an NCCI filing either because the data was not reported prior to the filing, had quality issues, or NCCI determined that the data that was reported should not be included in the filing based on NCCI's actuarial judgment.

All carriers writing at least one-tenth of one percent of the Missouri workers compensation written premium volume and whose data is not included in the experience period are listed below:

- Policy Year 2016 – Guarantee Insurance Company (0.8% of state premium)

Other exclusions are made for the purposes of analysis, but do not have a material impact on the proposed changes in this filing.

Risks and Uncertainty

This filing includes assumptions and projections concerning the future. As with any prospective analysis, there exists estimation uncertainty in these assumptions and projections. Areas of this analysis subject to estimation uncertainty that could have a material impact on the final results include the following:

- Projection of future loss development
- Selection of loss ratio trends
- Potential impact of changes to laws and/or regulations

In addition, any future changes to workers compensation law or regulations that apply retroactively to policies or benefit claims on policies in the proposed effective period may have a significant impact on the adequacy of the loss costs proposed in this filing.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Table of Contents

Part 1 Filing Overview

- Executive Summary
- Overview of Methodology
- Summary of Selections
- Selections Underlying the Proposed Changes
- Additional Proposed Changes

Part 2 Proposed Values

- Proposed Voluntary Loss Costs and Rating Values
- Proposed Values for Inclusion in the Experience Rating Plan Manual
- Proposed Values for Inclusion in the Retrospective Rating Plan Manual

Part 3 Supporting Exhibits

- Exhibit I: Determination of the Indicated Loss Cost Level Change
- Exhibit II: Workers Compensation Loss Adjustment Expenses
- Appendix A: Factors Underlying the Proposed Loss Cost Level Change
- Appendix B: Calculations Underlying the Loss Cost Change by Classification
- Appendix C: Memoranda for Laws and Assessments
- Appendix D: Derivation of Experience Rating Values

Part 4 Additional Information

- Definitions
- NCCI Affiliate List
- Key Contacts



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Part 1 Filing Overview

- Executive Summary
- Overview of Methodology
- Summary of Selections
- Selections Underlying the Proposed Changes
- Additional Proposed Changes



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Executive Summary

Based on its review of the most recently available data, NCCI has proposed an overall average workers compensation voluntary market loss cost level change of -1.6% to become effective January 1, 2020.

<u>Key Components</u>	<u>Percentage Change</u>
Impact of change in Experience and Development	- 3.2%
Impact of change in Trend	+ 1.8%
Impact of change in Benefits	+ 0.0%
<u>Impact of change in Loss-based Expenses</u>	<u>- 0.1%</u>
Proposed Change in Overall Voluntary Loss Cost Level	- 1.6%

Key observations:

- The filing is based on premium and loss experience for policy years 2016 and 2017 evaluated as of December 31, 2018, which is moderately favorable.
- Missouri's lost-time claim frequency has declined since 2010.
- After adjusting to a common wage level, indemnity average cost per case figures have remained fairly consistent in recent years, while the medical average cost per case figures have increased.

Proposed Changes in Voluntary Loss Cost Level by Industry Group:

<u>Industry Group</u>	<u>Average Change</u>	<u>Maximum Increase</u>	<u>Maximum Decrease</u>
Manufacturing	- 0.7%	+ 19.0%	- 21.0%
Contracting	- 1.7%	+ 18.0%	- 22.0%
Office and Clerical	- 1.6%	+ 18.0%	- 22.0%
Goods and Services	- 1.9%	+ 18.0%	- 22.0%
Miscellaneous	- 1.8%	+ 18.0%	- 22.0%

Additional Notable Changes Proposed in the Filing:

- Reflection of Annual Changes to Maximum and Minimum Indemnity Benefits in Ratemaking
- Proposed Change to the Defense and Cost Containment Expense Provision Calculation
- Update to the United States Longshore and Harbor Workers' (USL&HW) Coverage Percentage Factor
- Swing Limit Bound Calculation Modification



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Overview of Methodology

Aggregate Ratemaking

NCCI's approach to determining the proposed overall average loss cost level change utilizes widely accepted ratemaking methodologies. The approach employed in this filing includes the following steps:

- The reported historical premium totals are projected to an ultimate basis and adjusted to the current pure premium level
- The excess loss portion of individual large claims are removed from reported aggregate losses, based on a Missouri specific large loss threshold
- The reported historical limited indemnity and medical loss totals are projected to an ultimate basis and adjusted to the current benefit level
- Ratios of losses to pure premium are projected to the cost levels expected in the loss cost effective period
- Ultimate, trended, limited losses are adjusted to an unlimited basis with an excess ratio
- Proposed benefit level and/or expense changes are applied to the projected cost ratios

The indicated average loss cost level change is calculated for the years in the filing's experience period. If the final projected cost ratios are greater (less) than 1.000, then an increase (decrease) in the average loss cost level is indicated.

Class Ratemaking

Once the proposed overall average voluntary loss cost level change has been determined, NCCI separately determines loss costs per \$100 of payroll for each workers compensation job classification (class); the loss costs and year-over-year changes vary by class. Three sets of pure premiums are combined as part of each class code's loss cost calculation based on the volume of available data for that job classification. The three sets of pure premiums are:

- State-specific payroll and loss experience ("indicated")
- Current pure premium adjusted to the proposed level ("present on rate level")
- Countrywide experience adjusted to state conditions ("national")

Note: The methodology and assumptions used in this filing may not be applicable to or relevant for another purpose, including but not limited to NCCI filings in other jurisdictions.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Summary of Selections

The following is a summary of selections underlying the voluntary loss costs effective January 1, 2020, along with the selections underlying the January 1, 2019 loss cost filing.

Voluntary Loss Costs	Effective January 1, 2019	Effective January 1, 2020
Experience Period	Policy Years 2015 and 2016	Policy Years 2016 and 2017
Premium Development	3-year average	3-year average
Basis of Loss Experience	Average of Paid and Paid+Case losses	Average of Paid and Paid+Case losses
Paid Loss Development	3-year average	3-year average
Paid+Case Loss Development	5-year average	5-year average
Tail Factors	Selected	Selected
Indemnity Annual Loss Ratio Trend Factor	0.975	0.980
Medical Annual Loss Ratio Trend Factor	0.985	0.990
Loss Adjustment Expense Provision	18.8%	18.7%
Base Threshold for Limiting Losses	\$9,530,610	\$9,720,476
Large Loss Excess Ratio	0.7%	1.1%*
Classification Swing Limits (applied by Industry Group)	+/-20%	+/-20%

* The proposed value reflects the updated excess loss pure premium factor parameters and methodology as detailed in the approved item filing R-1417.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Selections Underlying the Proposed Changes

Experience and Development

NCCI analyzed the emerging experience of Missouri workers compensation policies in recent years. The primary focus of our analysis was on premiums and losses from policy years 2016 and 2017 evaluated as of December 31, 2018. The most recently available full policy year is 2017 since the last policy had an effective date of December 31, 2017 and did not expire until December 31, 2018. During this year's analysis, after reviewing various possible experience periods, the use of the two most recently available full policy years of data was selected as most appropriate in terms of providing balance between stability and responsiveness.

Different aggregations of loss experience were analyzed in preparation of this filing. These were (i) paid losses (benefit amounts already paid by insurers on reported claims) and (ii) the sum of paid losses plus case reserves (paid losses and the amounts set aside to cover future payments on those claims). In this filing, NCCI utilized loss development factors based on each of these two loss aggregations. This is consistent with NCCI filings made in the past several years in Missouri. Loss development factors are needed since paid losses and case reserve estimates on a given claim change over time until the claim is finally closed. The loss development factors are based on how paid losses and case reserve estimates changed over time for claims from older years. The specific development link ratio selections underlying this filing are shown below:

- A three-year average of historical premium development factors.
- A three-year average of historical paid loss development factors through a 19th report.
- A five-year average of historical paid plus case loss development factors through a 19th report.
- Loss development tail factors from a 19th report to ultimate were selected by NCCI based on historical averages of the ten most recent available factors.

Trend

This filing relies primarily on the experience from policy years 2016 and 2017. However, the proposed loss costs are intended for use with policies with effective dates starting on January 1, 2020. It is necessary to use trend factors that forecast how much the future Missouri workers compensation experience will differ from the past. These trend factors measure anticipated changes in the amount of indemnity and medical benefits as compared with anticipated changes in the amount of workers' wages. For example, if benefit costs are expected to grow faster than wages, then a trend factor greater than zero is indicated. Conversely, if wages are expected to grow faster than benefit costs, then a trend factor less than zero is indicated. While historical changes in claim frequency and average cost per case were also reviewed, NCCI applies loss ratio trend factors in the determination of the proposed overall average loss cost level change.

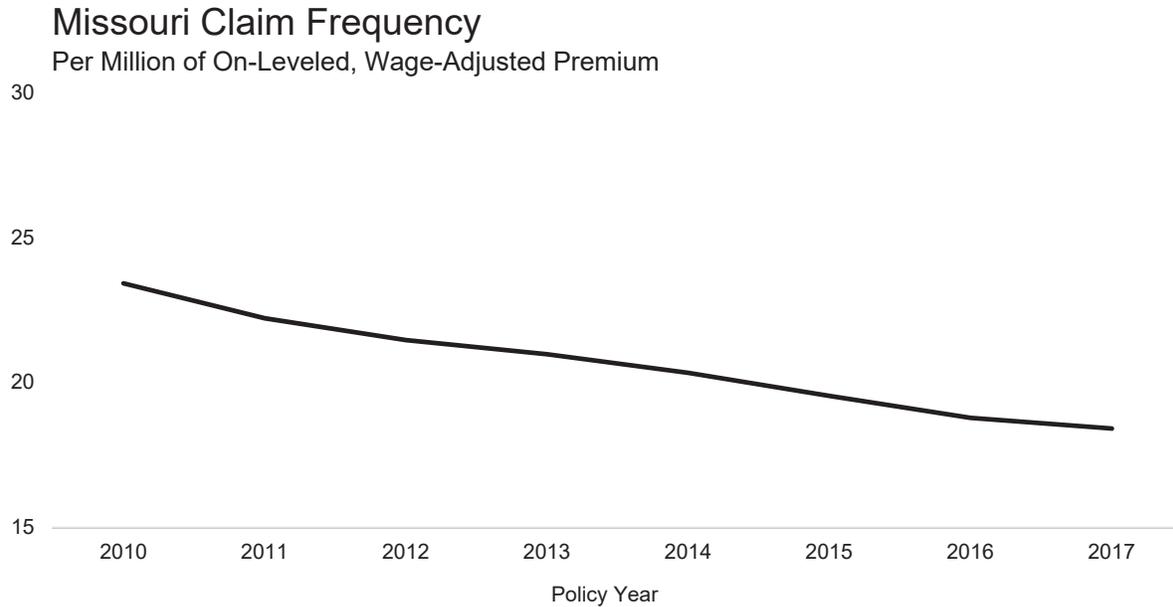


MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Selections Underlying the Proposed Changes

The following few charts show a measure of the number of workplace injuries (claim frequency) and the average cost of each of these injuries (claim severity).



Missouri's lost-time claim frequency has declined since 2010, as shown immediately above. The data in this chart reflects premiums at today's loss cost and wage levels.



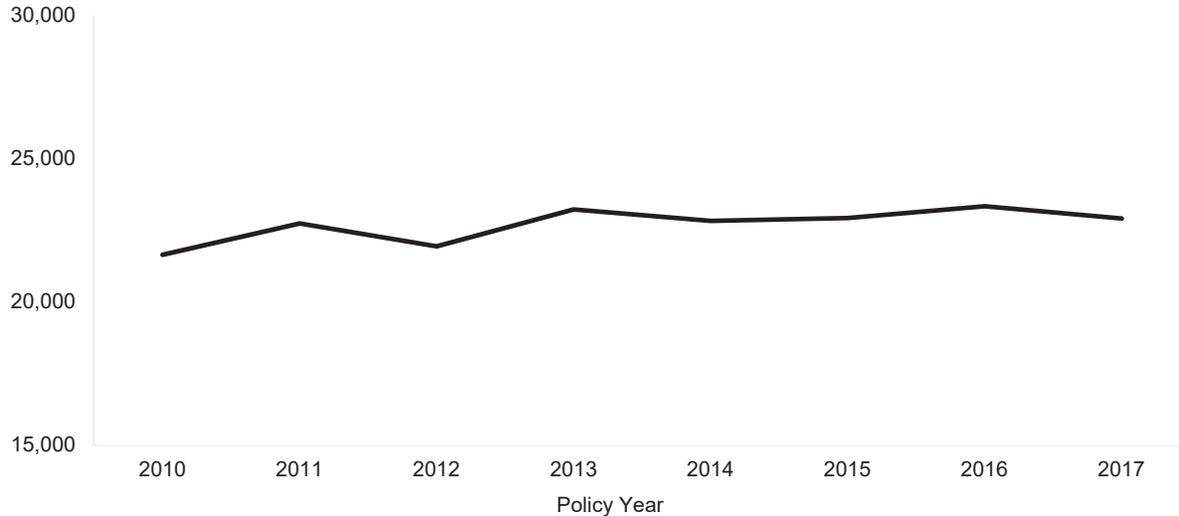
MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Selections Underlying the Proposed Changes

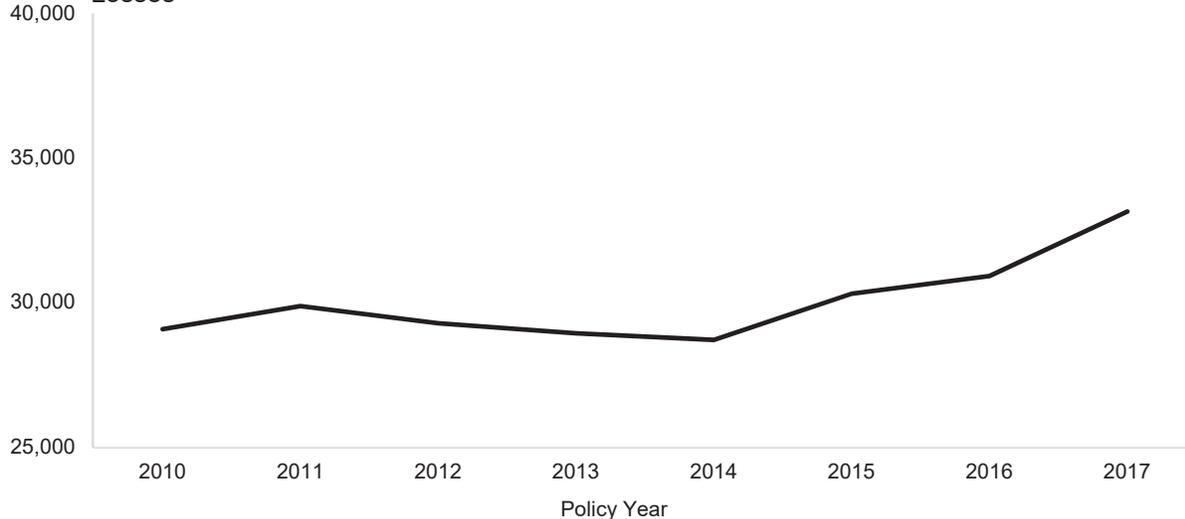
Missouri Indemnity Average Cost Per Case

Adjusted to a Common Wage Level, Based on Average of Paid and Paid+Case Losses



Missouri Medical Average Cost Per Case

Adjusted to a Common Wage Level, Based on Average of Paid and Paid+Case Losses



As these two charts illustrate, Missouri's average indemnity cost per case has remained fairly consistent over time, while the average medical cost per case figures have increased.



MISSOURI

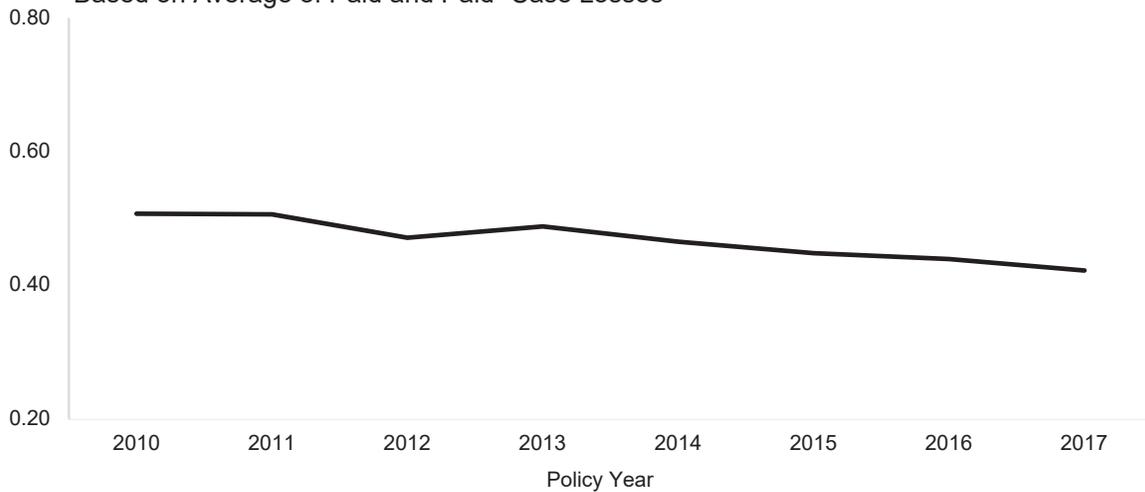
Advisory Loss Costs and Rating Values Filing – January 1, 2020

Selections Underlying the Proposed Changes

Loss ratios result after combining observed changes in Missouri's average claim frequency with corresponding changes in Missouri's average cost per case.

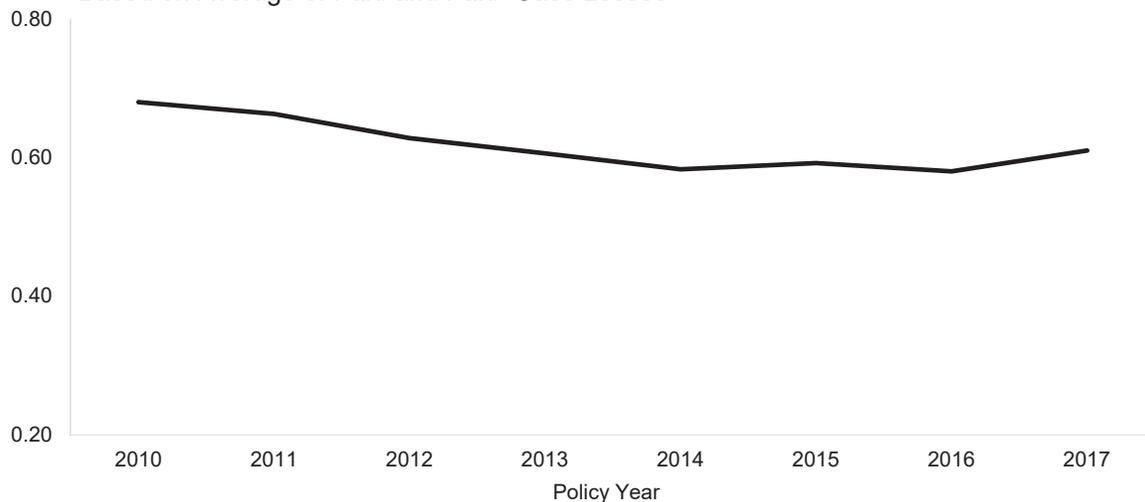
Missouri Indemnity Loss Ratio History

Based on Average of Paid and Paid+Case Losses



Missouri Medical Loss Ratio History

Based on Average of Paid and Paid+Case Losses



Based on our analysis this year, we are proposing an increase in the annual indemnity loss ratio trend from -2.5% to -2.0% and an increase in the annual medical loss ratio trend from -1.5% to -1.0% .



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Selections Underlying the Proposed Changes

Loss-Based Expenses

The proposed loss costs include a provision for loss adjustment expenses (LAE). These are expenses associated with the handling of workers compensation claims. LAE is included in the loss costs by using a ratio of loss adjustment expense dollars to loss dollars (called the LAE provision). In this filing, NCCI is proposing to decrease the current voluntary LAE provision from 18.8% to 18.7% of losses. Please see Exhibit II for additional detail.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Additional Proposed Changes

Reflection of Annual Changes to Maximum and/or Minimum Indemnity Benefits in Ratemaking

Summary

This filing proposes a change in the handling of benefit changes that result from annual revisions in maximum and/or minimum weekly indemnity benefits. These benefit changes are tied to annual statutory changes in the State Average Weekly Wage (SAWW). The proposal is to capture these benefit changes through the indemnity trend factor rather than through explicit benefit changes.

Background

NCCI has historically recognized annual SAWW-related changes to maximum and/or minimum weekly benefits via complex calculations relying on wage distributions, which vary the impacted inflation-sensitive parameters while holding all other values constant. The resulting impact becomes a benefit component of the loss cost indication and is used to bring historical indemnity losses to the proposed benefit level.

During a review of current procedures, NCCI determined that this adjustment unnecessarily increases the complexity of the calculation of expected benefit levels in the ratemaking process. As such, NCCI is simplifying the way this type of annual benefit change is reflected.

Proposed Procedure

Annual changes in maximum and/or minimum indemnity benefits reflect inflationary changes in premium/payroll; they do not result in changes to injured worker benefit levels over and above changes in wage inflation. Therefore, it is preferable to not explicitly adjust historical losses to account for these types of indemnity changes.

Going forward, the impact on indemnity benefit costs due to annual adjustments to maximum and/or minimum weekly benefits because of changes in the SAWW will not be calculated. Further, historical changes of this type will no longer be included in loss on-level factors.

Impact

Removal of explicit recognition of annual SAWW-related changes will likely impact the loss cost filing in three ways (assuming positive SAWW changes):

1. The estimated impact of the latest change in the SAWW will not be explicitly included (historically in Appendix C). Everything else being equal, this will tend to decrease the indication.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Additional Proposed Changes

2. The experience-period indemnity losses will not be on-leveled for previously filed annual SAWW-related changes (Exhibit I, Appendix A-I). Everything else being equal, this will tend to decrease the indication.
3. The indemnity losses used in the determination of the loss ratio trend factor will not be on-leveled for historical annual SAWW-related changes (Appendix A-III). Everything else being equal, this will tend to increase the fitted trend factors and, potentially, the indication.

NCCI researched the impact of the implicit recognition of these changes across states and years and concluded that the three components noted above should offset each other over time. Accordingly, there is no expected overall loss cost level impact due to this change.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Additional Proposed Changes

Proposed Change to the Defense and Cost Containment Expense Provision Calculation

Background

The Loss Adjustment Expense (LAE) provision in the loss costs is comprised of Defense and Cost Containment Expense (DCCE) and Adjusting and Other Expense (AOE) provisions.

Previously in Missouri, the DCCE portion of the LAE provision has been calculated based on a selected countrywide DCCE provision calculated from the NCCI Call for Loss Adjustment Expenses (Financial Call #19). This countrywide DCCE provision was adjusted by applying a state-specific relativity derived using NAIC Annual Statement payment data. Both the countrywide provision and state relativity were calculated based on private carrier data only. The private carrier DCCE provision was then weighted with a state fund DCCE provision to determine the final DCCE provision for Missouri.

Proposed Procedure

This filing proposes to calculate the DCCE provision more directly by utilizing Missouri-specific paid DCCE and losses, reported on the NCCI Call for Policy Year Data (Financial Call #3). Under the proposed methodology, the ratios of reported paid DCCE to paid losses by policy year are developed to a 19th report using DCCE ratio development factors. A 19th-to-ultimate tail factor is applied to reflect expected development beyond the 19th report. The proposed DCCE provision is selected based on the ultimate projected DCCE ratios by policy year. Policy year DCCE ratios under the proposed methodology use combined private carrier and state fund data.

Utilizing policy year data for the DCCE calculation is consistent with the basis for the losses and premium underlying the filing's loss cost level change (Exhibit I). By using policy year data, the proposed methodology minimizes the potential impact that claim activity occurring in older time periods (e.g., more than 20 years ago) may have on the prospective DCCE provision. When compared with the previous DCCE approach, the use of state-specific policy year data may allow the proposed methodology to be more responsive to state-specific changes.

The determination of the AOE provision is unaffected by this change to the DCCE methodology.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Additional Proposed Changes

Update to the USL&HW Coverage Percentage Factor

This filing proposes a revision to the United States Longshore and Harbor Workers' (USL&HW) Coverage Percentage factor found on the Miscellaneous Values page in this filing.

USL&HW Factor – Benefits Only

<u>Current</u>	<u>Proposed</u>
1.39	1.75

Background

The USL&HW Act is a federal law that extends federal benefits to employees such as harbor workers and others for disability or death resulting from an injury occurring upon the navigable waters of the United States. Separate class codes (“F-classes”) were created to account for those occupations that tend to have considerable USL&HW Act exposure. For all industrial classes that have USL&HW Act exposure but no relevant F-class code, the potentially higher federal benefits payable needs to be contemplated when calculating an insured’s premium. For USL&HW Act exposure that does not correspond to an F-class code, the USL&HW factor is applied to the industrial class loss cost for the portion of payroll that the USL&HW Act exposure represents.

NCCI’s prior full study of the USL&HW factors was completed in 2003. Since that time, the revised factor has been updated annually with each NCCI loss cost filing to account for how federal benefits have changed relative to Missouri benefits, as calculated and displayed in those filings.

Methodology

NCCI recently completed a full study of the USL&HW factors using Unit Statistical Data to determine the indicated USL&HW factor. The average cost of claims subject to Missouri’s workers compensation (WC) Act was compared to the average cost of claims subject to the USL&HW Act and a ratio, or “relativity,” was calculated. Due to the limited number of claims subject to the USL&HW Act within a given state, the average cost for these claims was calculated on a countrywide basis to increase the predictive accuracy. Two adjustments were independently made to the federal severity calculation to reflect additional attributes of the state under review: an injury type (IT) adjustment and a hazard group (HG) adjustment. Prior to calculating the indicated relativity, these adjustments modified the countrywide federal claim cost and the state’s industrial claim cost to have matching IT or matching HG distributions. These adjustments were done two ways: by weighting the federal severity to match the state severity IT or HG distribution, and vice versa. These calculations were done separately for indemnity and medical severities before being combined. The resulting values from the four



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Additional Proposed Changes

adjustment combinations were considered in the analysis. Note for medical, the indicated relativity was credibility weighted with the medical relativity assumption of unity underlying the previous (i.e., 2003) review prior to determining the combined indemnity and medical relativity.

Based on this review, each jurisdiction was placed into one of four USL&HW factor groups. These placements were validated by analyzing each jurisdiction's benefit structure. The USL&HW factor found on the Miscellaneous Values page is the USL&HW factor assigned to Missouri, adjusted for the difference between state and federal expenses, if applicable.

The USL&HW factor will not be automatically adjusted annually for filed benefit changes as has been current practice. Instead, unless a significant change to the state's benefit system occurs, NCCI will periodically review the current USL&HW factor to determine if an update to the USL&HW factor is warranted.

Impact

NCCI's recent study indicated that the current USL&HW factor in Missouri is not sufficient for covering the higher benefits applicable when a claim is subject to the USL&HW Act instead of Missouri's WC Act. Therefore, the USL&HW factor being proposed in this filing is higher than what is currently in place. The update to the USL&HW factor is expected to have a negligible impact on the proposed overall average loss cost level change in this filing.

Note that in NCCI Unit Statistical Data for the latest 5 policy years, the amount of USL&HW payroll reported outside of F-Classes has been approximately \$7,466,000 on average per year in Missouri.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Additional Proposed Changes

Classification Swing Limit Bounds

As part of NCCI's class ratemaking procedure, proposed loss costs by classification are subject to upper and lower bounds. As detailed in Appendix B-II, the bounds are determined as the product of the swing limits by industry group and the classification's present loss cost.

NCCI recently analyzed the impact of the bound calculations for classifications with significantly low loss costs. In these cases, the current multiplicative bound calculation can result in the upper and lower bounds for a classification being equal to the current loss cost for that classification. This restricts a classification's proposed loss cost to its present value, eliminating any possible responsiveness to a change indicated by the underlying data. As a result, NCCI is proposing 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 will review the change indicated by the classification and the corresponding industry group. If the direction of these two indications are aligned, NCCI will adjust 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. Note: Given Missouri's current 20% swing limits, this updated bound calculation can only impact classifications with loss costs of four cents or less.

In this filing, no adjustments have been made as a result of the proposed methodology. In future filings, class codes adjusted per this methodology change will be identified in Appendix B-II.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Part 2 Proposed Values

- Proposed Voluntary Loss Costs and Rating Values
- Proposed Values for Inclusion in the Experience Rating Plan Manual
- Proposed Values for Inclusion in the Retrospective Rating Plan Manual



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Proposed Voluntary Loss Costs and Rating Values

The following pages include proposed voluntary loss costs and rating values:

- Voluntary loss costs, expected loss rates, and d-ratios by class code, along with associated footnotes

- Advisory miscellaneous values, such as:
 - Advisory loss elimination ratios
 - Maximum weekly payroll applicable for select class codes
 - Premium determination for Executive Officers, Members of Limited Liability Companies, Partner and Sole Proprietors
 - Terrorism advisory loss cost
 - United States Longshore and Harbor Workers' Compensation Coverage Percentage

NCCI INCLUDING TREND ADVISORY LOSS COSTS - NOT RATES

MISSOURI

Advisory loss costs exclude all expense provisions except loss adjustment expense.

Effective January 1, 2020

CLASS CODE	LOSS COST	ELR	D RATIO	CLASS CODE	LOSS COST	ELR	D RATIO	CLASS CODE	LOSS COST	ELR	D RATIO
0005X	2.84	2.25	0.39	2016	2.88	2.34	0.39	2709	16.56	12.02	0.31
0008	2.53	1.93	0.35	2021	2.06	1.57	0.35	2710	12.46	8.57	0.26
0016	5.19	3.76	0.31	2039	2.50	2.03	0.39	2714	4.62	3.77	0.39
0034	2.41	1.91	0.39	2041	2.47	2.01	0.39	2731	3.68	2.67	0.31
0035	2.07	1.69	0.39	2065	1.75	1.38	0.39	2735	3.48	2.84	0.39
0036	6.61	5.25	0.39	2070	3.91	3.09	0.39	2747	-	2.46	0.48
0037	3.02	2.30	0.35	2081X	4.79	3.80	0.39	2759	6.08	4.96	0.39
0042	5.32	3.70	0.35	2089	3.17	2.51	0.39	2790	1.63	1.34	0.40
0050	4.48	3.25	0.39	2095	3.23	2.56	0.39	2791	-	2.91	0.39
0059D	0.12	0.04	0.31	2105	3.42	2.79	0.39	2797	4.75	3.76	0.39
0065D	0.04	0.01	0.31	2110	1.80	1.46	0.39	2799	5.03	3.51	0.35
0066D	0.04	0.01	0.31	2111	2.06	1.68	0.39	2802	4.92	3.75	0.35
0067D	0.04	0.01	0.31	2112	3.57	2.91	0.39	2835	2.22	1.87	0.48
0079	3.57	2.59	0.31	2114	2.96	2.42	0.39	2836	2.16	1.82	0.48
0083	4.34	3.44	0.39	2121	1.18	0.93	0.39	2841	3.55	2.91	0.39
0106	7.12	4.88	0.26	2130	1.68	1.33	0.39	2881	2.93	2.46	0.48
0113	4.54	3.61	0.39	2131	2.22	1.76	0.39	2883	2.83	2.24	0.39
0170	1.99	1.58	0.39	2143	2.17	1.77	0.39	2913	-	2.24	0.39
0251	3.35	2.65	0.39	2157	5.97	4.70	0.38	2915	3.35	2.55	0.35
0400	-	1.47	0.35	2172	1.47	1.11	0.34	2916	3.71	2.54	0.26
0401	10.47	7.20	0.26	2174	2.76	2.25	0.39	2923	1.85	1.50	0.39
0771N	0.44	-	-	2211	9.36	6.76	0.31	2942	-	1.02	0.48
0908P	116.00	92.20	0.39	2220	1.92	1.52	0.39	2960	5.19	4.10	0.39
0913P	394.00	311.56	0.39	2286	1.92	1.52	0.39	3004	1.77	1.28	0.31
0917	3.39	2.76	0.39	2288	3.55	2.90	0.39	3018	4.37	3.15	0.31
1005*	5.21	2.87	0.24	2300	-	1.94	0.39	3022	3.44	2.80	0.39
1016X*	12.52	6.65	0.24	2302	1.62	1.28	0.39	3027	2.45	1.77	0.31
1164D	4.39	2.75	0.24	2305	2.26	1.72	0.35	3028	3.60	2.85	0.39
1165D	3.12	2.12	0.26	2352	-	1.52	0.39	3030	4.32	3.12	0.31
1320	1.40	0.96	0.26	2361	1.80	1.43	0.39	3040	4.84	3.50	0.31
1322	6.10	3.82	0.26	2362	1.73	1.38	0.39	3041	4.07	3.22	0.39
1430	5.40	3.91	0.31	2380	1.98	1.57	0.39	3042	4.76	3.62	0.34
1438	12.64	8.64	0.26	2386	-	1.94	0.39	3064	3.32	2.63	0.39
1452	2.81	2.03	0.31	2388	1.52	1.24	0.39	3069	-	2.38	0.39
1463	9.01	6.17	0.26	2402	2.46	1.78	0.31	3076	3.00	2.38	0.39
1472	2.68	1.84	0.26	2413	2.52	2.00	0.39	3081DX	3.95	2.84	0.31
1624D	2.90	1.98	0.26	2416	1.80	1.42	0.39	3082D	4.61	3.32	0.31
1642	2.43	1.75	0.31	2417	1.34	1.07	0.39	3085DX	4.41	3.17	0.31
1654	3.47	2.50	0.31	2501	2.45	1.94	0.39	3110	4.21	3.33	0.39
1655	-	1.75	0.31	2503	1.31	1.06	0.39	3111	2.15	1.70	0.39
1699	2.56	1.85	0.31	2534	-	1.94	0.39	3113	1.76	1.39	0.39
1701	3.08	2.23	0.31	2570	3.77	3.07	0.39	3114	3.25	2.56	0.38
1710D	3.03	2.17	0.31	2585	3.08	2.51	0.39	3118	2.05	1.67	0.39
1741	-	2.23	0.31	2586	2.50	1.98	0.39	3119	1.37	1.15	0.48
1747	1.95	1.40	0.31	2587	1.73	1.41	0.39	3122	2.03	1.66	0.39
1748	5.31	3.86	0.31	2589	1.88	1.49	0.39	3126	1.31	1.03	0.39
1803D	7.16	4.80	0.26	2600	3.72	3.02	0.39	3131	1.81	1.43	0.39
1852	-	1.28	0.24	2623	6.02	4.58	0.35	3132	3.68	2.92	0.39
1853	-	2.23	0.31	2651	2.21	1.81	0.40	3145	2.26	1.79	0.39
1860	-	1.77	0.39	2660	2.70	2.21	0.39	3146	2.22	1.76	0.39
1924	3.58	2.91	0.39	2670	2.02	1.70	0.48	3169	2.22	1.76	0.39
1925	3.25	2.48	0.35	2683	2.10	1.72	0.40	3175	-	1.76	0.39
2002	2.91	2.38	0.39	2688	2.42	1.98	0.39	3179	2.01	1.64	0.39
2003	3.52	2.78	0.39	2701	10.48	7.55	0.31	3180	2.64	2.15	0.39
2014	4.52	3.27	0.31	2702	15.86	10.03	0.24	3188	2.16	1.76	0.39

* Refer to the Footnotes Page for additional information on this class code.

NCCI INCLUDING TREND ADVISORY LOSS COSTS - NOT RATES

MISSOURI

Advisory loss costs exclude all expense provisions except loss adjustment expense.

Effective January 1, 2020

CLASS CODE	LOSS COST	ELR	D RATIO	CLASS CODE	LOSS COST	ELR	D RATIO	CLASS CODE	LOSS COST	ELR	D RATIO
3220	2.15	1.70	0.39	4000	4.50	3.08	0.26	4597	-	1.63	0.39
3223	-	2.15	0.39	4018DX	4.95	3.53	0.31	4611	0.98	0.80	0.39
3224	2.85	2.32	0.39	4021	6.19	4.47	0.31	4635	2.94	1.85	0.24
3227	2.89	2.35	0.39	4034	6.33	4.58	0.31	4653	1.29	1.05	0.39
3240	2.71	2.22	0.39	4036	2.40	1.74	0.31	4665	9.01	6.54	0.31
3241	2.74	2.17	0.39	4038	3.83	3.20	0.47	4670	-	2.83	0.39
3255	2.24	1.88	0.48	4053	-	2.08	0.39	4683	3.58	2.83	0.39
3257	2.47	1.96	0.39	4061	-	2.08	0.39	4686	2.41	1.75	0.31
3270	3.65	2.90	0.39	4062	2.63	2.08	0.39	4692	0.82	0.66	0.39
3300	3.93	3.12	0.39	4101	2.22	1.69	0.35	4693	0.82	0.65	0.39
3303	2.01	1.64	0.39	4109	0.55	0.45	0.39	4703	1.91	1.51	0.39
3307	3.27	2.59	0.39	4110	1.21	0.95	0.39	4716	-	2.83	0.39
3315	3.04	2.47	0.39	4111	1.73	1.41	0.39	4717	2.05	1.72	0.48
3334	1.80	1.42	0.39	4113	-	1.41	0.39	4720	1.93	1.53	0.39
3336	2.63	1.90	0.31	4114	3.11	2.46	0.39	4740	0.98	0.71	0.31
3365	3.31	2.19	0.31	4130	3.09	2.45	0.39	4741	2.22	1.76	0.39
3372	3.13	2.38	0.35	4131	4.55	3.71	0.39	4751	1.75	1.26	0.31
3373	4.45	3.52	0.39	4133	1.80	1.47	0.39	4771N	2.52	1.60	0.24
3383	1.51	1.23	0.39	4149	0.82	0.69	0.48	4777	3.89	2.46	0.24
3385	0.82	0.67	0.39	4206	2.34	1.85	0.39	4825	0.72	0.52	0.31
3400	4.20	3.20	0.35	4207	1.80	1.29	0.31	4828	1.82	1.39	0.35
3507	2.57	2.04	0.39	4239	1.90	1.37	0.31	4829	1.07	0.73	0.26
3515	2.59	2.05	0.39	4240	3.48	2.84	0.39	4902	2.39	1.95	0.39
3548	1.43	1.14	0.39	4243	2.06	1.63	0.39	4923	0.97	0.77	0.39
3559	2.36	1.87	0.39	4244	2.32	1.84	0.39	4940	-	2.38	0.39
3574	1.72	1.40	0.39	4250	1.68	1.33	0.39	5020	4.23	2.79	0.31
3581	1.22	0.99	0.39	4251	3.28	2.60	0.39	5022	5.46	3.42	0.26
3612	1.97	1.50	0.34	4263	3.32	2.63	0.39	5037	10.46	6.04	0.24
3620X	3.69	2.67	0.31	4273	2.27	1.80	0.39	5040X	11.04	6.40	0.24
3629	1.51	1.23	0.39	4279	2.24	1.77	0.39	5057	3.66	2.12	0.24
3632X	2.80	2.13	0.35	4282	-	1.77	0.39	5059	24.30	14.12	0.24
3634	1.54	1.26	0.39	4283	1.38	1.09	0.39	5067	-	6.40	0.24
3635	2.10	1.66	0.39	4299	2.07	1.69	0.39	5069	-	14.12	0.24
3638	1.88	1.54	0.39	4304	5.73	4.37	0.35	5102	5.20	3.26	0.26
3642	1.21	0.96	0.39	4307	1.68	1.42	0.48	5146	4.38	2.90	0.31
3643	2.41	1.91	0.39	4351	0.83	0.66	0.39	5160	2.02	1.26	0.26
3647	2.49	1.89	0.35	4352	1.65	1.34	0.39	5183	2.65	1.75	0.31
3648	1.46	1.19	0.39	4360	-	0.29	0.35	5188	2.64	1.75	0.31
3681	0.73	0.59	0.39	4361	0.71	0.58	0.39	5190	2.50	1.65	0.31
3685	1.16	0.94	0.39	4410	2.88	2.28	0.39	5191	0.66	0.52	0.39
3719	1.04	0.60	0.24	4420	3.92	2.68	0.26	5192	2.19	1.73	0.39
3724	3.20	2.00	0.26	4431	1.26	1.06	0.48	5213X	5.39	3.38	0.26
3726	3.18	1.84	0.24	4432	1.21	1.02	0.48	5215	4.87	3.39	0.35
3803	2.00	1.58	0.39	4439	-	1.35	0.39	5221X	3.94	2.60	0.31
3807	2.02	1.65	0.39	4452	2.59	2.05	0.39	5222	6.74	4.21	0.26
3808	3.50	2.66	0.35	4459	2.40	1.90	0.39	5223	5.27	3.49	0.31
3821	4.46	3.40	0.35	4470	2.17	1.72	0.39	5348	3.73	2.47	0.31
3822X	3.50	2.67	0.35	4484	2.47	1.96	0.39	5402	3.72	2.77	0.39
3824X	4.04	3.08	0.35	4493	4.44	3.54	0.39	5403	4.98	3.12	0.26
3826	1.00	0.79	0.39	4511	0.41	0.31	0.34	5437	4.04	2.67	0.31
3827	2.35	1.79	0.35	4557X	2.00	1.63	0.39	5443	2.80	2.02	0.39
3830	0.70	0.53	0.34	4558	1.71	1.35	0.39	5445	4.38	2.74	0.26
3851	2.69	2.18	0.39	4568	3.71	2.68	0.31	5462	4.99	3.30	0.31
3865	2.05	1.73	0.48	4581	1.58	1.09	0.26	5472	4.55	2.64	0.24
3881	3.69	2.92	0.39	4583	4.08	2.80	0.26	5473	6.81	3.95	0.24

* Refer to the Footnotes Page for additional information on this class code.

NCCI INCLUDING TREND ADVISORY LOSS COSTS - NOT RATES

MISSOURI

Advisory loss costs exclude all expense provisions except loss adjustment expense.

Effective January 1, 2020

CLASS CODE	LOSS COST	ELR	D RATIO	CLASS CODE	LOSS COST	ELR	D RATIO	CLASS CODE	LOSS COST	ELR	D RATIO
5474	4.73	2.96	0.26	6884	5.16	3.24	0.24	7540	2.55	1.62	0.24
5478	5.05	3.33	0.31	7016M	2.34	1.48	0.24	7580	2.23	1.61	0.31
5479	6.14	4.28	0.35	7024M	2.60	1.64	0.24	7590	2.59	1.97	0.35
5480	5.08	3.18	0.26	7038M	5.10	3.25	0.24	7600	3.04	2.20	0.31
5491	1.54	0.97	0.26	7046M	9.40	5.92	0.24	7605	1.66	1.10	0.31
5505	-	2.72	0.24	7047M	3.24	1.96	0.24	7610	0.39	0.29	0.35
5506	4.68	2.72	0.24	7050M	8.73	5.32	0.24	7705	3.76	2.86	0.34
5507	3.20	2.00	0.26	7090M	5.67	3.61	0.24	7710	4.08	2.80	0.26
5508	-	2.00	0.26	7098M	10.44	6.58	0.24	7711	4.08	2.80	0.26
5515	-	2.02	0.34	7099M	15.63	9.43	0.24	7720	2.53	1.83	0.31
5535	5.36	3.55	0.31	7133	2.26	1.55	0.26	7855	3.10	2.05	0.31
5537	3.83	2.53	0.31	7151M	2.75	1.89	0.26	8001	1.88	1.54	0.40
5551	13.67	7.93	0.24	7152M	4.40	2.89	0.26	8002	1.62	1.29	0.39
5606	1.10	0.69	0.26	7153M	3.05	2.09	0.26	8006X	1.58	1.25	0.39
5610X	4.25	3.07	0.39	7207	-	3.44	0.26	8008	0.88	0.72	0.39
5645	9.19	5.78	0.26	7219X	6.43	4.39	0.26	8010	1.53	1.25	0.39
5703	10.02	6.64	0.31	7222	5.63	4.05	0.31	8013	0.32	0.25	0.39
5705	22.38	14.90	0.31	7225	6.02	4.34	0.31	8015	0.73	0.58	0.39
5951	0.35	0.29	0.39	7228	-	4.39	0.26	8017X	1.31	1.07	0.40
6003	4.26	2.81	0.31	7229	-	4.39	0.26	8018X	2.19	1.79	0.39
6005	4.55	3.01	0.31	7230	6.01	4.57	0.35	8021	2.67	2.12	0.39
6045	3.12	2.06	0.31	7231	6.91	5.25	0.34	8031	1.98	1.57	0.39
6204	8.43	5.29	0.26	7232	6.86	4.68	0.26	8032	1.70	1.39	0.39
6206	2.10	1.21	0.24	7250	-	4.39	0.26	8033	1.51	1.20	0.39
6213	1.15	0.72	0.26	7309F	10.26	4.97	0.21	8034X	1.92	1.52	0.39
6214	1.58	0.91	0.24	7313F	3.38	1.64	0.21	8037	1.61	1.32	0.40
6216	3.96	2.29	0.24	7317F	8.02	3.87	0.21	8039	1.11	0.91	0.40
6217	3.40	2.13	0.26	7327F	19.03	9.31	0.21	8044	2.26	1.72	0.35
6229	3.91	2.45	0.26	7333M	1.85	1.16	0.24	8045	0.54	0.44	0.39
6233	1.89	1.18	0.26	7335M	2.05	1.29	0.24	8046	2.06	1.64	0.39
6235	5.33	3.08	0.24	7337M	3.15	1.90	0.24	8047	0.84	0.68	0.39
6236	5.22	3.44	0.31	7350F	10.48	5.35	0.24	8058	2.33	1.85	0.39
6237	1.19	0.78	0.31	7360	3.66	2.64	0.31	8061X	1.61	1.28	0.39
6251D	3.06	1.90	0.26	7370	4.12	3.27	0.39	8072	0.51	0.41	0.40
6252D	2.95	1.70	0.24	7380	4.26	3.24	0.35	8102	1.92	1.57	0.40
6260	-	1.90	0.26	7382	4.07	3.23	0.39	8103	1.92	1.47	0.35
6306	4.92	3.08	0.26	7390	4.84	3.82	0.39	8105	-	1.79	0.39
6319	3.42	2.15	0.26	7394M	3.53	2.22	0.24	8106	4.17	3.02	0.31
6325	2.83	1.77	0.26	7395M	3.92	2.47	0.24	8107	2.35	1.70	0.31
6400	5.06	3.52	0.34	7398M	5.47	3.30	0.24	8111	1.54	1.22	0.39
6503	1.96	1.60	0.39	7402	0.10	0.08	0.39	8116	1.97	1.56	0.39
6504	2.29	1.87	0.39	7403	3.88	2.80	0.31	8203	5.92	4.67	0.39
6702M*	3.45	2.49	0.31	7405N	1.19	0.86	0.31	8204	3.36	2.43	0.31
6703M*	5.60	3.87	0.31	7420	6.86	4.30	0.24	8209	3.57	2.83	0.39
6704M*	3.83	2.76	0.31	7421	0.55	0.38	0.26	8215	3.50	2.54	0.31
6824F	7.27	3.75	0.24	7422	1.73	1.09	0.24	8227	2.85	1.65	0.24
6825FX	2.74	1.34	0.21	7425	2.02	1.27	0.24	8232	5.00	3.61	0.31
6826F	4.21	2.23	0.29	7431N	0.99	0.62	0.24	8233	1.97	1.41	0.31
6834	3.09	2.35	0.35	7445N	0.64	-	-	8235	3.54	2.80	0.39
6835X	2.59	1.63	0.24	7453N	0.53	-	-	8263	4.33	3.30	0.35
6836	3.02	2.19	0.31	7502	2.47	1.79	0.31	8264	4.52	3.27	0.31
6845a	a	a	a	7515	0.99	0.62	0.24	8265	4.13	2.83	0.26
6872F	10.12	4.92	0.21	7520	2.78	2.20	0.39	8279	5.01	3.44	0.26
6874F	15.18	7.34	0.21	7538	5.13	2.98	0.24	8288	6.89	5.01	0.31
6882	3.32	2.10	0.24	7539	1.69	1.16	0.26	8291	2.89	2.20	0.35

* Refer to the Footnotes Page for additional information on this class code.

NCCI INCLUDING TREND ADVISORY LOSS COSTS - NOT RATES

MISSOURI

Advisory loss costs exclude all expense provisions except loss adjustment expense.

Effective January 1, 2020

CLASS CODE	LOSS COST	ELR	D RATIO	CLASS CODE	LOSS COST	ELR	D RATIO	CLASS CODE	LOSS COST	ELR	D RATIO
8292	3.42	2.71	0.39	9012	0.77	0.59	0.35				
8293	7.18	5.18	0.31	9014	2.43	1.92	0.39				
8304	4.03	2.92	0.31	9015	2.66	2.10	0.39				
8350X	5.32	3.64	0.26	9016	2.85	2.27	0.39				
8353X	3.21	2.32	0.31	9019	1.80	1.30	0.31				
8370X	3.45	2.49	0.31	9033	1.73	1.37	0.39				
8381X	2.10	1.60	0.35	9040	3.29	2.69	0.40				
8385	1.68	1.21	0.31	9044	0.88	0.72	0.39				
8387X	2.55	1.94	0.35	9052	1.71	1.40	0.39				
8391X	1.94	1.47	0.35	9058	1.33	1.12	0.48				
8392	2.12	1.68	0.39	9060	1.06	0.87	0.40				
8393X	1.24	0.98	0.39	9061	1.30	1.10	0.48				
8500	4.60	3.33	0.31	9062	1.16	0.98	0.48				
8601	0.22	0.16	0.35	9063	0.69	0.56	0.40				
8602	0.96	0.73	0.35	9077F	2.42	1.36	0.37				
8603	0.06	0.05	0.39	9082	1.11	0.94	0.48				
8606	1.69	1.16	0.26	9083	0.91	0.77	0.48				
8709F	4.35	2.11	0.21	9084	1.12	0.89	0.39				
8719	1.76	1.12	0.24	9088a	a	a	a				
8720X	1.04	0.75	0.31	9089	0.99	0.81	0.39				
8721	0.25	0.18	0.31	9093	1.23	1.00	0.40				
8723X	0.14	0.11	0.39	9101	3.13	2.56	0.40				
8725	1.99	1.44	0.31	9102	2.50	1.98	0.39				
8726F	1.78	0.95	0.29	9110X	2.62	2.08	0.39				
8728X	0.37	0.26	0.31	9154	1.47	1.17	0.39				
8734M	0.32	0.23	0.31	9156	2.10	1.60	0.35				
8737M	0.29	0.21	0.31	9170	10.34	6.57	0.24				
8738M	0.49	0.33	0.31	9178	10.14	8.60	0.48				
8742X	0.24	0.17	0.31	9179	17.37	14.23	0.40				
8745	3.49	2.66	0.35	9180	3.85	2.79	0.31				
8748	0.49	0.37	0.35	9182	1.67	1.32	0.39				
8755	0.31	0.22	0.31	9186	14.81	10.21	0.26				
8799	0.35	0.28	0.39	9220	3.45	2.63	0.35				
8800	1.23	1.04	0.48	9402	3.87	2.79	0.31				
8803	0.06	0.04	0.31	9403	6.79	4.65	0.26				
8805M	0.15	0.12	0.39	9410	2.63	2.09	0.39				
8810	0.11	0.09	0.39	9501	2.84	2.16	0.35				
8814M	0.13	0.10	0.39	9505	3.98	3.03	0.35				
8815M	0.23	0.18	0.39	9516	2.63	1.90	0.31				
8820	0.13	0.10	0.35	9519	3.15	2.27	0.31				
8824	1.88	1.54	0.39	9521	3.29	2.38	0.31				
8825	-	1.38	0.39	9522	3.60	2.85	0.39				
8826	1.74	1.38	0.39	9534	4.02	2.51	0.26				
8829	-	1.54	0.39	9554	7.50	4.70	0.26				
8831	1.14	0.91	0.39	9586	0.48	0.41	0.48				
8832	0.23	0.18	0.39	9600	2.96	2.41	0.39				
8833X	1.04	0.82	0.39	9620	1.01	0.77	0.35				
8835	1.76	1.40	0.39								
8855	0.14	0.11	0.39								
8856	0.30	0.23	0.39								
8861X	1.14	0.90	0.39								
8868	0.38	0.31	0.40								
8869	0.89	0.73	0.40								
8871	0.06	0.05	0.39								
8901	0.17	0.13	0.34								

* Refer to the Footnotes Page for additional information on this class code.

Effective January 1, 2020

FOOTNOTES

a Advisory loss cost for each individual risk must be obtained from NCCI Customer Service or the Rating Organization having jurisdiction.

D Advisory loss cost for classification already includes the specific disease loading shown in the table below. See **Basic Manual** Rule 3-A-7.

Code No.	Disease Loading	Symbol	Code No.	Disease Loading	Symbol	Code No.	Disease Loading	Symbol
0059D	0.12	S	1165D	0.02	S	3082D	0.03	S
0065D	0.04	S	1624D	0.01	S	3085DX	0.03	S,L
0066D	0.04	S	1710D	0.02	S	4018DX	0.05	S
0067D	0.04	S	1803D	0.16	S	6251D	0.01	S
1164D	0.04	S	3081DX	0.02	S	6252D	0.01	S

S=Silica, L=Lead

F Advisory loss cost provides for coverage under the United States Longshore and Harbor Workers Compensation Act and its extensions. Loss cost contains a provision for the USL&HW Assessment.

M Risks are subject to Admiralty Law or Federal Employers Liability Act (FELA). However, the published loss cost is for risks that voluntarily purchase standard workers compensation and employers liability coverage. A provision for the USL&HW Assessment is included for those classifications under Program II USL Act.

N This code is part of a ratable / non-ratable group shown below. The statistical non-ratable code and corresponding advisory loss cost are applied in addition to the basic classification when determining premium.

Class Code	Non-Ratable Element Code
4771	0771
7405	7445
7431	7453

P Classification is computed on a per capita basis.

X Refer to special classification phraseology in these pages which is applicable in this state.

*** Class Codes with Specific Footnotes**

1005 Advisory loss cost includes a non-ratable disease element of \$0.65. (For coverage written separately for federal benefits only, \$0.64. For coverage written separately for state benefits only, \$0.01.)

1016 Advisory loss cost includes a non-ratable disease element of \$1.96. (For coverage written separately for federal benefits only, \$1.92. For coverage written separately for state benefits only, \$0.04.)

6702 Loss cost and rating values only appropriate for laying or relaying of tracks or maintenance of way - no work on elevated railroads. Otherwise, assign appropriate construction or erection code loss cost and elr each x 1.215.

6703 Loss cost and rating values only appropriate for laying or relaying of tracks or maintenance of way - no work on elevated railroads. Otherwise, assign appropriate construction or erection class loss cost x 2.106 and elr x 2.017.

6704 Loss cost and rating values only appropriate for laying or relaying of tracks or maintenance of way - no work on elevated railroads. Otherwise, assign appropriate construction or erection class loss cost and elr each x 1.35.

Effective January 1, 2020

ADVISORY MISCELLANEOUS VALUES

Advisory Loss Elimination Ratios - The following percentages are applicable by deductible amount and hazard group for total losses on a per occurrence basis. They do not include a safety factor.

Deductible Amount	Total Losses						
	HAZARD GROUP						
	A	B	C	D	E	F	G
\$100	1.2%	0.8%	0.7%	0.5%	0.4%	0.2%	0.2%
\$200	2.2%	1.7%	1.4%	1.0%	0.7%	0.5%	0.4%
\$300	3.3%	2.4%	2.0%	1.4%	1.0%	0.7%	0.6%
\$400	4.2%	3.1%	2.6%	1.8%	1.4%	0.9%	0.8%
\$500	5.0%	3.8%	3.1%	2.2%	1.7%	1.1%	1.0%
\$1,000	8.6%	6.5%	5.4%	3.9%	3.0%	2.1%	1.9%
\$1,500	11.3%	8.7%	7.3%	5.4%	4.2%	3.0%	2.7%
\$2,000	13.5%	10.5%	8.9%	6.6%	5.2%	3.8%	3.3%
\$2,500	15.4%	12.1%	10.2%	7.8%	6.1%	4.5%	4.0%
\$5,000	22.6%	18.2%	15.7%	12.4%	10.1%	7.7%	6.7%
\$10,000	32.1%	26.6%	23.5%	19.3%	16.1%	12.8%	11.2%
\$15,000	38.9%	32.8%	29.4%	24.7%	20.9%	17.1%	14.9%
\$20,000	44.3%	37.9%	34.3%	29.2%	25.0%	20.8%	18.1%

Basis of premium applicable in accordance with *Basic Manual* footnote instructions for Code 7370 --"Taxicab Co.":

Employee operated vehicle.....	\$72,900
Leased or rented vehicle.....	\$48,600

Maximum Weekly Payroll applicable in accordance with the *Basic Manual* footnote instructions for Code 9178 -- "Athletic Sports or Park: Non-Contact Sports," and Code 9179 -- "Athletic Sports or Park: Contact Sports"

\$900

Premium Determination for Executive Officers, Members of Limited Liability Companies, Partners and Sole Proprietors in accordance with *Basic Manual* Rule 2-E (Annual Payroll)

\$43,800

Terrorism - (Advisory Loss Cost)

0.005

United States Longshore and Harbor Workers' Compensation Coverage Percentage applicable only in connection with *Basic Manual* Rule 3-A-4.....

85%

(Multiply a Non-F classification loss cost by a factor of 1.85 to adjust for differences in benefits and loss-based expenses. This factor is the product of the adjustment for differences in benefits (1.75) and the adjustment for differences in loss-based expenses (1.055).)

Experience Rating Eligibility

A risk qualifies for experience rating on an intrastate basis when it meets the premium eligibility requirements for the state in which it operates. The eligibility amount varies by rating effective date. The *Experience Rating Plan Manual* should be referenced for the latest approved eligibility amounts by state and by effective date.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Proposed Values for Inclusion in the Experience Rating Plan Manual

The following pages include proposed values for the Experience Rating Plan Manual:

- Table of Weighting Values
- Table of Ballast Values
- Experience rating premium eligibility amounts

Effective January 1, 2020
TABLE OF WEIGHTING VALUES
APPLICABLE TO ALL POLICIES
Experience Rating Program - ERA

Expected Losses			Weighting Values	Expected Losses			Weighting Values
0	--	2,921	0.04	1,647,342	--	1,738,208	0.44
2,922	--	11,809	0.05	1,738,209	--	1,834,336	0.45
11,810	--	20,887	0.06	1,834,337	--	1,936,196	0.46
20,888	--	30,162	0.07	1,936,197	--	2,044,318	0.47
30,163	--	39,639	0.08	2,044,319	--	2,159,299	0.48
39,640	--	66,300	0.09	2,159,300	--	2,281,813	0.49
66,301	--	98,690	0.10	2,281,814	--	2,412,628	0.50
98,691	--	127,500	0.11	2,412,629	--	2,552,618	0.51
127,501	--	155,552	0.12	2,552,619	--	2,702,783	0.52
155,553	--	183,609	0.13	2,702,784	--	2,864,276	0.53
183,610	--	212,010	0.14	2,864,277	--	3,038,430	0.54
212,011	--	240,949	0.15	3,038,431	--	3,226,796	0.55
240,950	--	270,557	0.16	3,226,797	--	3,431,188	0.56
270,558	--	300,932	0.17	3,431,189	--	3,653,744	0.57
300,933	--	332,155	0.18	3,653,745	--	3,896,997	0.58
332,156	--	364,301	0.19	3,896,998	--	4,163,978	0.59
364,302	--	397,440	0.20	4,163,979	--	4,458,337	0.60
397,441	--	431,638	0.21	4,458,338	--	4,784,513	0.61
431,639	--	466,966	0.22	4,784,514	--	5,147,962	0.62
466,967	--	503,493	0.23	5,147,963	--	5,555,461	0.63
503,494	--	541,292	0.24	5,555,462	--	6,015,536	0.64
541,293	--	580,441	0.25	6,015,537	--	6,539,065	0.65
580,442	--	621,019	0.26	6,539,066	--	7,140,148	0.66
621,020	--	663,115	0.27	7,140,149	--	7,837,399	0.67
663,116	--	706,820	0.28	7,837,400	--	8,655,907	0.68
706,821	--	752,232	0.29	8,655,908	--	9,630,314	0.69
752,233	--	799,459	0.30	9,630,315	--	10,809,855	0.70
799,460	--	848,614	0.31	10,809,856	--	12,266,928	0.71
848,615	--	899,822	0.32	12,266,929	--	14,112,548	0.72
899,823	--	953,217	0.33	14,112,549	--	16,526,043	0.73
953,218	--	1,008,945	0.34	16,526,044	--	19,817,164	0.74
1,008,946	--	1,067,165	0.35	19,817,165	--	24,570,996	0.75
1,067,166	--	1,128,049	0.36	24,570,997	--	32,041,291	0.76
1,128,050	--	1,191,787	0.37	32,041,292	--	45,487,805	0.77
1,191,788	--	1,258,586	0.38	45,487,806	--	76,862,980	0.78
1,258,587	--	1,328,675	0.39	76,862,981	--	233,738,780	0.79
1,328,676	--	1,402,302	0.40	233,738,781	AND OVER		0.80
1,402,303	--	1,479,746	0.41				
1,479,747	--	1,561,313	0.42				
1,561,314	--	1,647,341	0.43				

- (a) G 13.95
 - (b) State Per Claim Accident Limitation \$348,500
 - (c) State Multiple Claim Accident Limitation \$697,000
 - (d) USL&HW Per Claim Accident Limitation \$875,500
 - (e) USL&HW Multiple Claim Accident Limitation \$1,751,000
 - (f) Employers Liability Accident Limitation \$55,000
 - (g) Primary/Excess Loss Split Point \$17,500
 - (h) USL&HW Act -- Expected Loss Factor -- Non-F Classes 1.75
- (Multiply a Non-F classification ELR by the USL&HW Act - Expected Loss Factor of 1.75.)

Effective January 1, 2020
TABLE OF BALLAST VALUES
APPLICABLE TO ALL POLICIES
Experience Rating Plan - ERA

Expected Losses	Ballast Values	Expected Losses	Ballast Values	Expected Losses	Ballast Values
0 -- 75,034	34,875	2,407,784 -- 2,477,494	279,000	4,848,327 -- 4,918,066	523,125
75,035 -- 129,141	41,850	2,477,495 -- 2,547,206	285,975	4,918,067 -- 4,987,806	530,100
129,142 -- 191,311	48,825	2,547,207 -- 2,616,921	292,950	4,987,807 -- 5,057,547	537,075
191,312 -- 256,896	55,800	2,616,922 -- 2,686,637	299,925	5,057,548 -- 5,127,287	544,050
256,897 -- 324,076	62,775	2,686,638 -- 2,756,356	306,900	5,127,288 -- 5,197,029	551,025
324,077 -- 392,099	69,750	2,756,357 -- 2,826,075	313,875	5,197,030 -- 5,266,770	558,000
392,100 -- 460,614	76,725	2,826,076 -- 2,895,797	320,850	5,266,771 -- 5,336,511	564,975
460,615 -- 529,440	83,700	2,895,798 -- 2,965,519	327,825	5,336,512 -- 5,406,253	571,950
529,441 -- 598,474	90,675	2,965,520 -- 3,035,243	334,800	5,406,254 -- 5,475,995	578,925
598,475 -- 667,652	97,650	3,035,244 -- 3,104,968	341,775	5,475,996 -- 5,545,738	585,900
667,653 -- 736,935	104,625	3,104,969 -- 3,174,694	348,750	5,545,739 -- 5,615,480	592,875
736,936 -- 806,298	111,600	3,174,695 -- 3,244,421	355,725	5,615,481 -- 5,685,222	599,850
806,299 -- 875,720	118,575	3,244,422 -- 3,314,149	362,700	5,685,223 -- 5,754,965	606,825
875,721 -- 945,191	125,550	3,314,150 -- 3,383,878	369,675	5,754,966 -- 5,824,708	613,800
945,192 -- 1,014,699	132,525	3,383,879 -- 3,453,608	376,650	5,824,709 -- 5,894,451	620,775
1,014,700 -- 1,084,237	139,500	3,453,609 -- 3,523,338	383,625	5,894,452 -- 5,964,195	627,750
1,084,238 -- 1,153,801	146,475	3,523,339 -- 3,593,070	390,600	5,964,196 -- 6,033,938	634,725
1,153,802 -- 1,223,386	153,450	3,593,071 -- 3,662,802	397,575	6,033,939 -- 6,103,682	641,700
1,223,387 -- 1,292,989	160,425	3,662,803 -- 3,732,535	404,550	6,103,683 -- 6,173,425	648,675
1,292,990 -- 1,362,606	167,400	3,732,536 -- 3,802,268	411,525	6,173,426 -- 6,243,169	655,650
1,362,607 -- 1,432,236	174,375	3,802,269 -- 3,872,002	418,500	6,243,170 -- 6,312,913	662,625
1,432,237 -- 1,501,877	181,350	3,872,003 -- 3,941,736	425,475	6,312,914 -- 6,382,657	669,600
1,501,878 -- 1,571,528	188,325	3,941,737 -- 4,011,471	432,450	6,382,658 -- 6,452,401	676,575
1,571,529 -- 1,641,187	195,300	4,011,472 -- 4,081,207	439,425	6,452,402 -- 6,522,146	683,550
1,641,188 -- 1,710,854	202,275	4,081,208 -- 4,150,943	446,400	6,522,147 -- 6,591,890	690,525
1,710,855 -- 1,780,527	209,250	4,150,944 -- 4,220,680	453,375	6,591,891 -- 6,661,125	697,500
1,780,528 -- 1,850,205	216,225	4,220,681 -- 4,290,416	460,350		
1,850,206 -- 1,919,889	223,200	4,290,417 -- 4,360,154	467,325		
1,919,890 -- 1,989,578	230,175	4,360,155 -- 4,429,892	474,300		
1,989,579 -- 2,059,270	237,150	4,429,893 -- 4,499,630	481,275		
2,059,271 -- 2,128,967	244,125	4,499,631 -- 4,569,368	488,250		
2,128,968 -- 2,198,667	251,100	4,569,369 -- 4,639,107	495,225		
2,198,668 -- 2,268,369	258,075	4,639,108 -- 4,708,846	502,200		
2,268,370 -- 2,338,075	265,050	4,708,847 -- 4,778,586	509,175		
2,338,076 -- 2,407,783	272,025	4,778,587 -- 4,848,326	516,150		

For Expected Losses greater than \$6,661,125, the Ballast Value can be calculated using the following formula (rounded to the nearest 1):

$$\text{Ballast} = (0.10)(\text{Expected Losses}) + 2500(\text{Expected Losses})(13.95) / (\text{Expected Losses} + (700)(13.95))$$

G = 13.95

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

MISSOURI—UPDATE TO EXPERIENCE RATING PREMIUM ELIGIBILITY AMOUNTS

EXPERIENCE RATING PLAN MANUAL—2003 EDITION RULE 2—EXPERIENCE RATING ELEMENTS AND FORMULA A. PREMIUM ELIGIBILITY

2. State Subject Premium Eligibility Amounts

A risk qualifies for experience rating when its subject premium, developed in its experience period, meets or exceeds the minimum eligibility amount shown in the State Table of Subject Premium Eligibility Amounts in Rule 2-A-2-c. *Refer to Rule 2-E-1 to determine a risk's experience period.*

- a. A risk qualifies for experience rating if its data within the most recent 24 months of the experience period develops a subject premium of at least the amount shown in Column A.
- b. A risk may not qualify according to Rule 2-A-2-a. If it has more than the amount of experience referenced in Rule 2-A-2-a, then to qualify for experience rating the risk must develop an average annual subject premium of at least the amount shown in Column B. *Refer to Rule 2-A-3 to determine average annual subject premium.*
- c. A risk's rating effective date determines the applicable Column A and Column B subject premium eligibility amounts required to qualify for experience rating. *Refer to Rule 2-B for rating effective date determination.*

State Table of Subject Premium Eligibility Amounts

State	Rating Effective Date	Column A (\$)	Column B (\$)
MO	<u>7/1/20 and after</u>	<u>7,500</u>	<u>3,750</u>
	<u>7/1/19 - 6/30/20</u>	7,500	3,750
	<u>7/1/18 - 6/30/19</u>	7,500	3,750

NOTE: This exhibit revises the Missouri experience rating subject premium eligibility amounts shown in the State Table of Subject Premium Eligibility Amounts in NCCI's *Experience Rating Plan Manual* national Rule 2-A-2. The content shown in this table is not a complete replacement of the existing State Table of Subject Premium Eligibility Amounts. The premium eligibility amounts are applicable to all policies.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Proposed Values for Inclusion in the Retrospective Rating Plan Manual

The following pages include values for inclusion in the Retrospective Rating Plan Manual:

- Average Cost per Case
- Average Cost per Case including ALAE
- Excess Loss Pure Premium Factors
- Excess Loss and Allocated Expense Pure Premium Factors

**RETROSPECTIVE RATING PLAN MANUAL
STATE SPECIAL RATING VALUES**

MISSOURI

Effective January 1, 2020

1. Average Cost per Case by Hazard Group

A	B	C	D	E	F	G
8,477	11,598	14,218	20,251	27,412	40,910	45,088

Average Cost per Case including ALAE by Hazard Group

A	B	C	D	E	F	G
9,460	12,930	15,829	22,515	30,432	45,357	49,856

2.

Excess Loss Pure Premium Factors
(Applicable to New and Renewal Policies)

Per Accident Limitation	Hazard Groups						
	A	B	C	D	E	F	G
\$10,000	0.572	0.618	0.644	0.679	0.706	0.734	0.748
\$15,000	0.515	0.565	0.594	0.634	0.666	0.698	0.717
\$20,000	0.469	0.523	0.553	0.596	0.631	0.667	0.689
\$25,000	0.431	0.487	0.518	0.563	0.601	0.640	0.665
\$30,000	0.400	0.456	0.488	0.534	0.574	0.615	0.643
\$35,000	0.372	0.429	0.461	0.508	0.550	0.592	0.623
\$40,000	0.349	0.405	0.438	0.485	0.528	0.572	0.605
\$50,000	0.311	0.365	0.398	0.446	0.491	0.536	0.572
\$75,000	0.245	0.296	0.328	0.374	0.420	0.466	0.508
\$100,000	0.204	0.250	0.281	0.325	0.370	0.416	0.460
\$125,000	0.174	0.218	0.247	0.289	0.333	0.378	0.424
\$150,000	0.152	0.193	0.222	0.261	0.305	0.348	0.395
\$175,000	0.135	0.174	0.201	0.239	0.281	0.323	0.370
\$200,000	0.122	0.158	0.185	0.221	0.262	0.303	0.350
\$225,000	0.111	0.145	0.171	0.206	0.246	0.285	0.333
\$250,000	0.102	0.134	0.159	0.193	0.232	0.270	0.317
\$275,000	0.094	0.125	0.149	0.182	0.220	0.257	0.304
\$300,000	0.087	0.117	0.140	0.172	0.209	0.245	0.292
\$325,000	0.082	0.110	0.133	0.163	0.199	0.234	0.281
\$350,000	0.077	0.104	0.126	0.156	0.191	0.225	0.271
\$375,000	0.072	0.098	0.120	0.149	0.183	0.216	0.262
\$400,000	0.069	0.093	0.115	0.143	0.176	0.209	0.254
\$425,000	0.065	0.089	0.110	0.137	0.170	0.202	0.247
\$450,000	0.062	0.085	0.106	0.132	0.164	0.195	0.240
\$475,000	0.059	0.082	0.102	0.127	0.159	0.189	0.233
\$500,000	0.057	0.079	0.098	0.123	0.154	0.184	0.227
\$600,000	0.049	0.068	0.086	0.109	0.138	0.165	0.207
\$700,000	0.043	0.060	0.077	0.098	0.125	0.150	0.191
\$800,000	0.038	0.054	0.070	0.090	0.115	0.139	0.178
\$900,000	0.035	0.050	0.065	0.083	0.107	0.129	0.167
\$1,000,000	0.032	0.046	0.060	0.077	0.100	0.121	0.158
\$2,000,000	0.018	0.027	0.036	0.048	0.064	0.078	0.105
\$3,000,000	0.012	0.019	0.026	0.035	0.048	0.059	0.081
\$4,000,000	0.009	0.015	0.021	0.028	0.038	0.047	0.066
\$5,000,000	0.007	0.012	0.016	0.022	0.031	0.039	0.055
\$6,000,000	0.006	0.010	0.014	0.019	0.026	0.033	0.047
\$7,000,000	0.005	0.008	0.011	0.016	0.022	0.028	0.041
\$8,000,000	0.004	0.007	0.010	0.013	0.019	0.025	0.036
\$9,000,000	0.003	0.006	0.008	0.012	0.017	0.022	0.031
\$10,000,000	0.003	0.005	0.007	0.010	0.014	0.019	0.028

Effective January 1, 2020

**Excess Loss and Allocated
Expense Pure Premium Factors**
(Applicable to New and Renewal Policies)

Per Accident Limitation	Hazard Groups						
	A	B	C	D	E	F	G
\$10,000	0.648	0.697	0.725	0.763	0.792	0.821	0.835
\$15,000	0.585	0.640	0.671	0.714	0.748	0.783	0.802
\$20,000	0.534	0.593	0.626	0.673	0.711	0.749	0.772
\$25,000	0.492	0.553	0.588	0.636	0.678	0.720	0.746
\$30,000	0.457	0.519	0.554	0.604	0.648	0.693	0.722
\$35,000	0.426	0.489	0.525	0.576	0.622	0.668	0.700
\$40,000	0.400	0.462	0.498	0.550	0.598	0.645	0.680
\$50,000	0.356	0.418	0.454	0.506	0.555	0.605	0.644
\$75,000	0.282	0.339	0.374	0.425	0.476	0.527	0.572
\$100,000	0.234	0.287	0.320	0.369	0.419	0.470	0.518
\$125,000	0.201	0.249	0.282	0.328	0.377	0.427	0.477
\$150,000	0.176	0.221	0.253	0.297	0.345	0.393	0.444
\$175,000	0.157	0.199	0.230	0.272	0.318	0.365	0.416
\$200,000	0.141	0.181	0.211	0.251	0.296	0.342	0.393
\$225,000	0.129	0.167	0.195	0.234	0.278	0.322	0.374
\$250,000	0.118	0.154	0.182	0.219	0.262	0.305	0.356
\$275,000	0.109	0.144	0.170	0.207	0.248	0.290	0.341
\$300,000	0.102	0.135	0.160	0.195	0.236	0.276	0.327
\$325,000	0.095	0.127	0.152	0.186	0.226	0.264	0.315
\$350,000	0.089	0.120	0.144	0.177	0.216	0.254	0.304
\$375,000	0.084	0.113	0.137	0.169	0.207	0.244	0.294
\$400,000	0.080	0.108	0.131	0.162	0.200	0.235	0.285
\$425,000	0.076	0.103	0.126	0.156	0.192	0.227	0.277
\$450,000	0.072	0.098	0.121	0.150	0.186	0.220	0.269
\$475,000	0.069	0.094	0.116	0.145	0.180	0.213	0.262
\$500,000	0.066	0.090	0.112	0.140	0.174	0.207	0.255
\$600,000	0.056	0.078	0.098	0.124	0.156	0.186	0.232
\$700,000	0.049	0.069	0.088	0.111	0.142	0.169	0.214
\$800,000	0.044	0.062	0.080	0.102	0.130	0.156	0.199
\$900,000	0.040	0.057	0.073	0.094	0.121	0.145	0.187
\$1,000,000	0.037	0.052	0.068	0.087	0.113	0.136	0.177
\$2,000,000	0.021	0.031	0.041	0.054	0.072	0.087	0.118
\$3,000,000	0.014	0.022	0.030	0.040	0.054	0.066	0.091
\$4,000,000	0.011	0.017	0.024	0.032	0.043	0.053	0.075
\$5,000,000	0.009	0.014	0.019	0.026	0.036	0.044	0.063
\$6,000,000	0.007	0.011	0.016	0.022	0.030	0.038	0.054
\$7,000,000	0.006	0.010	0.013	0.018	0.026	0.033	0.047
\$8,000,000	0.005	0.008	0.011	0.016	0.022	0.029	0.041
\$9,000,000	0.004	0.007	0.010	0.014	0.019	0.025	0.037
\$10,000,000	0.003	0.006	0.008	0.012	0.017	0.022	0.032



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Part 3 Supporting Exhibits

- Exhibit I: Determination of the Indicated Loss Cost Level Change
- Exhibit II: Workers Compensation Loss Adjustment Expense
- Appendix A: Factors Underlying the Proposed Loss Cost Level Change
- Appendix B: Calculations Underlying the Loss Cost Change by Classification
- Appendix C: Memoranda for Laws and Assessments
- Appendix D: Derivation of Experience Rating Values



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Exhibit I – Determination of Indicated Loss Cost Level Change

NCCI uses the following general methodology to determine the indicated change based on experience, trend, and benefits for each of the policy years in the experience period:

1. Standard earned premium at Designated Statistical Reporting (DSR) level is developed to ultimate and on-leveled to the current loss cost level
2. Reported indemnity and medical losses are limited by a large loss threshold, developed to ultimate using limited development factors, and on-leveled to a common benefit level to yield adjusted limited losses
3. Limited indemnity and medical cost ratios excluding trend and benefits are calculated as adjusted losses (step 2) divided by premium available for benefit costs (step 1)
4. Trend factors are applied to the indemnity and medical cost ratios to reflect expected differences between the historical experience years and the effective period of the proposed filing
5. An excess provision is applied to adjust the limited cost ratios to an unlimited basis
6. A factor is applied to reflect the impact of proposed indemnity and medical benefit changes
7. The projected unlimited indemnity and medical cost ratios including benefit changes are added to yield the indicated change based on experience, trend, and benefits

The indicated change based on experience, trend, and benefits for this filing is calculated as the average of the indicated changes for each of the individual policy years in the experience period. Lastly, the impact of the change in loss-based expenses is applied. The detailed calculations can be found on the following pages.



MISSOURI

EXHIBIT I

Determination of Indicated Loss Cost Level Change

Section A - Policy Year 2017 Experience

Premium:

(1) Standard Earned Premium Developed to Ultimate (Appendix A-II)	\$657,186,308
(2) Premium On-level Factor (Appendix A-I)	0.776
(3) Pure Premium Available for Benefit Costs = (1) x (2)	\$509,976,575

Indemnity Benefit Cost:

(4) Limited Indemnity Losses Developed to Ultimate (Appendix A-II)	\$214,801,026
(5) Indemnity Loss On-level Factor (Appendix A-I)	1.000
(6) Adjusted Limited Indemnity Losses = (4) x (5)	\$214,801,026
(7) Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.421
(8) Factor to Reflect Indemnity Trend (Appendix A-III)	0.941
(9) Projected Limited Indemnity Cost Ratio = (7) x (8)	0.396
(10) Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis (Appendix A-II)	1.011
(11) Projected Indemnity Cost Ratio = (9) x (10)	0.400
(12) Factor to Reflect Proposed Changes in Indemnity Benefits (Appendix C)	1.000
(13) Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.400

Medical Benefit Cost:

(14) Limited Medical Losses Developed to Ultimate (Appendix A-II)	\$310,955,874
(15) Medical Loss On-level Factor (Appendix A-I)	1.000
(16) Adjusted Limited Medical Losses = (14) x (15)	\$310,955,874
(17) Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.610
(18) Factor to Reflect Medical Trend (Appendix A-III)	0.970
(19) Projected Limited Medical Cost Ratio = (17) x (18)	0.592
(20) Factor to Adjust Medical Cost Ratio to an Unlimited Basis (Appendix A-II)	1.011
(21) Projected Medical Cost Ratio = (19) x (20)	0.599
(22) Factor to Reflect Proposed Changes in Medical Benefits (Appendix C)	1.000
(23) Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.599

Total Benefit Cost:

(24) Indicated Change Based on Experience, Trend and Benefits = (13) + (23)	0.999
---	-------



MISSOURI

EXHIBIT I

Determination of Indicated Loss Cost Level Change

Section B - Policy Year 2016 Experience

Premium:

(1) Standard Earned Premium Developed to Ultimate (Appendix A-II)	\$653,024,823
(2) Premium On-level Factor (Appendix A-I)	0.738
(3) Pure Premium Available for Benefit Costs = (1) x (2)	\$481,932,319

Indemnity Benefit Cost:

(4) Limited Indemnity Losses Developed to Ultimate (Appendix A-II)	\$210,979,292
(5) Indemnity Loss On-level Factor (Appendix A-I)	1.000
(6) Adjusted Limited Indemnity Losses = (4) x (5)	\$210,979,292
(7) Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.438
(8) Factor to Reflect Indemnity Trend (Appendix A-III)	0.922
(9) Projected Limited Indemnity Cost Ratio = (7) x (8)	0.404
(10) Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis (Appendix A-II)	1.011
(11) Projected Indemnity Cost Ratio = (9) x (10)	0.408
(12) Factor to Reflect Proposed Changes in Indemnity Benefits (Appendix C)	1.000
(13) Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.408

Medical Benefit Cost:

(14) Limited Medical Losses Developed to Ultimate (Appendix A-II)	\$279,635,411
(15) Medical Loss On-level Factor (Appendix A-I)	1.000
(16) Adjusted Limited Medical Losses = (14) x (15)	\$279,635,411
(17) Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.580
(18) Factor to Reflect Medical Trend (Appendix A-III)	0.961
(19) Projected Limited Medical Cost Ratio = (17) x (18)	0.557
(20) Factor to Adjust Medical Cost Ratio to an Unlimited Basis (Appendix A-II)	1.011
(21) Projected Medical Cost Ratio = (19) x (20)	0.563
(22) Factor to Reflect Proposed Changes in Medical Benefits (Appendix C)	1.000
(23) Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.563

Total Benefit Cost:

(24) Indicated Change Based on Experience, Trend and Benefits = (13) + (23)	0.971
---	-------



MISSOURI

EXHIBIT I

Determination of Indicated Loss Cost Level Change

Section C - Indicated Change Based on Experience, Trend, and Benefits

(1) Policy Year 2017 Indicated Change Based on Experience, Trend, and Benefits	0.999
(2) Policy Year 2016 Indicated Change Based on Experience, Trend, and Benefits	0.971
(3) Indicated Change Based on Experience, Trend, and Benefits = $[(1)+(2)] / 2$	0.985

Section D - Application of the Change in Loss-based Expenses

(1) Indicated Loss Cost Level Change	0.985
(2) Effect of the Change in Loss-based Expenses (Exhibit II)	0.999
(3) Indicated Change Modified to Reflect the Change in Loss-based Expenses = (1) x (2)	0.984

Section E - Distribution of Overall Loss Cost Level Change to Industry Groups

Industry Group Differentials (Appendix A-IV):

Manufacturing	1.009
Contracting	0.999
Office & Clerical	1.000
Goods & Services	0.997
Miscellaneous	0.998

Applying these industry group differentials to the final overall loss cost level change produces the changes in loss cost level proposed for each group as shown:

Industry Group	(1) Final Overall Loss Cost Level Change	(2) Industry Group Differential	(3) = (1) x (2) Final Loss Cost Level Change by Industry Group	
Manufacturing	0.984	1.009	0.993	(-0.7%)
Contracting	0.984	0.999	0.983	(-1.7%)
Office & Clerical	0.984	1.000	0.984	(-1.6%)
Goods & Services	0.984	0.997	0.981	(-1.9%)
Miscellaneous	0.984	0.998	0.982	(-1.8%)
Overall	0.984	1.000	0.984	(-1.6%)



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Exhibit II – Workers Compensation Loss Adjustment Expenses

The proposed loss costs include a provision for loss adjustment expenses (LAE).

LAE is included in the loss costs by using a ratio of loss adjustment expense dollars to loss dollars (called the LAE provision). These expenses are directly associated with the handling of workers compensation claims. The LAE provision is comprised of two components: Adjusting and Other Expenses (AOE) and Defense and Cost Containment Expenses (DCCE).

Given the nature of AOE, it cannot be allocated to a specific claim, and hence cannot be accurately attributed to specific states. Therefore, the Missouri-specific AOE ratio reflects a weighting of the latest selected countrywide AOE provision (which was calculated based on private carrier data) and an AOE provision calculated based on the state fund's data. The countrywide provision was calculated using data obtained from the NCCI Call for Loss Adjustment Expense. The accident year developed AOE ratios displayed in Section B are calculated on a countrywide basis using private carrier-only data.

NCCI used the following general methodology to determine the proposed DCCE provision based on Missouri-specific paid DCCE and losses reported on the NCCI Call for Policy Year Data:

- Ratios of reported paid DCCE-to-paid losses by policy year are developed to a 19th report using DCCE ratio development factors.
- A 19th-to-ultimate tail factor is applied to reflect expected development beyond a 19th report.
- The proposed DCCE provision is selected based on the ultimate projected DCCE ratios by policy year.

These policy year DCCE ratios were calculated using combined private carrier and state fund data.

The calculation of the loss adjustment expense provision is shown on the following pages.



MISSOURI

EXHIBIT II

Workers Compensation Loss Adjustment Expense Provision

Section A - Proposed Change in Missouri Loss Adjustment Expense Provision

NCCI proposes an 18.7% loss adjustment expense allowance as a percentage of incurred losses. This represents a 0.1% decrease from the current loss adjustment expense provision.

	(1)	(2)
Missouri		
<u>Provisions</u>	<u>Current</u>	<u>Proposed</u>
AOE	8.1%	8.4%
DCCE	10.7%	10.3%
Total LAE	18.8%	18.7%

$$\begin{aligned} \text{Proposed Change in Missouri LAE Provision} & \quad 0.999 \\ = [1.0 + (2)] / [1.0 + (1)] - 1 & \quad \mathbf{-0.1\%} \end{aligned}$$

Section B - Selection of AOE Provision

The adjusting and other expense data by accident year shown below is based on countrywide data for private carriers. NCCI's countrywide selection for the AOE provision is 8.0%

<u>Accident Year</u>	<u>Ultimate AOE Ratio</u>
2014	6.9%
2015	7.2%
2016	7.7%
2017	8.1%
2018	7.9%
Countrywide Selected	8.0%
Missouri Selected	8.4%



MISSOURI

EXHIBIT II

Workers Compensation Loss Adjustment Expense Provision

Section C - Selection of DCCE Provision

<u>Policy Year</u>	(1) Reported Ratio of Paid DCCE to <u>Paid Losses</u>	(2) Age to Ultimate Development <u>Factor</u>	(3) Ultimate DCCE <u>Ratio</u>
2013	10.9%	0.968	10.6%
2014	11.3%	0.971	11.0%
2015	10.5%	0.975	10.2%
2016	10.2%	0.995	10.1%
2017	8.9%	1.064	9.5%
Missouri Selected			10.3%

(2) Section D

(3) = (1) x (2)

Section D - Summary of Paid DCCE to Paid Loss Ratio Development Factors

<u>Report</u>	(1) <u>DCCE Ratio Development</u>	
	<u>To Next Report</u>	<u>To Ultimate</u>
1st	1.069	1.064
2nd	1.021	0.995
3rd	1.004	0.975
4th	1.003	0.971
5th	0.997	0.968
6th	0.997	0.971
7th	0.999	0.974
8th	0.999	0.975
9th	0.997	0.976
10th	0.997	0.979
11th	0.998	0.982
12th	0.998	0.984
13th	0.997	0.986
14th	0.998	0.989
15th	1.000	0.991
16th	0.996	0.991
17th	0.999	0.995
18th	0.996	0.996
19th		1.000*

(1) Section E

(2) = Cumulative upward product of column (1).

*Selection



MISSOURI

EXHIBIT II

Workers Compensation Loss Adjustment Expense Provision

Section E - Paid DCCE to Paid Loss Ratio Development Factors

<u>Valuation</u>	<u>1st/2nd</u>	<u>2nd/3rd</u>	<u>3rd/4th</u>	<u>4th/5th</u>	<u>5th/6th</u>	<u>6th/7th</u>
12/31/2016	1.036	1.003	0.996	0.999	0.998	1.001
12/31/2017	1.070	1.025	0.998	1.006	0.999	0.997
12/31/2018	1.100	1.035	1.019	1.003	0.995	0.993
Average	1.069	1.021	1.004	1.003	0.997	0.997

<u>Valuation</u>	<u>7th/8th</u>	<u>8th/9th</u>	<u>9th/10th</u>	<u>10th/11th</u>	<u>11th/12th</u>	<u>12th/13th</u>
12/31/2016	1.000	1.002	0.998	0.997	0.999	1.000
12/31/2017	0.999	0.999	1.001	0.999	0.998	0.998
12/31/2018	0.997	0.997	0.993	0.996	0.998	0.995
Average	0.999	0.999	0.997	0.997	0.998	0.998

<u>Valuation</u>	<u>13th/14th</u>	<u>14th/15th</u>	<u>15th/16th</u>	<u>16th/17th</u>	<u>17th/18th</u>	<u>18th/19th</u>
12/31/2016	0.998	1.000	0.999	0.994	0.998	0.992
12/31/2017	0.998	0.998	1.000	0.999	0.999	0.997
12/31/2018	0.995	0.997	1.001	0.995	0.999	0.999
Average	0.997	0.998	1.000	0.996	0.999	0.996



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Appendix A – Factors Underlying the Proposed Loss Cost Level Change

Appendix A-I Determination of Policy Year On-level Factors

NCCI uses premium and loss on-level factors to adjust historical policy year experience to current loss cost and benefit levels, respectively.

Premium on-level factors are adjustment factors that reflect the cumulative impact of all premium level changes that have occurred during and after the individual year being on-leveled. To calculate a weighted average, NCCI utilizes a monthly premium distribution for Missouri based on an analysis of policies reported in the Unit Statistical Data. Additional adjustments applied as part of the premium on-level factor calculation include:

- Adjustment for Expense Removal: This factor is applied to remove expenses from the reported voluntary DSR level premium totals.
- Experience Rating Off-Balance Adjustment Factor: This factor reflects the relative difference between the average experience rating modification for the historical year being on-leveled and the average experience rating modification targeted in the filing.

Loss on-level factors are adjustment factors that reflect the cumulative impact of all benefit level changes that have occurred during and after the individual year of data being on-leveled.

Note: For NCCI ratemaking purposes, proposed benefit level changes that (i) do not impact the experience period of the filing and (ii) have not yet been reflected in previous filings are included in Exhibit I, rather than in the loss on-level calculation.



MISSOURI
APPENDIX A-I

Determination of Policy Year On-level Factors

Section A - Factor Adjusting 2017 Policy Year Premium to Present Level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Loss Cost Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)	Adj. For Expense Removal	Off-balance Adjustment Factor*	Premium Adjustment Factor (5)x(6)x(7)
Date								
NR 01/01/17	Base	1.000	0.661	0.661	0.911	0.842	1.012	0.776
NR 08/01/17	0.960	0.960	0.339	0.325				
NR 01/01/18	0.970	0.931						
NR 01/01/19	0.965	0.898						
				0.986				

Section B - Factor Adjusting 2017 Policy Year Indemnity Losses to Present Benefit Level

	(1)	(2)	(3)	(4)	(5)
	Benefit Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)
Date					
01/01/14	Base	1.000	1.000	1.000	1.000
				1.000	

Section C - Factor Adjusting 2017 Policy Year Medical Losses to Present Benefit Level

	(1)	(2)	(3)	(4)	(5)
	Benefit Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)
Date					
01/01/14	Base	1.000	1.000	1.000	1.000
				1.000	

NR New and renewal business.

* 1.012 = 0.962 / 0.951 = (Targeted Off-balance) / (Off-balance for Policy Year 2017)



MISSOURI
APPENDIX A-I

Determination of Policy Year On-level Factors

Section D - Factor Adjusting 2016 Policy Year Premium to Present Level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Loss Cost Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)	Adj. For Expense Removal	Off-balance Adjustment Factor*	Premium Adjustment Factor (5)x(6)x(7)
Date								
NR 01/01/16	Base	1.000	1.000	1.000	0.865	0.842	1.014	0.738
NR 01/01/17	0.963	0.963						
NR 08/01/17	0.960	0.924						
NR 01/01/18	0.970	0.896						
NR 01/01/19	0.965	0.865						
				<u>1.000</u>				

Section E - Factor Adjusting 2016 Policy Year Indemnity Losses to Present Benefit Level

	(1)	(2)	(3)	(4)	(5)
	Benefit Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)
Date					
01/01/14	Base	1.000	1.000	1.000	1.000
				<u>1.000</u>	

Section F - Factor Adjusting 2016 Policy Year Medical Losses to Present Benefit Level

	(1)	(2)	(3)	(4)	(5)
	Benefit Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)
Date					
01/01/14	Base	1.000	1.000	1.000	1.000
				<u>1.000</u>	

NR New and renewal business.

* 1.014 = 0.962 / 0.949 = (Targeted Off-balance) / (Off-balance for Policy Year 2016)



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Appendix A – Factors Underlying the Proposed Loss Cost Level Change

Appendix A-II Determination of Premium and Losses Developed to an Ultimate Report

Development factors are used to project premium and limited losses to an ultimate report. In general, the ultimate development factors are based on a chain-ladder approach that utilizes average link ratios for several maturities and the application of a tail factor, as shown in Appendix A-II Sections A through J.

Limited Large Loss Methodology

In order to limit volatility on the loss cost indications due to the impact of extraordinary large losses, a limited large loss methodology is used in Missouri. A base threshold for the large loss limitation is determined by the volume of premium in the state as well as the number of years used in the experience period. The base threshold proposed in this filing is \$9,720,476, based on the volume of premium in policy years 2015 and 2016 underlying the previous filing that utilizes data valued as of 12/31/2017. The base threshold is detrended by policy year to reflect the inflationary impact on claim costs due to wage inflation. The wage index used as a basis for these calculations is the Missouri average weekly wages from the Quarterly Census of Employment and Wages (QCEW). Detrended thresholds are used in the experience period, trend period, and loss development period. Indemnity and medical losses are limited at the detrended large loss threshold corresponding to their policy year, as shown in Appendix A-II Section L.

Limited indemnity and medical losses used to calculate the ultimate losses are shown in Appendix A-II Section A. After developing limited indemnity and medical losses to an ultimate report, a statewide excess ratio at the base threshold is used to adjust the limited losses to an unlimited basis. The proposed excess ratio in this filing is 1.1%, as shown in Appendix A-II Section K.

Development Factors

For premium development, link ratios are used from 1st report through 5th report. It is assumed that no further development occurs after the 5th report.

For indemnity and medical loss development, link ratios calculated from limited losses are used from 1st report through the 19th report.

For indemnity and medical loss development past the 19th report, a “tail” factor is used to reflect all future expected emergence. The calculation of indemnity and medical paid + case 19th-to-ultimate tail factors utilize all available experience for the years prior to the tail attachment point. Tail factors are calculated for the most recent ten available policy years, each relying on losses in older policy years as well as a factor to adjust for the differences in the volume of losses



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Appendix A – Factors Underlying the Proposed Loss Cost Level Change

between the policy years. Tail factors are calculated separately for indemnity and medical losses by comparing the changes in the volume of policy year losses that occur on policy years reported after a nineteenth report to the volume of policy year losses at the nineteenth report, along with the application of a growth adjustment factor.

Since unlimited losses are used for the tail factor, they are adjusted to a limited basis as shown in Appendix A-II Section H.



MISSOURI

APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section A - Premium and Loss Summary Valued as of 12/31/2018

Policy Year 2017

(1) Standard Earned Premium	\$652,617,982
(2) Factor to Develop Premium to Ultimate	1.007
(3) Standard Earned Premium Developed to Ultimate = (1)x(2)	\$657,186,308
(4) Limited Indemnity Paid Losses	\$59,625,302
(5) Limited Indemnity Paid Development Factor to Ultimate	3.687
(6) Limited Indemnity Paid Losses Developed to Ultimate = (4)x(5)	\$219,838,488
(7) Limited Indemnity Paid+Case Losses	\$150,909,038
(8) Limited Indemnity Paid+Case Development Factor to Ultimate	1.390
(9) Limited Indemnity Paid+Case Losses Developed to Ultimate = (7)x(8)	\$209,763,563
(10) Policy Year 2017 Limited Indemnity Losses Developed to Ultimate = [(6)+(9)]/2	\$214,801,026
(11) Limited Medical Paid Losses	\$201,394,199
(12) Limited Medical Paid Development Factor to Ultimate	1.536
(13) Limited Medical Paid Losses Developed to Ultimate = (11)x(12)	\$309,341,490
(14) Limited Medical Paid+Case Losses	\$297,685,959
(15) Limited Medical Paid+Case Development Factor to Ultimate	1.050
(16) Limited Medical Paid+Case Losses Developed to Ultimate = (14)x(15)	\$312,570,257
(17) Policy Year 2017 Limited Medical Losses Developed to Ultimate = [(13)+(16)]/2	\$310,955,874

Policy Year 2016

(1) Standard Earned Premium	\$653,024,823
(2) Factor to Develop Premium to Ultimate	1.000
(3) Standard Earned Premium Developed to Ultimate = (1)x(2)	\$653,024,823
(4) Limited Indemnity Paid Losses	\$105,920,774
(5) Limited Indemnity Paid Development Factor to Ultimate	2.028
(6) Limited Indemnity Paid Losses Developed to Ultimate = (4)x(5)	\$214,807,330
(7) Limited Indemnity Paid+Case Losses	\$168,689,946
(8) Limited Indemnity Paid+Case Development Factor to Ultimate	1.228
(9) Limited Indemnity Paid+Case Losses Developed to Ultimate = (7)x(8)	\$207,151,254
(10) Policy Year 2016 Limited Indemnity Losses Developed to Ultimate = [(6)+(9)]/2	\$210,979,292
(11) Limited Medical Paid Losses	\$221,051,055
(12) Limited Medical Paid Development Factor to Ultimate	1.252
(13) Limited Medical Paid Losses Developed to Ultimate = (11)x(12)	\$276,755,921
(14) Limited Medical Paid+Case Losses	\$275,355,653
(15) Limited Medical Paid+Case Development Factor to Ultimate	1.026
(16) Limited Medical Paid+Case Losses Developed to Ultimate = (14)x(15)	\$282,514,900
(17) Policy Year 2016 Limited Medical Losses Developed to Ultimate = [(13)+(16)]/2	\$279,635,411



MISSOURI
APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section B - Premium Development Factors

<u>Policy Year</u>	<u>1st/2nd</u>	<u>Policy Year</u>	<u>2nd/3rd</u>	<u>Policy Year</u>	<u>3rd/4th</u>	<u>Policy Year</u>	<u>4th/5th</u>
2014	1.008	2013	1.000	2012	1.000	2011	1.000
2015	1.008	2014	1.000	2013	1.000	2012	1.000
2016	1.005	2015	0.999	2014	1.000	2013	1.001
Average	1.007	Average	1.000	Average	1.000	Average	1.000

Summary of Premium Development Factors

<u>1st/5th</u>	<u>2nd/5th</u>	<u>3rd/5th</u>	<u>4th/5th</u>
1.007	1.000	1.000	1.000



MISSOURI
APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section C - Limited Indemnity Paid Loss Development Factors

<u>Policy Year</u>	<u>1st/2nd</u>	<u>Policy Year</u>	<u>2nd/3rd</u>	<u>Policy Year</u>	<u>3rd/4th</u>	<u>Policy Year</u>	<u>4th/5th</u>
2014	1.869	2013	1.327	2012	1.155	2011	1.092
2015	1.805	2014	1.268	2013	1.182	2012	1.087
2016	1.781	2015	1.282	2014	1.117	2013	1.073
Average	1.818	Average	1.292	Average	1.151	Average	1.084
<u>Policy Year</u>	<u>5th/6th</u>	<u>Policy Year</u>	<u>6th/7th</u>	<u>Policy Year</u>	<u>7th/8th</u>	<u>Policy Year</u>	<u>8th/9th</u>
2010	1.051	2009	1.026	2008	1.019	2007	1.016
2011	1.060	2010	1.033	2009	1.023	2008	1.020
2012	1.052	2011	1.045	2010	1.021	2009	1.017
Average	1.054	Average	1.035	Average	1.021	Average	1.018
<u>Policy Year</u>	<u>9th/10th</u>	<u>Policy Year</u>	<u>10th/11th</u>	<u>Policy Year</u>	<u>11th/12th</u>	<u>Policy Year</u>	<u>12th/13th</u>
2006	1.009	2005	1.010	2004	1.007	2003	1.005
2007	1.021	2006	1.008	2005	1.008	2004	1.006
2008	1.020	2007	1.013	2006	1.010	2005	1.006
Average	1.017	Average	1.010	Average	1.008	Average	1.006
<u>Policy Year</u>	<u>13th/14th</u>	<u>Policy Year</u>	<u>14th/15th</u>	<u>Policy Year</u>	<u>15th/16th</u>	<u>Policy Year</u>	<u>16th/17th</u>
2002	1.003	2001	1.003	2000	1.004	1999	1.007
2003	1.007	2002	1.004	2001	1.006	2000	1.003
2004	1.012	2003	1.007	2002	1.003	2001	1.004
Average	1.007	Average	1.005	Average	1.004	Average	1.005
<u>Policy Year</u>	<u>17th/18th</u>	<u>Policy Year</u>	<u>18th/19th</u>				
1998	1.004	1997	1.004				
1999	1.002	1998	1.007				
2000	1.004	1999	1.002				
Average	1.003	Average	1.004				



MISSOURI
APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section D - Limited Medical Paid Loss Development Factors

<u>Policy Year</u>	<u>1st/2nd</u>	<u>Policy Year</u>	<u>2nd/3rd</u>	<u>Policy Year</u>	<u>3rd/4th</u>	<u>Policy Year</u>	<u>4th/5th</u>
2014	1.241	2013	1.064	2012	1.030	2011	1.020
2015	1.236	2014	1.061	2013	1.027	2012	1.019
2016	1.204	2015	1.058	2014	1.021	2013	1.016
Average	1.227	Average	1.061	Average	1.026	Average	1.018
<u>Policy Year</u>	<u>5th/6th</u>	<u>Policy Year</u>	<u>6th/7th</u>	<u>Policy Year</u>	<u>7th/8th</u>	<u>Policy Year</u>	<u>8th/9th</u>
2010	1.012	2009	1.010	2008	1.012	2007	1.004
2011	1.018	2010	1.010	2009	1.006	2008	1.004
2012	1.015	2011	1.013	2010	1.008	2009	1.006
Average	1.015	Average	1.011	Average	1.009	Average	1.005
<u>Policy Year</u>	<u>9th/10th</u>	<u>Policy Year</u>	<u>10th/11th</u>	<u>Policy Year</u>	<u>11th/12th</u>	<u>Policy Year</u>	<u>12th/13th</u>
2006	1.004	2005	1.005	2004	1.004	2003	1.004
2007	1.004	2006	1.003	2005	1.004	2004	1.004
2008	1.012	2007	1.005	2006	1.005	2005	1.005
Average	1.007	Average	1.004	Average	1.004	Average	1.004
<u>Policy Year</u>	<u>13th/14th</u>	<u>Policy Year</u>	<u>14th/15th</u>	<u>Policy Year</u>	<u>15th/16th</u>	<u>Policy Year</u>	<u>16th/17th</u>
2002	1.007	2001	1.004	2000	1.001	1999	1.008
2003	1.002	2002	1.004	2001	1.005	2000	1.002
2004	1.004	2003	1.004	2002	1.003	2001	1.003
Average	1.004	Average	1.004	Average	1.003	Average	1.004
<u>Policy Year</u>	<u>17th/18th</u>	<u>Policy Year</u>	<u>18th/19th</u>				
1998	1.001	1997	1.011				
1999	1.001	1998	1.002				
2000	1.003	1999	1.001				
Average	1.002	Average	1.005				



MISSOURI
APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section E - Limited Indemnity Paid + Case Loss Development Factors

<u>Policy Year</u>	<u>1st/2nd</u>	<u>Policy Year</u>	<u>2nd/3rd</u>	<u>Policy Year</u>	<u>3rd/4th</u>	<u>Policy Year</u>	<u>4th/5th</u>
2012	1.136	2011	1.051	2010	1.042	2009	1.041
2013	1.129	2012	1.078	2011	1.072	2010	1.029
2014	1.135	2013	1.089	2012	1.038	2011	1.033
2015	1.122	2014	1.054	2013	1.074	2012	1.019
2016	1.139	2015	1.063	2014	1.021	2013	1.040
Average	1.132	Average	1.067	Average	1.049	Average	1.032
<u>Policy Year</u>	<u>5th/6th</u>	<u>Policy Year</u>	<u>6th/7th</u>	<u>Policy Year</u>	<u>7th/8th</u>	<u>Policy Year</u>	<u>8th/9th</u>
2008	1.028	2007	1.001	2006	1.009	2005	1.000
2009	1.006	2008	1.013	2007	1.007	2006	1.002
2010	1.015	2009	1.002	2008	1.009	2007	1.014
2011	1.017	2010	1.014	2009	1.014	2008	1.008
2012	1.008	2011	1.003	2010	1.006	2009	1.001
Average	1.015	Average	1.007	Average	1.009	Average	1.005
<u>Policy Year</u>	<u>9th/10th</u>	<u>Policy Year</u>	<u>10th/11th</u>	<u>Policy Year</u>	<u>11th/12th</u>	<u>Policy Year</u>	<u>12th/13th</u>
2004	1.008	2003	1.000	2002	0.995	2001	1.001
2005	1.006	2004	1.003	2003	1.000	2002	0.999
2006	1.002	2005	0.998	2004	1.000	2003	1.008
2007	1.012	2006	1.001	2005	1.004	2004	1.011
2008	1.002	2007	1.002	2006	0.998	2005	1.004
Average	1.006	Average	1.001	Average	0.999	Average	1.005
<u>Policy Year</u>	<u>13th/14th</u>	<u>Policy Year</u>	<u>14th/15th</u>	<u>Policy Year</u>	<u>15th/16th</u>	<u>Policy Year</u>	<u>16th/17th</u>
2000	1.001	1999	0.999	1998	0.999	1997	0.998
2001	1.002	2000	1.001	1999	1.001	1998	1.003
2002	1.003	2001	0.999	2000	1.000	1999	1.001
2003	0.998	2002	0.999	2001	1.002	2000	1.000
2004	1.006	2003	1.004	2002	1.002	2001	1.000
Average	1.002	Average	1.000	Average	1.001	Average	1.000
<u>Policy Year</u>	<u>17th/18th</u>	<u>Policy Year</u>	<u>18th/19th</u>				
1996	1.001	1995	1.001				
1997	1.004	1996	1.002				
1998	1.003	1997	1.003				
1999	1.001	1998	1.000				
2000	0.996	1999	1.003				
Average	1.001	Average	1.002				



MISSOURI

APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section F - Limited Medical Paid + Case Loss Development Factors

<u>Policy Year</u>	<u>1st/2nd</u>	<u>Policy Year</u>	<u>2nd/3rd</u>	<u>Policy Year</u>	<u>3rd/4th</u>	<u>Policy Year</u>	<u>4th/5th</u>
2012	1.031	2011	0.997	2010	0.993	2009	1.003
2013	1.013	2012	1.005	2011	0.972	2010	0.993
2014	1.034	2013	0.993	2012	1.004	2011	0.993
2015	1.034	2014	0.993	2013	1.000	2012	0.998
2016	1.005	2015	1.006	2014	0.992	2013	1.000
Average	1.023	Average	0.999	Average	0.992	Average	0.997
<u>Policy Year</u>	<u>5th/6th</u>	<u>Policy Year</u>	<u>6th/7th</u>	<u>Policy Year</u>	<u>7th/8th</u>	<u>Policy Year</u>	<u>8th/9th</u>
2008	1.010	2007	0.998	2006	1.006	2005	1.001
2009	0.999	2008	1.007	2007	1.003	2006	0.998
2010	1.010	2009	1.007	2008	0.997	2007	1.004
2011	1.024	2010	1.001	2009	1.007	2008	1.007
2012	0.986	2011	0.992	2010	0.998	2009	0.996
Average	1.006	Average	1.001	Average	1.002	Average	1.001
<u>Policy Year</u>	<u>9th/10th</u>	<u>Policy Year</u>	<u>10th/11th</u>	<u>Policy Year</u>	<u>11th/12th</u>	<u>Policy Year</u>	<u>12th/13th</u>
2004	1.005	2003	1.004	2002	0.999	2001	1.002
2005	1.023	2004	0.997	2003	0.994	2002	1.005
2006	1.001	2005	0.997	2004	1.001	2003	1.004
2007	1.002	2006	1.006	2005	1.010	2004	1.005
2008	0.990	2007	0.996	2006	1.001	2005	1.002
Average	1.004	Average	1.000	Average	1.001	Average	1.004
<u>Policy Year</u>	<u>13th/14th</u>	<u>Policy Year</u>	<u>14th/15th</u>	<u>Policy Year</u>	<u>15th/16th</u>	<u>Policy Year</u>	<u>16th/17th</u>
2000	1.003	1999	1.001	1998	1.008	1997	0.999
2001	0.999	2000	0.991	1999	1.000	1998	1.004
2002	1.003	2001	1.003	2000	0.997	1999	1.004
2003	0.999	2002	1.003	2001	0.993	2000	1.000
2004	0.994	2003	1.009	2002	1.001	2001	1.000
Average	1.000	Average	1.001	Average	1.000	Average	1.001
<u>Policy Year</u>	<u>17th/18th</u>	<u>Policy Year</u>	<u>18th/19th</u>				
1996	1.001	1995	1.001				
1997	1.012	1996	1.002				
1998	1.000	1997	0.991				
1999	0.999	1998	1.000				
2000	1.001	1999	0.999				
Average	1.003	Average	0.999				



MISSOURI

APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section G - Determination of Policy Year Loss Development Factors (19th-to-Ultimate Report)

Indemnity Paid+Case Data for Matching Companies

(1) Policy Year	(2) <u>Losses for Policy Year</u> 19th Report	(3) <u>Losses for Policy Year</u> 20th Report	(4) <u>Losses for All Prior Policy Years</u> Previous	(5) <u>Losses for All Prior Policy Years</u> Current	(6) Factor to Adjust Losses for Prior Policy Years	(7) Indicated 19th-to-Ult Development for Policy Year
1989	218,972,637	219,010,945	1,574,118,975	1,573,978,893	0.509	0.999
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	1,968,281,792	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	164,000,954	164,145,266	2,575,187,385	2,577,398,341	1.096	1.013
1995	141,339,770	141,572,206	2,737,106,287	2,738,828,735	1.309	1.011
1996	147,883,829	148,802,798	2,879,571,795	2,881,494,797	1.257	1.017
1997	154,253,043	154,687,733	3,026,557,412	3,025,951,376	1.201	1.000
1998	182,523,316	182,647,097	3,169,052,488	3,171,037,604	1.009	1.011
Selected Indemnity 19th-to-Ultimate Loss Development Factor						1.011

Medical Paid+Case Data for Matching Companies

(8) Policy Year	(9) <u>Losses for Policy Year</u> 19th Report	(10) <u>Losses for Policy Year</u> 20th Report	(11) <u>Losses for All Prior Policy Years</u> Previous	(12) <u>Losses for All Prior Policy Years</u> Current	(13) Factor to Adjust Losses for Prior Policy Years	(14) Indicated 19th-to-Ult Development for Policy Year
1989	167,635,672	167,926,896	1,074,596,290	1,079,600,293	0.479	1.064
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	151,020,897	149,363,054	1,920,214,880	1,921,166,657	0.936	0.996
1995	134,262,976	134,653,905	2,066,085,458	2,070,691,043	1.110	1.034
1996	128,412,573	128,363,117	2,204,592,287	2,205,855,600	1.195	1.008
1997	152,762,374	153,435,850	2,332,133,784	2,332,460,373	1.022	1.007
1998	156,242,524	155,872,170	2,480,454,534	2,483,108,409	1.011	1.014
Selected Medical 19th-to-Ultimate Loss Development Factor						1.018

(7) = 1 + [(3)-(2) + ((5)-(4)) / (6)] / (2)

(14) = 1 + [(10)-(9) + ((12)-(11)) / (13)] / (9)

Columns (4) and (11) are valued as of the date at which the given policy year is at a 19th report.

Columns (5) and (12) are valued as of the date at which the given policy year is at a 20th report.



MISSOURI

APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section H - Derivation of Policy Year Limited 19th-to-Ultimate Loss Development Factors

Policy Year	Indemnity Paid-to-Paid + Case Ratio 19th Report	Medical Paid-to-Paid + Case Ratio 19th Report
1995	0.978	0.966
1996	0.972	0.953
1997	0.975	0.982
1998	0.973	0.975
1999	0.968	0.986
Average	0.973	0.972

	Indemnity	Medical
(1) Paid+Case 19th-to-Ultimate Loss Development Factor (Section G)	1.011	1.018
(2) Factor to Adjust 19th-to-Ultimate Development Factor to a Limited Basis	0.858	0.858
(3) Limited Paid+Case 19th-to-Ultimate Loss Development Factor = [(1)-1]x(2)+1	1.009	1.015
(4) Limited Paid-to-Paid+Case Ratio (Section H)	0.973	0.972
(5) Limited Paid 19th-to-Ultimate Loss Development Factor = (3) / (4)	1.037	1.044

Section I - Summary of Limited Paid Loss Development Factors

Report	(1) Indemnity Paid Loss Development		Section H	(3) Medical Paid Loss Development		Section H
	to Next Report	to Ultimate		to Next Report	to Ultimate	
1st	1.818	3.687		1.227	1.536	
2nd	1.292	2.028		1.061	1.252	
3rd	1.151	1.570		1.026	1.180	
4th	1.084	1.364		1.018	1.150	
5th	1.054	1.258		1.015	1.130	
6th	1.035	1.194		1.011	1.113	
7th	1.021	1.154		1.009	1.101	
8th	1.018	1.130		1.005	1.091	
9th	1.017	1.110		1.007	1.086	
10th	1.010	1.091		1.004	1.078	
11th	1.008	1.080		1.004	1.074	
12th	1.006	1.071		1.004	1.070	
13th	1.007	1.065		1.004	1.066	
14th	1.005	1.058		1.004	1.062	
15th	1.004	1.053		1.003	1.058	
16th	1.005	1.049		1.004	1.055	
17th	1.003	1.044		1.002	1.051	
18th	1.004	1.041		1.005	1.049	
19th		1.037	Section H		1.044	Section H

(2) = Cumulative upward product of column (1).
 (4) = Cumulative upward product of column (3).



MISSOURI

APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section J - Summary of Limited Paid+Case Loss Development Factors

Report	(1) Indemnity Paid+Case Loss Development	
	to Next Report	to Ultimate
1st	1.132	1.390
2nd	1.067	1.228
3rd	1.049	1.151
4th	1.032	1.097
5th	1.015	1.063
6th	1.007	1.047
7th	1.009	1.040
8th	1.005	1.031
9th	1.006	1.026
10th	1.001	1.020
11th	0.999	1.019
12th	1.005	1.020
13th	1.002	1.015
14th	1.000	1.013
15th	1.001	1.013
16th	1.000	1.012
17th	1.001	1.012
18th	1.002	1.011
19th		1.009

Section H

Report	(3) Medical Paid+Case Loss Development	
	to Next Report	to Ultimate
1st	1.023	1.050
2nd	0.999	1.026
3rd	0.992	1.027
4th	0.997	1.035
5th	1.006	1.038
6th	1.001	1.032
7th	1.002	1.031
8th	1.001	1.029
9th	1.004	1.028
10th	1.000	1.024
11th	1.001	1.024
12th	1.004	1.023
13th	1.000	1.019
14th	1.001	1.019
15th	1.000	1.018
16th	1.001	1.018
17th	1.003	1.017
18th	0.999	1.014
19th		1.015

Section H

(2) = Cumulative upward product of column (1).
 (4) = Cumulative upward product of column (3).



MISSOURI

APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section K - Factor to Adjust Limited Losses to an Unlimited Basis

(1) Threshold at the Midpoint of the Loss Cost Effective Period*	9,720,476
(2) Statewide Excess Ratio for (1)	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 Basis = $1.0 / \{1.0 - [(2) \times (1.0 - (3))]\}$	1.011

Section L - Policy Year Large Loss Limits

Experience Year	Policy Year Detrended Limit
2017	8,645,028
2016	8,382,444
2015	8,234,244
2014	8,060,829
2013	7,829,211
2012	7,702,536
2011	7,531,289
2010	7,341,918
2009	7,210,406
2008	7,216,358
2007	7,062,458
2006	6,771,750
2005	6,536,954
2004	6,328,126
2003	6,129,431
2002	5,980,133
2001	5,866,249
2000	5,711,113
1999	5,476,470
1998	5,250,607
1997	5,038,670
1996	4,816,348
1995	4,625,864

* November 28, 2020 is the midpoint of the effective period for which the revised loss costs are being proposed.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Appendix A – Factors Underlying the Proposed Loss Cost Level Change

Appendix A-III Trend Factors

NCCI separately analyzes a measure of the number of workplace injuries (claim frequency) and the average indemnity and medical costs of each of these injuries (claim severity). Premium, lost-time claim counts, and losses used in these frequency and severity calculations are developed to ultimate and adjusted for changes in the level of workers' wages over time using the United States Bureau of Labor Statistics Quarterly Census of Employment and Wages for Missouri. Note that medical-only claim counts are excluded from the claim frequency and severity calculations, but the losses associated with medical-only claims are included.

While claim frequency and average costs per case are reviewed separately, NCCI selects annual indemnity and medical loss ratio trend factors based on an analysis of historical indemnity and medical loss ratios, along with other pertinent considerations, including, but not limited to, changes in system benefits and administration, economic environment, credibility of state data, and prior trend approach and selection.

The lost-time claim frequency, average costs per case, and loss ratios for Policy Years 2010 through 2017 are shown in Appendix A-III, along with the impact of the trend selection for each policy year in the experience period. The trend lengths displayed in Section B(3) are calculated by comparing the average accident date for the effective period of the proposed loss costs to each of the policy years in the experience period. The average accident dates are based on a Missouri distribution of policy writings by month and assume a uniform probability of loss over the coverage period.



MISSOURI

APPENDIX A-III

Policy Year Trend Factors

Section A - Summary of Policy Year Data

(1)	(2)	(3)	(4)	(5)	(6)
Policy Year	Lost-Time Claim Frequency*	Indemnity		Medical	
		Avg Cost Per Case**	Loss Ratio^	Avg Cost Per Case**	Loss Ratio^
2010	23.416	21,620	0.506	29,064	0.680
2011	22.208	22,713	0.505	29,862	0.663
2012	21.458	21,915	0.470	29,267	0.628
2013	20.967	23,203	0.487	28,922	0.606
2014	20.326	22,804	0.464	28,692	0.583
2015	19.532	22,905	0.447	30,290	0.592
2016	18.774	23,314	0.438	30,901	0.580
2017	18.403	22,888	0.421	33,133	0.610

* Figures have been adjusted to the common wage level.

^ Based on an average of paid and paid+case losses.

Section B - Summary of Annual Trend Factors

	<u>Indemnity</u>	<u>Medical</u>
(1) Current Annual Loss Ratio Trend Factor	0.975	0.985
(2) Selected Annual Loss Ratio Trend Factor	0.980	0.990
(3) Length of Trend Period from Midpoint of Policy Year to Midpoint of Effective Period:		
		<u>Years</u>
	Policy Year 2016	4.001
	Policy Year 2017	3.001
(4) Trend Factor Applied to Experience Year = (2) ^ (3)	<u>Indemnity</u>	<u>Medical</u>
	Policy Year 2016	0.961
	Policy Year 2017	0.970



MISSOURI

APPENDIX A-IV

Derivation of Industry Group Differentials

Industry group differentials are used to more equitably distribute the overall loss cost level change based on the individual experience of each industry group. The payroll, losses and claim counts used in the calculations below are from NCCI's Workers Compensation Statistical Plan (WCSP) data.

I. Expected Losses

The current expected losses (columns (1) and (2)) are the payroll extended by the pure premiums underlying the latest loss costs. The proposed expected losses (3) are the current expected losses adjusted to the proposed level. These adjustments include the proposed experience, trend, benefit and, if applicable, loss-based expense changes as well as any miscellaneous premium adjustments.

Industry Group	(1) Latest Year Current Expected Losses Prior to Adjustment for Change in Off-Balance	(2) Five Year Current Expected Losses Prior to Adjustment for Change in Off-Balance	(3) Five Year Proposed Expected Losses Prior to Adjustment for Change in Off-Balance	(4) Current Ratio of Manual to Standard Premium	(5) Proposed Ratio of Manual to Standard Premium
Manufacturing	171,172,876	829,292,745	816,024,061	1.243	1.256
Contracting	182,782,807	811,295,340	798,314,615	1.115	1.121
Office & Clerical	106,454,939	490,041,879	482,201,209	1.128	1.139
Goods & Services	279,457,291	1,287,738,117	1,267,134,308	1.063	1.075
Miscellaneous	181,873,189	842,565,449	829,084,402	1.071	1.075
Statewide	921,741,103	4,260,933,530	4,192,758,594		

Industry Group	(6) Latest Year Current Expected Losses Adjusted for Change in Off-Balance (1)x(4)/(5)	(7) Five Year Current Expected Losses Adjusted for Change in Off-Balance (2)x(4)/(5)	(8) Five Year Proposed Expected Losses Adjusted for Change in Off-Balance (3)x(4)/(5)	(9) Current/ Proposed (7)/(8)	(10) Adjustment to Proposed for Current Relativity (9)IG/(9)SW
Manufacturing	169,401,182	820,709,301	807,577,952	1.016	1.000
Contracting	181,804,487	806,952,992	794,041,744	1.016	1.000
Office & Clerical	105,426,841	485,309,253	477,544,305	1.016	1.000
Goods & Services	276,337,768	1,273,363,366	1,252,989,553	1.016	1.000
Miscellaneous	181,196,452	839,430,322	825,999,437	1.016	1.000
Statewide	914,166,730	4,225,765,234	4,158,152,991	1.016	



MISSOURI

APPENDIX A-IV

II. Industry Group Differentials

To calculate the converted indicated balanced losses (11) the reported losses are limited to \$500,000 for a single claim occurrence and \$1,500,000 for each multiple claim occurrence. After the application of limited development, trend and benefit factors, the limited losses are brought to an unlimited level through the application of the expected excess provision. The proposed experience change, applicable loss-based expenses and any miscellaneous premium adjustments are applied to calculate the indicated losses. These indicated losses are then balanced to the expected losses using the factors shown in Appendix B-I, Section A-3.

Industry Group	(11) Converted Indicated Balanced Losses	(12) Indicated/ Expected Ratio (11)/[(8)x(10)]	(13) Indicated Differential (12)IG/(12)SW	(14) Lost-Time Claim Counts
Manufacturing	816,488,144	1.011	1.009	17,296
Contracting	794,810,499	1.001	0.999	10,325
Office & Clerical	478,339,982	1.002	1.000	9,965
Goods & Services	1,251,410,184	0.999	0.997	29,925
Miscellaneous	826,092,335	1.000	0.998	14,058
Statewide	4,167,141,144	1.002		

Industry Group	(15) Full Credibility Standard for Lost-Time Claim Counts	(16) Credibility Minimum of 1.000 and ((14)/(15))^0.5	(17) Credibility Weighted Indicated/Expected Ratio [(16)IGx(12)IG] + [1-(16)IG]x(12)SW*	(18) Final Industry Group Differential (17)IG/(17)SW
Manufacturing	12,000	1.00	1.011	1.009
Contracting	12,000	0.93	1.001	0.999
Office & Clerical	12,000	0.91	1.002	1.000
Goods & Services	12,000	1.00	0.999	0.997
Miscellaneous	12,000	1.00	1.000	0.998
Statewide			1.002	1.000

*Statewide ratio (column 17) = $\sum_{IG} [(6)x(17)] \div \sum_{IG} (6)$



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Appendix B – Calculations Underlying the Loss Cost Change by Classification

NCCI separately determines voluntary loss costs for each workers compensation classification. The proposed change from the current loss cost will vary depending on the classification. The following are the general steps utilized to determine the individual classification loss costs:

1. Calculate industry group differentials, which are used to more equitably distribute the proposed overall average loss cost level change based on the individual experience of each industry group
2. For each classification, determine the indicated pure premiums based on the most recently-available five policy periods of Missouri payroll and loss experience
3. Indicated pure premiums are credibility-weighted with present on rate level pure premiums and national pure premiums to generate derived by formula pure premiums
4. Final adjustments include the application of a test correction factor, the ratio of manual-to-standard premium, and swing limits.



MISSOURI

APPENDIX B-I

Distribution of Loss Cost Level Change to Occupational Classification

After determining the required changes in the overall loss cost level for the state and by industry group, the next step in the ratemaking procedure is to distribute these changes among the various occupational classifications. In order to do this, the pure premiums by classification must be adjusted, by policy period, industry group, or on an overall basis, to incorporate the changes proposed in the filing. There are three sets of pure premiums for each classification: indicated, present on rate level, and national pure premiums.

Section A – Calculation of Indicated Pure Premiums

The indicated pure premiums are calculated from the payroll and loss data reported, by class code and policy period, in the Workers Compensation Statistical Plan (WCSP) for the latest available five policy periods. Various adjustments are made to these pure premiums to put them at the level proposed in this filing (Sections A-1 to A-3).

Section A-1 – Calculation of Primary Conversion Factors

1. Limited Loss Development Factors

The following factors are applied to develop the losses from first through fifth report to an ultimate basis.

Policy Period	Indemnity		Medical	
	Likely-to-Develop	Not-Likely-to-Develop	Likely-to-Develop	Not-Likely-to-Develop
7/12-6/13	1.124	1.017	1.080	1.005
7/13-6/14	1.188	1.029	1.082	1.004
7/14-6/15	1.281	1.054	1.091	1.002
7/15-6/16	1.467	1.114	1.123	1.003
7/16-6/17	1.851	1.232	1.207	1.010

2. Factors to Adjust to the Proposed Trend Level

The proposed trend factors are applied to adjust the losses to the proposed level.

Policy Period	Indemnity	Medical
7/12-6/13	0.860	0.928
7/13-6/14	0.877	0.937
7/14-6/15	0.895	0.946
7/15-6/16	0.913	0.956
7/16-6/17	0.932	0.966

3. Factors to Adjust to the Proposed Benefit Level

The following factors are applied to adjust the losses to the proposed benefit level.

Policy Period	Fatal	Permanent Total (P.T.)	Permanent Partial (P.P.)	Temporary Total (T.T.)	Medical
7/12-6/13	1.006	1.006	1.006	1.006	1.000
7/13-6/14	1.001	1.001	1.001	1.001	1.000
7/14-6/15	1.000	1.000	1.000	1.000	1.000
7/15-6/16	1.000	1.000	1.000	1.000	1.000
7/16-6/17	1.000	1.000	1.000	1.000	1.000



MISSOURI
APPENDIX B-I

4. Primary Conversion Factors: Indicated Pure Premiums

The factors above, contained within Section A-1, are combined multiplicatively, resulting in the following factors for the Likely-to-Develop (L) and Not-Likely-to-Develop (NL) groupings.

Policy Period	Fatal (L)	Fatal (NL)	P.T.*	P.P. (L)	P.P. (NL)	T.T. (L)	T.T. (NL)	Medical (L)	Medical (NL)
7/12-6/13	0.972	0.880	0.972	0.972	0.880	0.972	0.880	1.002	0.933
7/13-6/14	1.043	0.903	1.043	1.043	0.903	1.043	0.903	1.014	0.941
7/14-6/15	1.146	0.943	1.146	1.146	0.943	1.146	0.943	1.032	0.948
7/15-6/16	1.339	1.017	1.339	1.339	1.017	1.339	1.017	1.074	0.959
7/16-6/17	1.725	1.148	1.725	1.725	1.148	1.725	1.148	1.166	0.976

* Permanent total losses are always assigned to the Likely-to-Develop grouping.

Section A-2 – Expected Excess Provision and Redistribution

After the application of the primary conversion factors, the limited losses are brought to an expected unlimited level through the application of excess loss factors by hazard group. These factors are shown below.

Hazard Group	A	B	C	D	E	F	G
(1) Excess Ratios	0.062	0.087	0.110	0.139	0.176	0.211	0.264
(2) Excess Factors 1/(1-(1))	1.066	1.095	1.124	1.161	1.214	1.267	1.359

As the excess loss factors are on a combined (indemnity and medical) basis, a portion (40%) of the indemnity expected excess losses are redistributed to medical in order to more accurately allocate expected excess losses. Since a portion of the expected excess losses are redistributed in an additive manner, the expected excess factors shown above cannot be combined multiplicatively with either the primary or secondary loss conversion factors.



MISSOURI
APPENDIX B-I

Section A-3 – Calculation of Secondary Conversion Factors

1. Factors to Adjust for Proposed Industry Group Differentials

The following factors are applied to adjust the indicated industry group differentials for the effects of credibility weighting the industry group differentials and weighting the differentials by the latest year expected losses.

	Manufacturing	Contracting	Office and Clerical	Goods and Services	Miscellaneous
(1) Indicated Differentials*	1.009	0.999	1.000	0.997	0.998
(2) Final Differentials**	1.009	0.999	1.000	0.997	0.998
(3) Adjustment (2)/(1)	1.000	1.000	1.000	1.000	1.000

*See Appendix A-IV, column (13).

**See Appendix A-IV, column (18).

2. Factors to Balance Indicated to Expected Losses

The expected losses are calculated as the pure premium underlying the current loss costs, adjusted to the proposed level and adjusted for the Experience Rating Plan off-balance. The indicated losses are balanced to the expected losses by applying the following factors.

Policy Period	(1) Adjustment of Indicated Losses to Pure Premium at Proposed Level	(2) Current Ratio of Manual to Standard Premium	(3) Proposed Ratio of Manual to Standard Premium	(4) Off-balance Adjustment (2)/(3)	(5) Balancing Indicated to Expected Losses (1)x(4)
7/12-6/13	0.943	1.118	1.105	1.012	0.954
7/13-6/14	0.927	1.117	1.121	0.996	0.923
7/14-6/15	0.922	1.117	1.132	0.987	0.910
7/15-6/16	0.939	1.117	1.130	0.988	0.928
7/16-6/17	0.947	1.116	1.128	0.989	0.937

3. Adjustment for Experience Change

A factor of 0.968 is applied to adjust for the experience change in the proposed loss cost level.

4. Factor to Reflect the Proposed Loss-Based Expense Provisions

A factor of 1.187 is applied to include the proposed loss-based expense provisions.

5. Secondary Conversion Factors: Indicated Pure Premiums

The factors above, contained within section A-3, are combined multiplicatively, resulting in the following factors:

Policy Period	Manufacturing	Contracting	Office and Clerical	Goods and Services	Miscellaneous
7/12-6/13	1.096	1.096	1.096	1.096	1.096
7/13-6/14	1.061	1.061	1.061	1.061	1.061
7/14-6/15	1.046	1.046	1.046	1.046	1.046
7/15-6/16	1.066	1.066	1.066	1.066	1.066
7/16-6/17	1.077	1.077	1.077	1.077	1.077



MISSOURI
APPENDIX B-I

Section B – Calculation of Present on Rate Level Pure Premiums

The present on rate level pure premiums are the pure premiums underlying the current loss costs, adjusted to the proposed level. The data sources for the above-captioned pure premiums are the partial pure premiums underlying the current loss costs.

1. Adjustment for Experience Change

A factor of 0.968 is applied to adjust for the experience change in the proposed loss cost level.

2. Factors to Adjust to the Proposed Trend Level

The pure premiums underlying the current loss costs contain the current trend. The change in trend factors, 1.018 and 1.018, for indemnity and medical, respectively, are applied to adjust to the proposed trend level.

3. Factors to Adjust to the Proposed Benefit Level

The following factors are applied to adjust the pure premiums underlying the current loss costs to the proposed benefit level.

	Indemnity	Medical
Benefit Adjustment	1.000	1.000

4. Factors to Include the Proposed Loss-Based Expense Provisions

The pure premiums underlying the current loss costs include the current loss-based expense provisions and must be adjusted to the proposed level.

	(a) Current		(b) Proposed	
	Indemnity	Medical	Indemnity	Medical
(1) Loss Adjustment Expense	1.188	1.188	1.187	1.187
(2) Overall Change (1b)/(1a)			0.999	0.999

5. Adjustment to Obtain Expected Losses

The pure premiums underlying the current loss costs reflect the current Experience Rating Plan off-balance. The change in off-balance must be applied.

Industry Group	(1) Current Ratio of Manual to Standard Premium	(2) Proposed Ratio of Manual to Standard Premium	(3) Off-balance Adjustment (1)/(2)
Manufacturing	1.243	1.256	0.990
Contracting	1.115	1.121	0.995
Office & Clerical	1.128	1.139	0.990
Goods & Services	1.063	1.075	0.989
Miscellaneous	1.071	1.075	0.996



MISSOURI
APPENDIX B-I

6. Factors to Adjust for Proposed Industry Group Differentials

The pure premiums underlying the current loss costs are adjusted by the proposed industry group differentials.

Industry Group	(1) Final Differential*	(2) Adjustment to Proposed for Current Relativities**	(3) Adjusted Differential (1)x(2)
Manufacturing	1.009	1.000	1.009
Contracting	0.999	1.000	0.999
Office & Clerical	1.000	1.000	1.000
Goods & Services	0.997	1.000	0.997
Miscellaneous	0.998	1.000	0.998

*See Appendix A-IV, column (18).

**See Appendix A-IV, column (10).

7. Combined Conversion Factors

The factors above, contained within Section B, are combined multiplicatively, resulting in the following factors.

Industry Group	Indemnity	Medical
Manufacturing	0.983	0.983
Contracting	0.978	0.978
Office & Clerical	0.974	0.974
Goods & Services	0.970	0.970
Miscellaneous	0.978	0.978



MISSOURI

APPENDIX B-I

Section C – Calculation of National Pure Premiums

Finally, there are the national pure premiums, which reflect the countrywide experience for each classification adjusted to state conditions. These pure premiums reflect the countrywide experience for each classification as indicated by the latest available individual classification experience for all states for which the National Council on Compensation Insurance compiles workers compensation data.

Countrywide data is adjusted to Missouri conditions in four steps. First, statewide indicated pure premiums are determined for Missouri. Second, using Missouri payrolls as weights, corresponding statewide-average pure premiums are computed for each remaining state. Third, the ratios of Missouri statewide pure premiums to those for other states are used as adjustment factors to convert losses for other states to a basis that is consistent with the Missouri indicated pure premiums. The quotient of the countrywide total of such adjusted losses divided by the total countrywide payroll for the classification is the initial pure premium indicated by national relativity. Finally, national pure premiums are balanced to the level of the state indicated pure premiums to ensure unbiased derived by formula pure premiums. Indemnity and medical pure premiums are computed separately.

Section D – Calculation of Derived by Formula Pure Premiums

The indicated, present on rate level and national pure premiums are credibility weighted, and the resulting derived by formula pure premiums are used to determine the final class loss costs.

As for the preceding pure premiums, separate computations are performed for each partial pure premium: indemnity and medical. Each partial formula pure premium is derived by the weighting of the indicated, present on rate level and national partial pure premiums. The weight assigned to the policy year indicated pure premium varies in one-percent intervals from zero percent to one hundred percent, depending upon the volume of expected losses (i.e. the product of the underlying pure premiums and the payroll in hundreds). To achieve full state credibility, a classification must have expected losses of at least: \$34,552,908 for indemnity and \$24,870,643 for medical.

The partial credibilities formula is:

$$z = [(\text{expected losses}) / (\text{full credibility standard})]^{0.5}$$

For the national pure premiums, credibility is determined from the number of lost-time claims. Full credibility standards are: 2,300 lost-time claims for indemnity and 2,000 lost-time claims for medical.

Partial credibilities are assigned using a credibility formula similar to that used for indicated pure premiums but based on the number of national cases. In no case is the national credibility permitted to exceed 50% of the complement of the state credibility.

National Credibility equals the smaller of:

$$[(\text{national cases}) / (\text{full credibility standard})]^{0.5} \text{ and } [(1 - \text{state credibility}) / 2]$$

The residual credibility (100% minus the sum of the state and national credibilities) is assigned to the present on rate level pure premium.

For example, if the state credibility is 40%, the national pure premium is assigned a maximum credibility of 30% $((100 - 40) / 2)$. The remainder is assigned to the present on rate level pure premium.

The total pure premium shown on the attached Appendix B-III is obtained by adding the indemnity and medical partial pure premiums obtained above and rounding the sum to two decimal places.



MISSOURI
APPENDIX B-II

Adjustments to Obtain Loss Costs

The following items are combined with the derived by formula pure premium to obtain the proposed loss cost:

1. Test Correction Factor

The payrolls are now extended by the loss costs presently in effect and by the indicated loss costs to determine if the required change in manual premium level as calculated in Exhibit I has been achieved. Since at first this calculation may not yield the required results, an iterative process is initiated which continuously tests the proposed loss costs including tentative test correction factors until the required change in manual premium level is obtained. The test correction factor is applied to the derived by formula pure premiums.

The factors referred to above are set out as follows:

	Test Correction Factor
Manufacturing	1.0005
Contracting	0.9974
Office & Clerical	0.9779
Goods & Services	0.9900
Miscellaneous	0.9977

2. Ratios of Manual to Standard Premiums

The ratios of manual to standard premiums by industry group have also been excluded from the classification experience, and it is necessary to apply these factors to the derived by formula pure premiums.

	Ratio of Manual to Standard Premiums
Manufacturing	1.256
Contracting	1.121
Office & Clerical	1.139
Goods & Services	1.075
Miscellaneous	1.075

3. Disease Loadings

The proposed manual loss costs shown in this filing include specific disease loadings for those classifications where they apply. The proposed specific disease loadings are shown on the footnotes page.



MISSOURI
APPENDIX B-II

4. Swing Limits

As a further step, a test is made to make certain that the proposed loss costs fall within the following departures from the present loss costs:

Manufacturing	from 19% above to 21% below
Contracting	from 18% above to 22% below
Office & Clerical	from 18% above to 22% below
Goods & Services	from 18% above to 22% below
Miscellaneous	from 18% above to 22% below

These limits have been calculated in accordance with the following formula:

Max. Deviation = Effect of the final change in loss cost level by industry group plus or minus 20% rounded to the nearest 1%.

The product of the swing limits and the present loss cost sets bounds for the proposed loss cost. If the calculated loss cost falls outside of the bounds, the closest bound is chosen as the proposed loss cost. When a code is limited, the underlying pure premiums are adjusted to reflect the limited loss cost. The classifications which have been so limited are shown below. Note that classifications that are subject to special handling may fall outside of the swing limits. A code listed below with an asterisk indicates the code's swing limit was adjusted by one cent before being applied; this is only performed when the upper and lower bounds calculated by the swing limit are equal.

An illustrative example showing the calculation of a proposed manual class loss cost is attached as Appendix B-III. This example demonstrates the manner in which the partial pure premiums are combined to produce a total pure premium, and shows the steps in the calculation at which the rounding takes place. The loss costs for other classifications are calculated in the same manner.

List of Classifications Limited by the Upper Swing

4581 6703 7016 7024 7047 7050 7099 7152
7337 7398 7711 8602 8738 8856 9019

List of Classifications Limited by the Lower Swing

3851 4493

5. Missouri Contracting Classification Premium Adjustment Program (CCPAP)

For classifications eligible for the CCPAP, the last step in producing the final proposed loss costs is to apply a factor of 1.092 to offset the credits payable under the CCPAP.

A list of the eligible class codes can be found under the **Basic Manual** Miscellaneous Rules.



MISSOURI

APPENDIX B-III

Derivation of Proposed Loss Cost - Code 8810

As previously explained in Appendix B-I, the indicated pure premiums are developed by adjusting the limited losses by a set of conversion factors. The converted losses are then summarized into indemnity and medical and then divided by payroll (in hundreds). The derivation of the indicated pure premium for the above-captioned classification follows:

LIMITED LOSSES (Workers Compensation Statistical Plan)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
07/01/12 - 06/30/13	0	5,000	166,219	1,661,093	4,417,376	378,796	1,085,554	2,448,286	11,037,293
07/01/13 - 06/30/14	0	0	31,756	2,206,585	4,286,108	777,036	1,280,721	4,445,751	10,893,176
07/01/14 - 06/30/15	0	1,000	0	2,388,546	4,230,314	723,934	1,781,168	3,256,595	10,417,951
07/01/15 - 06/30/16	5,000	80,168	0	1,357,027	3,505,941	680,869	1,491,153	2,926,791	9,742,869
07/01/16 - 06/30/17	0	100,680	0	657,850	3,053,196	589,141	1,779,056	1,686,823	10,465,717

PRIMARY CONVERSION FACTORS (Appendix B-I, Section A-1)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
07/01/12 - 06/30/13	0.972	0.880	0.972	0.972	0.880	0.972	0.880	1.002	0.933
07/01/13 - 06/30/14	1.043	0.903	1.043	1.043	0.903	1.043	0.903	1.014	0.941
07/01/14 - 06/30/15	1.146	0.943	1.146	1.146	0.943	1.146	0.943	1.032	0.948
07/01/15 - 06/30/16	1.339	1.017	1.339	1.339	1.017	1.339	1.017	1.074	0.959
07/01/16 - 06/30/17	1.725	1.148	1.725	1.725	1.148	1.725	1.148	1.166	0.976

EXPECTED EXCESS PROVISION AND REDISTRIBUTION (Appendix B-I, Section A-2)

After the application of the primary conversion factors, the limited losses are brought to an expected unlimited level through the application of a hazard group-specific excess loss factor. The factor is shown below:

HAZARD GROUP: C	
Excess Factor	1.124

As the excess loss factor is on a combined (indemnity and medical) basis, the following portion of the indemnity expected excess losses are redistributed to medical in order to more accurately allocate expected excess losses:

Redistribution %	40%
------------------	-----



MISSOURI

APPENDIX B-III

Derivation of Proposed Loss Cost - Code 8810

EXPECTED UNLIMITED LOSSES (Limited Losses x Primary Conversion Factors, then adjusted for the Excess Provision and Redistribution)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
07/01/12 - 06/30/13	0	4,726	173,546	1,734,315	4,175,562	395,494	1,026,129	2,862,397	11,810,181
07/01/13 - 06/30/14	0	0	35,578	2,472,139	4,157,371	870,550	1,242,253	5,220,645	11,765,910
07/01/14 - 06/30/15	0	1,013	0	2,940,263	4,285,013	891,151	1,804,199	3,952,528	11,377,177
07/01/15 - 06/30/16	7,191	87,577	0	1,951,807	3,829,953	979,292	1,628,963	3,667,116	10,753,493
07/01/16 - 06/30/17	0	124,152	0	1,218,944	3,764,996	1,091,632	2,193,812	2,316,272	11,756,980

SECONDARY CONVERSION FACTORS (Appendix B-I, Section A-3)

Policy Period	INDUSTRY GROUP: Office and Clerical
07/01/12 - 06/30/13	1.096
07/01/13 - 06/30/14	1.061
07/01/14 - 06/30/15	1.046
07/01/15 - 06/30/16	1.066
07/01/16 - 06/30/17	1.077

PAYROLL, FINAL CONVERTED LOSSES (Expected Unlimited Losses x Secondary Conversion Factors)

Policy Period	Payroll	Indemnity Likely	Indemnity Not-Likely	Medical Likely	Medical Not-Likely	Total Indemnity	Total Medical	Total
07/01/12 - 06/30/13	21,823,326,588	2,524,477	5,706,233	3,137,187	12,943,958	8,230,710	16,081,145	24,311,855
07/01/13 - 06/30/14	22,594,773,484	3,584,341	5,729,001	5,539,104	12,483,631	9,313,342	18,022,735	27,336,077
07/01/14 - 06/30/15	23,220,923,228	4,007,659	6,370,375	4,134,344	11,900,527	10,378,034	16,034,871	26,412,905
07/01/15 - 06/30/16	24,691,458,927	3,132,217	5,912,562	3,909,146	11,463,224	9,044,779	15,372,370	24,417,149
07/01/16 - 06/30/17	25,521,134,667	2,488,490	6,551,348	2,494,625	12,662,267	9,039,838	15,156,892	24,196,730
Total	117,851,616,894	15,737,184	30,269,519	19,214,406	61,453,607	46,006,703	80,668,013	126,674,716
INDICATED PURE PREMIUM						0.039	0.068	0.11

The present on rate level pure premiums are developed by adjusting the pure premiums underlying the current loss cost by the conversion factors calculated in Appendix B-I. The derivation of the present on rate level pure premiums for the above-captioned classification follows:

	Indemnity	Medical	Total
Pure Premiums Underlying Current Loss Cost	0.039	0.071	0.11
Conversion Factors (App. B-I, Section B)	0.974	0.974	xxx
PURE PREMIUMS PRESENT ON RATE LEVEL (Underlying Pure Premiums) x (Conversion Factor)	0.038	0.069	0.11



MISSOURI

APPENDIX B-III

Derivation of Proposed Loss Cost - Code 8810
 Industry Group - Office and Clerical, Hazard Group - C

The loss cost for the above-captioned classification is derived as follows:

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
1. Indicated Pure Premium	0.039	0.068	0.11
2. Pure Premium Indicated by National Relativity	0.039	0.067	0.11
3. Pure Premium Present on Rate Level	0.038	0.069	0.11
4. State Credibilities	100%	100%	xxx
5. National Credibilities	0%	0%	xxx
6. Residual Credibilities = 100% - (4) - (5)	0%	0%	xxx
7. Derived by Formula Pure Premiums = (1) x (4) + (2) x (5) + (3) x (6)	0.039	0.068	0.11
8. Test Correction Factor	0.9779	0.9779	xxx
9. Underlying Pure Premiums = (7) x (8) *	0.034	0.066	0.10
10. Ratio of Manual to Standard Premium			1.139
11. Loss Cost = (9) x (10)			0.11
12. Loss Cost Within Swing Limits			0.11
Current Loss Cost x Swing Limits			
a) Lower bound = 0.12 x 0.780 = 0.10			
b) Upper bound = 0.12 x 1.180 = 0.14			
13. Pure Premiums Underlying Proposed Loss Cost* = ((13TOT) / (9TOT)) x (9) , (13TOT) = (12) / (10)	0.034	0.066	0.10
14. Disease, Catastrophe and/or Miscellaneous Loadings			0.00
15. Final Loaded Loss Cost			0.11

* Indemnity pure premium is adjusted for the rounded total pure premium:
 Indemnity Pure Premium = Total Pure Premium - Medical Pure Premium



MISSOURI

APPENDIX B-IV

I. Determination and Distribution of Premium Level Change to “F” Classifications

The Workers Compensation Statistical Plan (WCSP) data is used to determine the overall “F” classifications (F-class) premium level change as well as the individual change by the various classifications. There are three sets of pure premiums for each classification: indicated, present on rate level, and national pure premiums. All sets of pure premiums are adjusted to the common proposed level that is explained further in this exhibit. These three sets of pure premiums are credibility weighted and the results, the derived by formula pure premiums, are adjusted for additional proposed components (Section II) to determine the indicated loss costs. The payrolls are extended by the loss costs presently in effect and by the indicated loss costs. The loss costs are limited to the swing limits based on 20% above and 20% below the current loss costs. This results in the indicated loss cost level change of -6.6%.

Section A – Calculation of F-Class Indicated Pure Premiums

The payroll and loss data reported are from the WCSP data by class code for the latest available five policy periods.

Section A-1 – Calculation of Primary Conversion Factors

1. Factors to Adjust to the Proposed Benefit Levels

The state and federal losses are adjusted to the proposed state and federal benefit levels, respectively.

STATE ACT

Policy Period	Fatal	Permanent Total (P.T.)	Permanent Partial (P.P.)	Temporary Total (T.T.)	Medical
1/12 - 12/12	1.007	1.007	1.007	1.007	1.000
1/13 - 12/13	1.004	1.004	1.004	1.004	1.000
1/14 - 12/14	1.000	1.000	1.000	1.000	1.000
1/15 - 12/15	1.000	1.000	1.000	1.000	1.000
1/16 - 12/16	1.000	1.000	1.000	1.000	1.000

FEDERAL ACT

Policy Period	Fatal	Permanent Total (P.T.)	Permanent Partial (P.P.)	Temporary Total (T.T.)	Medical
1/12 - 12/12	1.000	1.000	1.000	1.000	1.000
1/13 - 12/13	1.000	1.000	1.000	1.000	1.000
1/14 - 12/14	1.000	1.000	1.000	1.000	1.000
1/15 - 12/15	1.000	1.000	1.000	1.000	1.000
1/16 - 12/16	1.000	1.000	1.000	1.000	1.000

2. Factors to Adjust to the Proposed Trend Level

The following factors are applied to trend the losses in each policy year to the proposed rating year. The selected annual trends utilized were 0.980 and 0.990 for indemnity and medical, respectively.

Policy Period	Indemnity	Medical
1/12 - 12/12	0.851	0.923
1/13 - 12/13	0.868	0.932
1/14 - 12/14	0.886	0.941
1/15 - 12/15	0.904	0.951
1/16 - 12/16	0.922	0.961



MISSOURI

APPENDIX B-IV

Section A-1 Calculation of Primary Conversion Factors (continued)

3. Limited Loss Development Factors

The following factors are applied to develop the losses from first through fifth report to an ultimate basis utilizing countrywide data.

Policy Period	Indemnity		Medical	
	Likely-to-Develop	Not-Likely-to-Develop	Likely-to-Develop	Not-Likely-to-Develop
1/12 - 12/12	1.096	1.034	1.192	1.025
1/13 - 12/13	1.141	1.045	1.237	1.020
1/14 - 12/14	1.329	1.095	1.288	1.044
1/15 - 12/15	1.528	1.241	1.435	1.071
1/16 - 12/16	2.480	1.785	1.703	1.136

4. Primary Conversion Factors = (1) x (2) x (3)

The factors above contained within Section A-1, are combined multiplicatively, resulting in the following factors for the Likely-to-Develop (L) and Not-Likely-to-Develop (NL) groupings.

STATE ACT

Policy Period	Fatal (L)	Fatal (NL)	P.T.*	P.P. (L)	P.P. (NL)	T.T. (L)	T.T. (NL)	Medical (L)	Medical (NL)
1/12 - 12/12	0.939	0.886	0.939	0.939	0.886	0.939	0.886	1.100	0.946
1/13 - 12/13	0.994	0.911	0.994	0.994	0.911	0.994	0.911	1.153	0.951
1/14 - 12/14	1.177	0.970	1.177	1.177	0.970	1.177	0.970	1.212	0.982
1/15 - 12/15	1.381	1.122	1.381	1.381	1.122	1.381	1.122	1.365	1.019
1/16 - 12/16	2.287	1.646	2.287	2.287	1.646	2.287	1.646	1.637	1.092

FEDERAL ACT

Policy Period	Fatal (L)	Fatal (NL)	P.T.*	P.P. (L)	P.P. (NL)	T.T. (L)	T.T. (NL)	Medical (L)	Medical (NL)
1/12 - 12/12	0.933	0.880	0.933	0.933	0.880	0.933	0.880	1.100	0.946
1/13 - 12/13	0.990	0.907	0.990	0.990	0.907	0.990	0.907	1.153	0.951
1/14 - 12/14	1.177	0.970	1.177	1.177	0.970	1.177	0.970	1.212	0.982
1/15 - 12/15	1.381	1.122	1.381	1.381	1.122	1.381	1.122	1.365	1.019
1/16 - 12/16	2.287	1.646	2.287	2.287	1.646	2.287	1.646	1.637	1.092

* Permanent Total losses are always assigned to the Likely-to-Develop grouping.



MISSOURI

APPENDIX B-IV

Section A-2 – Expected Excess Provision and Redistribution

To reduce distortions in individual class loss cost indications, individual claim amounts are subject to a maximum limit of \$500,000. Multiple claim accidents are limited to three times the individual claim loss limitation. After the application of the primary conversion factors, the limited losses are brought to an expected unlimited level through the application of excess loss factors by hazard group. These factors are shown below.

Hazard Group	A	B	C	D	E	F	G
(1) Excess Ratios	0.062	0.087	0.110	0.139	0.176	0.211	0.264
(2) Excess Factors 1/(1-(1))	1.066	1.095	1.124	1.161	1.214	1.267	1.359

As the excess loss factors are on a combined (indemnity and medical) basis, a portion (40%) of the indemnity expected excess losses are redistributed to medical in order to more accurately allocate expected excess losses. Since a portion of the expected excess losses are redistributed in an additive manner, the expected excess factors shown above cannot be combined multiplicatively with either the primary or secondary loss conversion factors.

Section A-3 – Calculation of Secondary Conversion Factors

The following factors are applied to include the proposed loss-based expenses. The state losses are adjusted to reflect the proposed loss-based expenses. The federal losses are adjusted to reflect the proposed USL&HW Special Fund Assessment and loss adjustment expense. The combined** factors are based on a combined indemnity and medical loss-weighted average of the above loss-based expenses by policy period.

Policy Period	State Act	Federal Act
1/12 - 12/12	1.187	1.252
1/13 - 12/13	1.187	1.203
1/14 - 12/14	1.187	1.251
1/15 - 12/15	1.187	1.258
1/16 - 12/16	1.187	1.187

** See Section B.3 for the indemnity and medical breakdown of the proposed loss-based expenses.



MISSOURI
APPENDIX B-IV

Section B – Present on Rate Level

1. Benefits

The underlying pure premiums are adjusted by the weighted impact of the proposed state and federal benefit levels. The distribution of state and federal losses was used to determine the weighted effects.

State Weight (St%)	0.341
Federal Weight (Fed%)	0.659

	Indemnity	Medical	Total
(a) State Laws	1.000	1.000	1.000
(b) Federal Laws	1.000	1.000	1.000
(c) Weighted Laws = [(a)xSt%] + [(b)xFed%]	1.000	1.000	1.000

2. Trend

Since the trend in the current underlying pure premiums is adequate for the current rating year, additional trend is applied to bring the underlyings to the proposed rating year.

Indemnity	Medical
0.980	0.990



MISSOURI
APPENDIX B-IV

Section B – Present on Rate Level (continued)

3. Loss-Based Expenses

The current underlying pure premiums are adjusted to reflect the change in the weighted effect of the loss-based expense provisions.

Proposed:

STATE ACT			
	Indemnity	Medical	Total
(a) Loss Adjustment Expense	1.187	1.187	1.187
(b) Loss-Based Assessment	1.000	1.000	1.000
(c) Total = (a) + (b) - 1	1.187	1.187	1.187

FEDERAL ACT			
	Indemnity	Medical	Total
(d) Loss Adjustment Expense	1.187	1.187	1.187
(e) Loss-Based Assessment	1.113	1.000	1.065
(f) Total = (d) + (e) - 1	1.300	1.187	1.252

	Indemnity	Medical	Total
(g) Weighted Proposed Expenses = [(c) x St%] + [(f) x Fed%]	1.261	1.187	1.230

Current:

STATE ACT			
	Indemnity	Medical	Total
(h) Loss Adjustment Expense	1.188	1.188	1.188
(i) Loss-Based Assessment	1.000	1.000	1.000
(j) Total = (h) + (i) - 1	1.188	1.188	1.188

FEDERAL ACT			
	Indemnity	Medical	Total
(k) Loss Adjustment Expense	1.188	1.188	1.188
(l) Loss-Based Assessment	1.113	1.000	1.065
(m) Total = (k) + (l) - 1	1.301	1.188	1.253

	Indemnity	Medical	Total
(n) Weighted Current Expenses = [(j) x St%] + [(m) x Fed%]	1.262	1.188	1.231

Change:

	Indemnity	Medical	Total
Weighted Expense Change in Loss-Based Expenses = [(g) / (n)]	0.999	0.999	0.999

4. Conversion Factors = (1) x (2) x (3)

The factors have been applied multiplicatively resulting in the following factors.

Indemnity	Medical
0.979	0.989



MISSOURI
APPENDIX B-IV

Section C – National Pure Premiums

The latest three years of state and federal losses for states in which NCCI compiles workers compensation data are separately adjusted to the same level as the indicated and present on rate level pure premiums.

Class Code 9077

For Code 9077, the indicated, national and present on rate level pure premiums were calculated as described previously in Sections A, B and C but using the non-appropriated benefit changes and the federal loss-based expenses.

Section D – Derived by Formula Pure Premiums

The derived by formula pure premiums are calculated by a process similar to that of the industrial codes, which is described in Appendix B-I, Section D. To achieve full state credibility, a classification must have expected losses of at least: \$132,011,800 for indemnity and \$59,735,200 for medical.

II. Calculation of Proposed Loss Costs

The following items are combined with the derived by formula pure premiums to obtain the proposed loss cost:

A. Test Correction Factor **1.0000**

B. Ratio of Manual Premium to Earned Premium **1.230**
(determined on a countrywide basis)

C. Swing Limits
No classifications were adjusted on account of swing limits.



MISSOURI

APPENDIX B-IV

Derivation of Proposed Loss Cost - Code 7317

The indicated pure premiums are developed by adjusting the limited losses by a set of conversion factors. The converted losses are then summarized into indemnity and medical and then divided by payroll (in hundreds). The derivation of the indicated pure premium for the above-captioned classification follows:

STATE ACT - LIMITED LOSSES (Workers Compensation Statistical Plan)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/12 - 12/31/12	0	0	0	0	0	0	0	0	0
01/01/13 - 12/31/13	0	0	0	0	0	0	0	0	0
01/01/14 - 12/31/14	0	0	0	0	0	0	0	0	0
01/01/15 - 12/31/15	0	0	0	0	0	0	0	0	0
01/01/16 - 12/31/16	0	0	0	0	0	0	0	0	0

FEDERAL ACT - LIMITED LOSSES (Workers Compensation Statistical Plan)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/12 - 12/31/12	0	0	0	0	0	0	0	0	0
01/01/13 - 12/31/13	0	0	0	0	0	0	0	0	0
01/01/14 - 12/31/14	0	0	0	0	224,187	0	0	0	126,742
01/01/15 - 12/31/15	0	0	0	0	36,180	0	0	0	16,780
01/01/16 - 12/31/16	0	0	0	0	0	0	0	0	613

STATE ACT - PRIMARY CONVERSION FACTORS (Appendix B-IV, Section A-1)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/12 - 12/31/12	0.939	0.886	0.939	0.939	0.886	0.939	0.886	1.100	0.946
01/01/13 - 12/31/13	0.994	0.911	0.994	0.994	0.911	0.994	0.911	1.153	0.951
01/01/14 - 12/31/14	1.177	0.970	1.177	1.177	0.970	1.177	0.970	1.212	0.982
01/01/15 - 12/31/15	1.381	1.122	1.381	1.381	1.122	1.381	1.122	1.365	1.019
01/01/16 - 12/31/16	2.287	1.646	2.287	2.287	1.646	2.287	1.646	1.637	1.092

FEDERAL ACT - PRIMARY CONVERSION FACTORS (Appendix B-IV, Section A-1)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/12 - 12/31/12	0.933	0.880	0.933	0.933	0.880	0.933	0.880	1.100	0.946
01/01/13 - 12/31/13	0.990	0.907	0.990	0.990	0.907	0.990	0.907	1.153	0.951
01/01/14 - 12/31/14	1.177	0.970	1.177	1.177	0.970	1.177	0.970	1.212	0.982
01/01/15 - 12/31/15	1.381	1.122	1.381	1.381	1.122	1.381	1.122	1.365	1.019
01/01/16 - 12/31/16	2.287	1.646	2.287	2.287	1.646	2.287	1.646	1.637	1.092



**MISSOURI
APPENDIX B-IV**

Derivation of Proposed Loss Cost - Code 7317

EXPECTED EXCESS PROVISION AND REDISTRIBUTION (Appendix B-IV, Section A-2)

After the application of the primary conversion factors, the limited losses are brought to an expected unlimited level through the application of a hazard group-specific excess loss factor. The factor is shown below:

	HAZARD GROUP: G
Excess Factor	1.359

As the excess loss factor is on a combined (indemnity and medical) basis, the following portion of the indemnity expected excess losses are redistributed to medical in order to more accurately allocate expected excess losses:

Redistribution %	40%
------------------	-----

STATE ACT - EXPECTED UNLIM LOSSES (Lim Losses x Primary Conv Factors, then adjusted for the Excess Provision and Redistribution)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/12 - 12/31/12	0	0	0	0	0	0	0	0	0
01/01/13 - 12/31/13	0	0	0	0	0	0	0	0	0
01/01/14 - 12/31/14	0	0	0	0	0	0	0	0	0
01/01/15 - 12/31/15	0	0	0	0	0	0	0	0	0
01/01/16 - 12/31/16	0	0	0	0	0	0	0	0	0

FEDERAL ACT - EXPECTED UNLIM LOSSES (Lim Losses x Primary Conv Factors, then adjusted for the Excess Provision and Redistribution)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/12 - 12/31/12	0	0	0	0	0	0	0	0	0
01/01/13 - 12/31/13	0	0	0	0	0	0	0	0	0
01/01/14 - 12/31/14	0	0	0	0	264,262	0	0	0	200,306
01/01/15 - 12/31/15	0	0	0	0	49,331	0	0	0	29,056
01/01/16 - 12/31/16	0	0	0	0	0	0	0	0	909

STATE ACT - SECONDARY CONVERSION FACTORS (Appendix B-IV, Section A-3)

	INDUSTRY GROUP: F-Class
Policy Period	
01/01/12 - 12/31/12	1.187
01/01/13 - 12/31/13	1.187
01/01/14 - 12/31/14	1.187
01/01/15 - 12/31/15	1.187
01/01/16 - 12/31/16	1.187

FEDERAL ACT - SECONDARY CONVERSION FACTORS (Appendix B-IV, Section A-3)

	INDUSTRY GROUP: F-Class
Policy Period	
01/01/12 - 12/31/12	1.252
01/01/13 - 12/31/13	1.203
01/01/14 - 12/31/14	1.251
01/01/15 - 12/31/15	1.258
01/01/16 - 12/31/16	1.187



MISSOURI

APPENDIX B-IV

Derivation of Proposed Loss Cost - Code 7317

TOTAL - PAYROLL, FINAL CONVERTED LOSSES

Policy Period	Payroll	Indemnity Likely	Indemnity Not-Likely	Medical Likely	Medical Not-Likely	Total Indemnity	Total Medical	Total
01/01/12 - 12/31/12	3,143,009	0	0	0	0	0	0	0
01/01/13 - 12/31/13	2,564,420	0	0	0	0	0	0	0
01/01/14 - 12/31/14	1,211,490	0	330,592	0	250,583	330,592	250,583	581,175
01/01/15 - 12/31/15	1,652,562	0	62,058	0	36,552	62,058	36,552	98,610
01/01/16 - 12/31/16	1,310,313	0	0	0	1,079	0	1,079	1,079
Total	9,881,794	0	392,650	0	288,214	392,650	288,214	680,864
INDICATED PURE PREMIUM						3.973	2.917	6.89

The present on rate level pure premiums are developed by adjusting the pure premiums underlying the current loss cost by the conversion factors. The derivation of the present on rate level pure premiums for the above-captioned classification follows:

	Indemnity	Medical	Total
Pure Premiums Underlying Current Loss Cost	3.736	3.164	6.90
Conversion Factors (Section B)	0.979	0.989	xxx
PURE PREMIUMS PRESENT ON RATE LEVEL (Underlying Pure Premiums) x (Conversion Factor)	3.658	3.129	6.79



MISSOURI

APPENDIX B-IV

Derivation of Proposed Loss Cost - Code 7317

Industry Group - F-Class, Hazard Group - G

The loss cost for the above-captioned classification is derived as follows:

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
1. Indicated Pure Premium	3.973	2.917	6.89
2. Pure Premium Indicated by National Relativity	2.630	2.753	5.38
3. Pure Premium Present on Rate Level	3.658	3.129	6.79
4. State Credibilities	5%	7%	xxx
5. National Credibilities	19%	20%	xxx
6. Residual Credibilities = 100% - (4) - (5)	76%	73%	xxx
7. Derived by Formula Pure Premiums = (1) x (4) + (2) x (5) + (3) x (6)	3.478	3.039	6.52
8. Test Correction Factor	1.0000	1.0000	xxx
9. Underlying Pure Premiums = (7) x (8) *	3.481	3.039	6.52
10. Ratio of Manual to Standard Premium			1.230
11. Loss Cost = (9) x (10)			8.02
12. Loss Cost Within Swing Limits			8.02
Current Loss Cost x Swing Limits			
a) Lower bound = 8.38 x 0.800 = 6.71			
b) Upper bound = 8.38 x 1.200 = 10.05			
13. Pure Premiums Underlying Proposed Loss Cost* = ((13TOT) / (9TOT)) x (9) , (13TOT) = (12) / (10)	3.481	3.039	6.52
14. Disease, Catastrophe and/or Miscellaneous Loadings			0.00
15. Final Loaded Loss Cost			8.02

* Indemnity pure premium is adjusted for the rounded total pure premium:
Indemnity Pure Premium = Total Pure Premium - Medical Pure Premium



**MISSOURI
APPENDIX B-V**

Derivation of Proposed Traumatic Loss Cost - Code 1016

As previously explained in Appendix B-I, the indicated pure premiums are developed by adjusting the limited losses by a set of conversion factors. The converted losses are then summarized into indemnity and medical and then divided by payroll (in hundreds). The derivation of the indicated pure premium for classification 1016 follows:

LIMITED LOSSES (Workers Compensation Statistical Plan)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
07/01/12 - 06/30/13	0	0	0	0	0	0	0	0	0
07/01/13 - 06/30/14	0	0	0	0	0	0	0	0	0
07/01/14 - 06/30/15	0	0	0	0	0	0	0	0	7,277
07/01/15 - 06/30/16	0	0	0	0	0	0	0	0	0
07/01/16 - 06/30/17	0	0	0	0	0	0	0	0	0

PRIMARY PARTIAL CONVERSION FACTORS (Appendix B-I, Section A-1)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
07/01/12 - 06/30/13	0.972	0.880	0.972	0.972	0.880	0.972	0.880	1.002	0.933
07/01/13 - 06/30/14	1.043	0.903	1.043	1.043	0.903	1.043	0.903	1.014	0.941
07/01/14 - 06/30/15	1.146	0.943	1.146	1.146	0.943	1.146	0.943	1.032	0.948
07/01/15 - 06/30/16	1.339	1.017	1.339	1.339	1.017	1.339	1.017	1.074	0.959
07/01/16 - 06/30/17	1.725	1.148	1.725	1.725	1.148	1.725	1.148	1.166	0.976

EXPECTED EXCESS PROVISION AND REDISTRIBUTION (Appendix B-I, Section A-2)

After the application of the primary conversion factors, the limited losses are brought to an expected unlimited level through the application of a hazard group-specific excess loss factor. The factor is shown below:

	HAZARD GROUP: G
Excess Factor	1.359

As the excess loss factor is on a combined (indemnity and medical) basis, the following portion of the indemnity expected excess losses are redistributed to medical in order to more accurately allocate expected excess losses:

Redistribution %	40%
------------------	-----



MISSOURI
APPENDIX B-V

Derivation of Proposed Traumatic Loss Cost - Code 1016

EXPECTED UNLIMITED LOSSES (Limited Losses x Primary Conversion Factors, then adjusted for the Excess Provision and Redistribution)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
07/01/12 - 06/30/13	0	0	0	0	0	0	0	0	0
07/01/13 - 06/30/14	0	0	0	0	0	0	0	0	0
07/01/14 - 06/30/15	0	0	0	0	0	0	0	0	9,374
07/01/15 - 06/30/16	0	0	0	0	0	0	0	0	0
07/01/16 - 06/30/17	0	0	0	0	0	0	0	0	0

SECONDARY PARTIAL CONVERSION FACTOR (Loss-based expense, if applicable)

	Indemnity	Medical
Loss Based Expense	1.187	1.187

PAYROLL, FINAL CONVERTED LOSSES (Expected Unlimited Losses x Loss-Based Expenses, if applicable)

Policy Period	Payroll	Indemnity Likely	Indemnity Not-Likely	Medical Likely	Medical Not-Likely	Total Indemnity	Total Medical	Total
07/01/12 - 06/30/13	0	0	0	0	0	0	0	0
07/01/13 - 06/30/14	0	0	0	0	0	0	0	0
07/01/14 - 06/30/15	10,773	0	0	0	11,127	0	11,127	11,127
07/01/15 - 06/30/16	0	0	0	0	0	0	0	0
07/01/16 - 06/30/17	46,646	0	0	0	0	0	0	0
Total	57,419	0	0	0	11,127	0	11,127	11,127
INDICATED PURE PREMIUM						0.000	19.378	19.38

The present on rate level pure premiums are developed by adjusting the pure premiums underlying the current loss cost by the conversion factors calculated in Appendix B-I. The derivation of the present on rate level pure premiums for the above-captioned classification follows:

	Indemnity	Medical	Total
Pure Premiums Underlying Current Loss Cost	4.596	4.054	8.65
Conversion Factors *	1.017	1.017	xxx
PURE PREMIUMS PRESENT ON RATE LEVEL (Underlying Pure Premiums) x (Conversion Factor)	4.674	4.123	8.80

* Conversion factors only adjust for changes in trend, benefit, and if applicable, loss-based expense provision.



MISSOURI

APPENDIX B-V

Derivation of Proposed Traumatic Loss Cost - Code 1016
COAL MINING—NOC, Hazard Group - G

The traumatic loss cost for classification 1016 is derived as follows:

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
1. Indicated Pure Premium	0.000	19.378	19.38
2. Pure Premium Indicated by National Relativity	5.625	4.928	10.55
3. Pure Premium Present on Rate Level	4.674	4.123	8.80
4. State Credibilities†	0%	1%	xxx
5. National Credibilities	50%	49%	xxx
6. Residual Credibilities = 100% - (4) - (5)	50%	50%	xxx
7. Derived by Formula Pure Premiums = (1) x (4) + (2) x (5) + (3) x (6)	5.150	4.670	9.82
8. Voluntary Offset	1.000	1.000	xxx
9. Underlying Pure Premiums = (7) x (8) *	5.150	4.670	9.82
10. Ratio of Manual to Standard Premium			1.075
11. Loss Cost = (9) x (10)			10.56
12. Loss Cost Within Swing Limits			10.56
Current Loss Cost x Swing Limits			
a) Lower bound = 9.26 x 0.80 =	7.41		
b) Upper bound = 9.26 x 1.20 =	11.11		
13. Pure Premiums Underlying Proposed Loss Cost* = ((13TOT) / (9TOT)) x (9) , (13TOT) = (12) / (10)	5.150	4.670	9.82
14. Proposed Traumatic Loss Cost			10.56

† To achieve full state credibility, the classification must have expected losses of at least: \$125,908,401 for indemnity, and \$51,905,955 for medical.

* Indemnity pure premium is adjusted for the rounded total pure premium:

Indemnity Pure Premium = Total Pure Premium - Medical Pure Premium



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Appendix C – Memoranda for Laws and Assessments

Appendix C provides details on changes affecting workers compensation benefit costs that are not yet reflected in the on-level factors shown in Appendix A-I. Such changes may result from annual updates in the medical reimbursement levels or other changes that directly affect worker compensation benefit levels. In addition, changes to the administration of the workers compensation system, including benefit levels, may result from specific regulatory, legislative, or judicial action. The overall effect of benefit changes displayed in Appendix C is calculated as of the benefit effective date, which may differ from the overall impact on the filing as shown in the Executive Summary.

The following changes affecting Missouri benefit levels are detailed in this section of the filing:

- Longshore and Harbor Workers' Compensation Act
 - Annual Assessment



MISSOURI

APPENDIX C-I

U.S. Longshore and Harbor Workers' Compensation Act Assessment

The F-class and Program II, Option II maritime class voluntary loss costs include the following provision for the federal assessment:

1.) Estimated Total Expense Needed for 2018 *	107,000,000
2.) Compensation Payments Reported (on indemnity only) in 2017 *	948,926,168
3.) Assessment Rate on Indemnity Losses (1) / (2)	11.3%

Breakdown of Losses Under the Longshore and Harbor Workers Act

4.) Indemnity Losses (Combination of 1st through 3rd reports) #	44,388,071
5.) Medical Losses (Combination of 1st through 3rd reports) #	32,733,507
6.) Total Losses (4) + (5)	77,121,578
7.) Assessment Rate on Total Losses { (3) x (4) } / (6)	6.5%

* Source: U.S. Department of Labor

Source: On-leveled and developed USL&HW losses - statistical plan data



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Appendix D – Derivation of Experience Rating Values

1. Expected Loss Rate (ELR) factors

An expected loss rate for a classification is used to estimate the expected losses per \$100 of payroll during the experience rating period for risks within that classification. These *expected* losses are then compared with the *actual* losses of a risk during the experience rating period to determine the experience modification (mod).

The actual losses reflect the loss data during the experience rating period. Expected losses and actual losses must be at the same level to enable an appropriate comparison for purposes of the experience mod calculation. As such, the pure premiums underlying the proposed loss costs are adjusted to reflect the average loss levels of the proposed experience rating period. This is accomplished through the application of ELR factors to the proposed underlying pure premiums. These ELR factors, calculated by hazard group, remove the effects of items such as: loss development, expected losses above the State Accident Limit, a portion of medical-only losses, benefit changes, trend, loss-based expenses, experience, and offsets for assigned risk programs.

An adjustment is made to the ELR factors so that the resulting ELRs produce an expected experience rating off-balance that equals the targeted experience rating off-balance used in the calculation of the overall loss cost level change for the state (Appendix A–I). For the calculation of experience mods, the experience rating plan for Missouri uses actual losses net of the deductible reimbursement amount reported per the *Unit Statistical Reporting Guidebook* for the calculation of experience mods. As a result, the ELR adjustment mentioned above also modifies the ELRs uniformly across all class codes in the state to account for net experience rating.

The final ELR for each classification is calculated as follows:

$$\text{ELR} = \{(\text{Hazard Group indemnity ELR factor}) \times (\text{indemnity pure premium}) + (\text{Hazard Group medical ELR factor}) \times (\text{medical pure premium})\} \times \text{Manual/Standard Ratio}$$

2. Discount Ratio (D-Ratio) factors

In experience rating, losses are divided into primary and excess portions. For each claim, losses below the split point are primary losses, while losses above the split point are excess losses. The D-ratio represents the estimated ratio of expected primary losses to expected total losses for a classification. The D-ratio is used to determine the expected primary losses to be used in the experience mod calculation.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Appendix D – Derivation of Experience Rating Values

D-ratio factors are calculated separately for indemnity and medical losses by hazard group and are based on the latest three years of Unit Statistical data. A comparison of the resulting D-ratio factors across hazard groups is done to ensure that the factors monotonically decrease from hazard group A to hazard group G. If they do not, an adjustment is made by averaging the D-ratios over adjacent hazard groups.

The final D-ratio for each classification is calculated as follows:

$$\text{D-ratio} = \frac{\{(HG \text{ indemnity D-ratio factor}) \times (\text{indemnity pure premium}) + (HG \text{ medical D-ratio factor}) \times (\text{medical pure premium})\}}{\text{total pure premium}}$$

3. Additional experience rating values

Table of Weighting Values

The Weighting Value (W) determines how much actual excess and expected excess losses will enter the experience modification formula. The weighting value increases as expected losses increase with larger insureds receiving a larger weighting value. The weighting value for various levels of expected losses is provided in the Table of Weighting Values. The table is updated based on the state reference point, which is updated with Unit Statistical data each experience filing.

The state reference point is calculated as the state average cost per case for the experience rating period multiplied by 250. The state reference point serves to determine how much credibility to give to the losses of an individual risk and as an index of claim cost differences by state. The state per claim accident limitation shown on the Table of Weighting Values is 10% of the state reference point.

Table of Ballast Values

The Ballast Value (B) is a stabilizing value designed to limit the effect of any actual loss experience on the experience rating modification. It is added to both the numerator and denominator of the mod calculation and increases as expected losses increase. The ballast value for various levels of expected loss ranges is provided in the Table of Ballast Values. The table is updated based on the state reference point, which is updated with Unit Statistical data.

The G value used in the ballast formula is the state reference point / 250,000, rounded to the nearest 0.05.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Part 4 Additional Information

- Definitions
- NCCI Affiliate List
- Key Contacts



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

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 Level Premium: The standard earned premium that would result if business were written at NCCI state-approved loss costs or rates instead of at the company rates. It is the common benchmark level at which carriers report premium on the Financial Calls.

Frequency: The number of 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.

Lost-time Claims: Claims where an injured employee has received wage replacement benefits due to a compensable workplace injury.

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

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

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:

- The one-year period beginning with the effective date or anniversary of a policy.
- 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 cost per case (claim) calculated as ultimate losses divided by ultimate lost-time claim counts.



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Definitions

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 when all claims are closed.

Unlimited Losses: Losses that have not been limited to jurisdiction and year-specific large loss thresholds as part of NCCI's large loss procedure.

Valuation Date: The date that premiums and losses are evaluated for reporting purposes. Premiums and losses may change over time from initial estimates to final values. Therefore, interim snapshots have associated valuation dates.

Wage Level Adjustment Factor: The ratio of the average workers' wages during the most recent time period to the average workers' wages during a historical time period.



Missouri

Advisory Loss Costs and Rating Values Filing – January 1, 2020

NCCI Affiliate List

7710 INSURANCE COMPANY
A M C O INSURANCE COMPANY
ACADIA INSURANCE COMPANY
ACCIDENT FUND GENERAL INS CO
ACCIDENT FUND INS CO OF AMERICA
ACCIDENT FUND NATIONAL INS CO
ACCIDENT INSURANCE COMPANY INC
ACE AMERICAN INSURANCE COMPANY
ACE FIRE UNDERWRITERS INSURANCE COMPANY
ACE PROPERTY & CASUALTY INSURANCE COMPANY
ACIG INS CO
ACUITY A MUTUAL INS COMPANY
ADDISON INSURANCE COMPANY
ADVANTAGE WC INSURANCE CO
AIG ASSURANCE COMPANY
AIG PROPERTY CASUALTY COMPANY
AIU INSURANCE CO (NATIONAL UNION FIRE OF PITTS PA)
AK NATIONAL INS CO
ALLIED EASTERN IND CO
ALLIED INSURANCE COMPANY OF AMERICA
ALLIED PROPERTY AND CASUALTY INS CO
ALLMERICA FINANCIAL ALLIANCE INS CO
ALLMERICA FINANCIAL BENEFIT INS CO
AMERICAN ALTERNATIVE INSURANCE CORPORATION
AMERICAN AUTOMOBILE INSURANCE CO
AMERICAN BUSINESS AND MERCANTILE INS MUTUAL INC
AMERICAN CASUALTY COMPANY OF READING P A
AMERICAN COMPENSATION INS CO
AMERICAN ECONOMY INS CO
AMERICAN FAMILY HOME INS CO
AMERICAN FAMILY INS CO
AMERICAN FAMILY MUTUAL INSURANCE COMPANY, S.I.
AMERICAN FIRE AND CASUALTY CO
AMERICAN GUARANTEE AND LIABILITY INS CO
AMERICAN HOME ASSUR CO-NATIONAL UNION FIRE OF PIT
AMERICAN INS CO
AMERICAN INTERSTATE INS CO
AMERICAN MODERN HOME INS CO
AMERICAN NATIONAL PROPERTY AND CASUALTY CO
AMERICAN SELECT INS CO
AMERICAN STATES INS CO A SAFECO COMPANY
AMERICAN ZURICH INS CO
AMERISURE INS CO
AMERISURE MUTUAL INS CO
AMERISURE PARTNERS INS CO
AMERITRUST INS CORP
AMGUARD INS CO
AMTRUST INSURANCE CO OF KS INC
ARCH INDEMNITY INSURANCE COMPANY
ARCH INSURANCE COMPANY
ARGONAUT GREAT CENTRAL INS CO
ARGONAUT INS CO
ARGONAUT MIDWEST INS CO
ASHMERE INSURANCE COMPANY
ASSOCIATED INDEMNITY CORP
ASSOCIATION CASUALTY INS CO
ATLANTIC SPECIALTY INS CO (ONEBEACON)
AUSTIN MUTUAL INSURANCE COMPANY
AUTO OWNERS INS CO
BANKERS STANDARD INS CO
BEARING MIDWEST CASUALTY COMPANY
BENCHMARK INSURANCE COMPANY
BERKLEY CASUALTY COMPANY
BERKLEY INSURANCE COMPANY
BERKLEY NATIONAL INSURANCE COMPANY
BERKLEY REGIONAL INS CO
BERKSHIRE HATHAWAY DIRECT INSURANCE COMPANY
BERKSHIRE HATHAWAY HOMESTATE INS CO
BITCO GENERAL INSURANCE CORPORATION
BITCO NATIONAL INSURANCE COMPANY
BLACKBOARD INSURANCE COMPANY
BLOOMINGTON COMPENSATION INS CO
BRICKSTREET MUTUAL INS CO
BROTHERHOOD MUTUAL INS CO
CALIFORNIA INSURANCE COMPANY
CAROLINA CASUALTY INS CO
CHARTER OAK FIRE INS CO
CHEROKEE INS CO
CHIRON INSURANCE COMPANY
CHUBB INDEMNITY INS CO
CHUBB NATIONAL INS CO
CHURCH MUTUAL INS CO
CIMARRON INSURANCE COMPANY INC
CINCINNATI CASUALTY COMPANY
CINCINNATI INDEMNITY COMPANY
CINCINNATI INS CO
CITIZENS INS CO OF AMERICA
CLEAR SPRING PROPERTY AND CASUALTY COMPANY
COLONIAL AMERICAN CASUALTY & SURETY CO
COLUMBIA MUTUAL INSURANCE CO
COLUMBIA NATIONAL INS CO
COMMERCE AND INDUSTRY INS CO
CONSOLIDATED INS CO
CONTINENTAL CASUALTY CO
CONTINENTAL INDEMNITY CO
CONTINENTAL INS CO
CONTINENTAL WESTERN INSURANCE COMPANY
CRESTBROOK INS CO
CRUM AND FORSTER INDEMNITY CO
DAKOTA TRUCK UNDERWRITERS
DEPOSITORS INS CO
DIAMOND INS CO
DISCOVER PROPERTY & CASUALTY INS CO
EASTERN ADVANTAGE ASSURANCE COMPANY
EASTERN ALLIANCE INSURANCE COMPANY
EASTGUARD INS CO
ELECTRIC INS CO
EMC PROPERTY & CASUALTY COMPANY
EMCASCO INS CO
EMPLOYERS ASSURANCE COMPANY
EMPLOYERS COMPENSATION INS CO
EMPLOYERS INS CO OF WAUSAU
EMPLOYERS MUTUAL CASUALTY CO
EMPLOYERS PREFERRED INS CO
ENDURANCE AMERICAN INS CO
ENDURANCE ASSURANCE CORPORATION
EVEREST DENALI INSURANCE COMPANY
EVEREST NATIONAL INS CO
EVEREST PREMIER INSURANCE COMPANY
EVEREST REINSURANCE CO DIRECT



Missouri

Advisory Loss Costs and Rating Values Filing – January 1, 2020

NCCI Affiliate List

EXACT PROPERTY AND CASUALTY CO INC
EXECUTIVE RISK INDEMNITY INC
EXPLORER INS CO
FALLS LAKE NATIONAL INSURANCE CO
FARMERS INSURANCE EXCHANGE
FARMINGTON CASUALTY COMPANY
FCCI INSURANCE COMPANY
FEDERAL INSURANCE COMPANY
FEDERATED MUTUAL INS CO
FEDERATED RESERVE INSURANCE CO
FEDERATED RURAL ELECTRIC INS EXCHANGE
FEDERATED SERVICE INS CO
FIDELITY & DEPOSIT COMPANY OF MARYLAND
FIDELITY & GUARANTY INS UNDERWRITERS
FIDELITY & GUARANTY INSURANCE CO
FIRE INS EXCHANGE
FIREMANS FUND INSURANCE CO
FIREMENS INS CO OF WASHINGTON DC
FIRST DAKOTA INDEMNITY CO
FIRST LIBERTY INS CORP
FIRST NATIONAL INS CO OF AMERICA
FIRST NONPROFIT INS CO
FIRSTCOMP INSURANCE CO
FLORISTS MUTUAL INSURANCE CO
FRANK WINSTON CRUM INSURANCE CO
FUEL MARKETERS INSURANCE TRUST
GENERAL CASUALTY COMPANY OF WISCONSIN
GENERAL CASUALTY INSURANCE COMPANY
GENERAL INS CO OF AMERICA
GENESIS INS CO
GRANITE STATE INSURANCE COMPANY
GRAY INSURANCE COMPANY
GREAT AMERICAN ALLIANCE INS CO
GREAT AMERICAN ASSURANCE COMPANY
GREAT AMERICAN INS CO OF NY
GREAT AMERICAN INSURANCE COMPANY
GREAT AMERICAN SPIRIT INS CO
GREAT DIVIDE INSURANCE COMPANY
GREAT MIDWEST INS CO
GREAT NORTHERN INS CO
GREAT WEST CASUALTY COMPANY
GREENWICH INS CO
GRINNELL MUTUAL REINSURANCE CO
GUIDEONE ELITE INS CO
GUIDEONE MUTUAL INS CO
GUIDEONE SPECIALTY MUTUAL INS CO
HANOVER AMERICAN INS CO
HANOVER INS CO
HARLEYSVILLE INSURANCE COMPANY
HARTFORD ACCIDENT AND INDEMNITY CO
HARTFORD CASUALTY INS CO
HARTFORD FIRE INSURANCE CO
HARTFORD INS CO OF IL
HARTFORD INS CO OF MIDWEST
HARTFORD INS CO OF THE SOUTHEAST
HARTFORD UNDERWRITERS INS CO
HAWKEYE-SECURITY INS CO
HDI GLOBAL INSURANCE COMPANY
HOME OWNERS INS CO
HORIZON MIDWEST CASUALTY COMPANY
ILLINOIS CASUALTY COMPANY
ILLINOIS NATIONAL INSURANCE COMPANY
IMPERIUM INSURANCE COMPANY
INDEMNITY INS CO OF N AMERICA (INA INS) (CT GEN)
INS CO OF NORTH AMERICA
INS CO OF THE STATE PA
INS CO OF THE WEST
INTREPID INSURANCE COMPANY
LACKAWANNA AMERICAN INS CO
LACKAWANNA CASUALTY CO
LACKAWANNA NATIONAL INS CO
LIBERTY INS CORP
LIBERTY INSURANCE UNDERWRITERS INC
LIBERTY MUTUAL FIRE INS CO
LIBERTY MUTUAL INS CO
LM INS CORP
MA BAY INS CO
MAG MUTUAL INS CO
MANUFACTURERS ALLIANCE INS CO
MARKEL AMERICAN INSURANCE CO
MARKEL INSURANCE CO
MCDONALDS OPERATORS RISK MGMT ASSOC OF MO
MEMIC INDEMNITY CO
MERIDIAN SECURITY INSURANCE COMPANY
MID CENTURY INS CO
MIDDLESEX INS CO
MIDSOUTH MUTUAL INSURANCE COMPANY
MIDVALE INDEMNITY COMPANY
MIDWEST BUILDERS CASUALTY MUTUAL COMPANY
MIDWEST EMPLOYERS CASUALTY CO
MIDWEST FAMILY MUTUAL INS CO
MIDWEST INS CO
MIDWESTERN INDEMNITY CO
MILBANK INSURANCE COMPANY
MILFORD CASUALTY INSURANCE CO
MITSUI SUMITOMO INS CO OF AMERICA
MITSUI SUMITOMO INS USA INC
MO EMPLOYERS MUTUAL INS CO
MO RURAL SERVICES WC INS TRUST
MO WOOD INDUSTRY INS TRUST
MONROE GUARANTY INS CO
NATIONAL AMERICAN INS CO
NATIONAL CASUALTY CO
NATIONAL FIRE INS CO OF HARTFORD
NATIONAL INTERSTATE INS CO
NATIONAL LIABILITY & FIRE INSURANCE CO
NATIONAL SPECIALTY INS CO
NATIONAL SURETY CORP
NATIONAL TRUST INS CO
NATIONAL UNION FIRE INS CO OF PITTSBURGH PA
NATIONWIDE AGRIBUSINESS INS CO
NATIONWIDE ASSURANCE CO
NATIONWIDE GENERAL INSURANCE CO
NATIONWIDE INS CO OF AMERICA
NATIONWIDE MUTUAL FIRE INS CO
NATIONWIDE MUTUAL INS CO
NATIONWIDE PROPERTY AND CASUALTY INS CO
NETHERLANDS INSURANCE COMPANY
NEW HAMPSHIRE INSURANCE COMPANY
NEW YORK MARINE AND GENERAL INSURANCE CO



Missouri

Advisory Loss Costs and Rating Values Filing – January 1, 2020

NCCI Affiliate List

NHRMA MUTUAL INSURANCE COMPANY
NORGUARD INS CO
NORMANDY INSURANCE COMPANY
NORTH AMERICAN ELITE INSURANCE CO
NORTH AMERICAN SPECIALTY INS CO
NORTH POINTE INS CO
NORTH RIVER INS CO
NORTHSTONE INSURANCE COMPANY
NOVA CASUALTY COMPANY
NUTMEG INS CO
OAK RIVER INSURANCE COMPANY
OBI AMERICA INSURANCE COMPANY
OBI NATIONAL INSURANCE COMPANY
OH CASUALTY INS CO
OH FARMERS INS CO
OHIO SECURITY INS CO
OLD GUARD INSURANCE COMPANY
OLD REPUBLIC GENERAL INSURANCE CORPORATION
OLD REPUBLIC INS CO
OWNERS INSURANCE COMPANY
PA MANUFACTURERS ASSN INS CO
PA MANUFACTURERS INDEMNITY CO
PA NATIONAL MUTUAL CAS INS CO
PACIFIC EMPLOYERS INS CO
PACIFIC INDEMNITY CO
PATRONS MUTUAL INS CO OF CT
PEERLESS INDEMNITY INS CO
PEERLESS INSURANCE COMPANY
PENN MILLERS INS CO
PENNSYLVANIA INSURANCE COMPANY
PETROLEUM CASUALTY CO
PHARMACISTS MUTUAL INS CO
PHOENIX INS CO
PINNACLEPOINT INSURANCE COMPANY
PLAZA INSURANCE CO
PRAETORIAN INSURANCE COMPANY
PREFERRED PROFESSIONAL INSURANCE COMPANY
PREMIER GROUP INS CO
PRIVILEGE UNDERWRITERS RECIPROCAL EXCHANGE
PROPERTY AND CASUALTY INS CO OF HARTFORD
PROTECTIVE INS CO
PUBLIC SERVICE INSURANCE COMPANY
QBE INSURANCE CORPORATION
REDWOOD FIRE & CASUALTY INS CO
REGENT INSURANCE COMPANY
REPUBLIC INDEMNITY CO OF CA
REPUBLIC INDEMNITY COMPANY OF AMERICA
RIVERPORT INSURANCE COMPANY
RLI INSURANCE COMPANY
ROCKWOOD CASUALTY INS CO
RURAL TRUST INSURANCE COMPANY
SAFECO INS CO OF AMERICA
SAFETY FIRST INS CO
SAFETY NATIONAL CASUALTY CORP
SAGAMORE INSURANCE CO
SAMSUNG FIRE AND MARINE INS CO LTD USB
SCOTTSDALE INDEMNITY CO
SECURA INSURANCE A MUTUAL CO
SECURA SUPREME INS CO
SECURITY NATIONAL INS CO (AMTRUST GROUP)
SELECT INS CO
SELECTIVE INS CO OF SC
SELECTIVE INS CO OF THE SOUTHEAST
SELECTIVE INSURANCE COMPANY OF AMERICA
SELECTIVE WAY INS CO
SENECA INSURANCE CO
SENTINEL INS CO
SENTRY CASUALTY CO
SENTRY INSURANCE A MUTUAL CO
SENTRY SELECT INSURANCE COMPANY
SERVICE AMERICAN INDEMNITY COMPANY
SFM MUTUAL INS CO
SIRIUS AMERICA INSURANCE COMPANY
SOMPO AMERICA FIRE & MARINE INSURANCE COMPANY
SOMPO AMERICA INSURANCE COMPANY
SOUTHERN INS CO
ST PAUL FIRE AND MARINE INS CO
ST PAUL GUARDIAN INS CO
ST PAUL MERCURY INS CO
ST PAUL PROTECTIVE INS CO
STANDARD FIRE INSURANCE COMPANY
STAR INS CO
STARNET INSURANCE COMPANY
STARR INDEMNITY AND LIABILITY CO
STARR SPECIALTY INSURANCE COMPANY
STARSTONE NATIONAL INSURANCE COMPANY
STATE AUTO PROPERTY AND CASUALTY INS CO
STATE AUTOMOBILE MUTUAL INS CO
STATE FARM FIRE AND CASUALTY CO
STATE NATIONAL INSURANCE COMPANY
STONETRUST COMMERCIAL INS CO
STONEWOOD INSURANCE CO
STONINGTON INS CO
SUMMITPOINT INSURANCE COMPANY
SUNZ INSURANCE COMPANY
SYNERGY INS CO
T H E INSURANCE COMPANY
TECHNOLOGY INSURANCE CO
THE TRAVELERS CASUALTY COMPANY
TNUS INSURANCE CO
TOKIO MARINE AMERICA INSURANCE CO
TRANS PACIFIC INS CO
TRANSGUARD INS CO OF AMERICA INC
TRANSPORTATION INS CO
TRAVELERS CASUALTY & SURETY CO OF AMERICA
TRAVELERS CASUALTY AND SURETY CO
TRAVELERS CASUALTY INS CO OF AMERICA
TRAVELERS COMMERCIAL CASUALTY CO
TRAVELERS INDEMNITY CO
TRAVELERS INDEMNITY CO OF AMERICA
TRAVELERS INDEMNITY CO OF CT
TRAVELERS INSURANCE CO
TRAVELERS PROPERTY CASUALTY CO OF AMERICA
TRI STATE INSURANCE COMPANY OF MINNESOTA
TRIANGLE INSURANCE COMPANY INC
TRIUMPH CASUALTY COMPANY
TRUCK INSURANCE EXCHANGE
TRUMBULL INS CO
TWIN CITY FIRE INS CO
UNION INS CO OF PROVIDENCE



Missouri

Advisory Loss Costs and Rating Values Filing – January 1, 2020

NCCI Affiliate List

UNION INSURANCE COMPANY
UNITED FIRE AND CASUALTY CO
UNITED STATES FIDELITY AND GUARANTY CO
UNITED WI INS CO
US FIRE INS CO
UTAH BUSINESS INSURANCE COMPANY INC
UTICA MUTUAL INS CO
VALLEY FORGE INS CO
VANLINER INS CO
VANTAPRO SPECIALTY INS CO
VICTORIA FIRE & CASUALTY COMPANY
VIGILANT INS CO
WASHINGTON INTERNATIONAL INSURANCE COMPANY
WELLFLEET INSURANCE COMPANY
WELLFLEET NEW YORK INSURANCE COMPANY
WESCO INSURANCE COMPANY (AMTRUST GROUP)
WEST AMERICAN INS CO
WEST BEND MUTUAL INS CO
WESTCHESTER FIRE INSURANCE COMPANY
WESTFIELD INS CO
WESTFIELD NATIONAL INS CO
WESTPORT INSURANCE CORPORATION
WILLIAMSBURG NATIONAL INS CO
WORK FIRST CASUALTY CO
WORTH CASUALTY COMPANY
XL INS CO OF NY INC
XL INSURANCE AMERICA INC
XL SPECIALTY INS CO
ZENITH INS CO
ZNAT INS CO
ZURICH AMERICAN INS CO
ZURICH AMERICAN INS CO OF IL



MISSOURI

Advisory Loss Costs and Rating Values Filing – January 1, 2020

Key Contacts

Carla Townsend, State Relations Executive
Regulatory Division
National Council on Compensation Insurance, Inc. (NCCI)
901 Peninsula Corporate Circle
Boca Raton, Florida 33487-1362
Phone (561) 893-3819 Fax (561) 893-5779

Jim Davis, ACAS, MAAA
Executive Director and Actuary
Actuarial and Economic Services Division
National Council on Compensation Insurance, Inc. (NCCI)
901 Peninsula Corporate Circle
Boca Raton, Florida 33487-1362
Phone (561) 893-3097 Fax (561) 893-5185

All NCCI employees can be contacted via e-mail using the following format:

First Name_Last Name@NCCI.com

State: *Missouri* Filing Company: *NCCI Inc*
 TOI/Sub-TOI: *16.0 Workers Compensation/16.0004 Standard WC*
 Product Name: *Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2020*
 Project Name/Number: */*

Supporting Document Schedules

Bypassed - Item:	Actuarial Justification
Bypass Reason:	NA
Attachment(s):	
Item Status:	REVIEWED
Status Date:	10/30/2019
Bypassed - Item:	Electronic Rate Submission
Bypass Reason:	NA
Attachment(s):	
Item Status:	REVIEWED
Status Date:	10/30/2019
Bypassed - Item:	Exhibits A & B (20 CSR 500-6.950)(2)
Bypass Reason:	NA
Attachment(s):	
Item Status:	REVIEWED
Status Date:	10/30/2019
Satisfied - Item:	Filing Memorandum
Comments:	
Attachment(s):	MO 1.1.2020 Filing Cover Letter.pdf
Item Status:	REVIEWED
Status Date:	10/30/2019



Carla Townsend
Regulatory Division
(P) 561-893-3819 (F) 561-893-5779
Email: Carla_Townsend@ncci.com

August 13, 2019

The Honorable Chlora Lindley-Myers
Director
Missouri Department of Insurance,
Financial Institutions and Professional Registration
Harry S Truman Bldg, Room 530
P.O. Box 690
Jefferson City, Missouri 65102

Re: Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2020

Dear Director Lindley-Myers:

In accordance with the applicable statutes and regulations of the state of Missouri, we are filing advisory voluntary loss costs for Missouri to be effective January 1, 2020 for new and renewal policies.

This filing proposes an average overall change of -1.6% in the voluntary loss costs from the January 1, 2019 NCCI Voluntary Loss Costs Including Trend. Enclosed are the NCCI Voluntary Loss Costs Including Trend proposed to be effective January 1, 2020.

Please note the following in connection with this filing:

- As a result of Item B-1397, effective January 1, 2008, a single combined loss cost is still calculated for Class Codes 7710 and 7711 via a payroll-weighted average of the separately indicated loss costs for these two Class Codes.
- As a result of Item B-1435, effective January 1, 2018:
 - Class Codes 1642 and 1655 are combined to reflect the final year of a three-year transition program, and Class Code 1655 is discontinued.
 - Class Codes 5040 and 5067 are combined to reflect the final year of a three-year transition program, and Class Code 5067 is discontinued.
 - Class Codes 5505 and 5506 are combined to reflect the final year of a three-year transition program, and Class Code 5505 is discontinued.
- As a result of Item B-1436, effective January 1, 2019:
 - Class Codes 8825 and 8826 are combined to reflect the final year of a two-year transition program, and Class Code 8825 is discontinued.
 - Class Code 8829 is discontinued and the loss cost for Class Code 8824 is payroll weighted to reflect the combined experience of Class Codes 8824 and 8829
- As a result of Item B-1437, effective January 1, 2020:
 - Class Codes 2286 and 2220 are combined to reflect the first year of a two-year transition program. In the second year of the transition, Class Code 2286 will be discontinued.

- Class Codes 2670 and 2688 are combined to reflect the first year of a two-year transition program. In the second year of the transition, Class Code 2670 will be discontinued.
- Class Code 4360 is discontinued and the loss cost for Class Code 7610 is payroll weighted to reflect the combined experience of Class Codes 4360 and 7610.
- Class Code 4670 is discontinued and the loss cost for Class Code 4683 is payroll weighted to reflect the combined experience of Class Codes 4670 and 4683.
- Class Code 5508 is discontinued and the loss cost for Class Code 5507 is payroll weighted to reflect the combined experience of Class Codes 5508 and 5507.
- As a result of Item R-1417, the retrospective rating plan parameters were updated.

I hereby certify that I am familiar with the insurance laws, rules and regulations of the State of Missouri, and to the best of my knowledge, information, and belief, this filing complies in all respects to such laws, rules, and regulations. This filing is made on behalf of the members and subscribers of the National Council on Compensation Insurance, Inc., who are now writing or will write workers compensation insurance in Missouri.

This filing is made exclusively on behalf of the companies that have given valid consideration for the express purpose of fulfilling regulatory rate or pure premium filing requirements and other private use of this information.

In the enclosed appendix is a list of companies, which as of the time this filing is submitted, are eligible to reference this information. The inclusion of a company on this list merely indicates that the company, or the group to which it belongs, is affiliated with NCCI in this state, or has licensed this information as a non-affiliate, and is not intended to indicate whether the company is currently writing business or is even licensed to write business in this state.

Please contact me (561-893-3819) if you have any questions or need any further information.

Sincerely,



Carla Townsend
State Relations Executive