

**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, 2024  
**Project Name/Number:** /

## Filing at a Glance

Company: NCCI Inc  
Product Name: Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2024  
State: Missouri  
TOI: 16.0 Workers Compensation  
Sub-TOI: 16.0004 Standard WC  
Filing Type: Rate  
Date Submitted: 08/24/2023  
SERFF Tr Num: NCCI-133792650  
SERFF Status: Closed-REVIEWED  
State Tr Num: 137  
State Status: REVIEWED  
Co Tr Num: MISSOURI LC 01012024

Effective Date: 01/01/2024  
Requested (New):  
Effective Date: 01/01/2024  
Requested (Renewal):  
Author(s): Lesley O'Brien, Nancy Mattei, Tyler Santos, Andrew Scott, Mario Morales  
Reviewer(s): Patrick Lennon (primary)  
Disposition Date: 11/29/2023  
Disposition Status: REVIEWED  
Effective Date (New): 01/01/2024  
Effective Date (Renewal): 01/01/2024

State Filing Description:

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**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, 2024  
**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: 11/29/2023  
State Status Changed: 11/29/2023 Deemer Date:  
Created By: Nancy Mattei Submitted By: Nancy Mattei  
Corresponding Filing Tracking Number:  
State TOI: 16.0 Workers Compensation State Sub-TOI: 16.0004 Standard WC

### Filing Description:

In accordance with the applicable statutes and regulations of the state of Missouri, we are filing advisory voluntary loss costs and rating values to be effective January 1, 2024, for new and renewal policies.

## Company and Contact

### Filing Contact Information

Carla Townsend, Senior State Relations      carla\_townsend@ncci.com  
Executive  
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

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**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, 2024  
**Project Name/Number:** /

## Filing Fees

### State Fees

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

Company	Amount	Date Processed	Transaction #
NCCI Inc	\$150.00	08/24/2023 08:23 AM	265346027
<b>EFT Total</b>	<b>\$150.00</b>		

### State Specific

NAIC Number: N/A  
 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, 2024  
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## Correspondence Summary

### Dispositions

Status	Created By	Created On	Date Submitted
REVIEWED	Patrick Lennon	11/29/2023	11/29/2023

### Objection Letters and Response Letters

#### Objection Letters

Status	Created By	Created On	Date Submitted
PENDING INDUSTRY RESPONSE	Patrick Lennon	10/23/2023	10/23/2023
PENDING INDUSTRY RESPONSE	Patrick Lennon	10/10/2023	10/10/2023

#### Response Letters

Responded By	Created On	Date Submitted
Nancy Mattei	10/27/2023	10/27/2023
Nancy Mattei	10/17/2023	10/17/2023

**State:** Missouri  
**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, 2024  
**Project Name/Number:** /

**Filing Company:** NCCI Inc

## Disposition

Disposition Date: 11/29/2023

Effective Date (New): 01/01/2024

Effective Date (Renewal): 01/01/2024

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 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	-7.500%	0.000%	\$0	0	\$0	0.000%	0.000%

Schedule	Schedule Item	Schedule Item Status	Public Access
Rate	New Filing	REVIEWED	Yes
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
Supporting Document	Filing Narrative	REVIEWED	Yes
Supporting Document	Interrogatory Response	REVIEWED	Yes
Supporting Document	Interrogatory Response 10/27/2023	REVIEWED	Yes

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**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, 2024  
**Project Name/Number:** /

## Objection Letter

Objection Letter Status	PENDING INDUSTRY RESPONSE
Objection Letter Date	10/23/2023
Submitted Date	10/23/2023
Respond By Date	10/30/2023

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Dear Carla Townsend,

**Introduction:**

Thank you for your response to our previous inquiry. Upon review of the information provided, the following concerns remain:

**Objection 1**

Comments: Please provide the Missouri Employers Mutual (MEM) ultimate AOE ratios by accident year which led to the selected MEM provision of 12.5% found on Exhibit 10c of your response to interrogatory #10.

**Objection 2**

Comments: Please provide the underlying calculations which support and lead to the selected 19-to-ultimate ratio of DCCE-to-loss development factor of 0.995 shown in Column (2) of Exhibit 11b of your response to interrogatory #11.

**Objection 3**

Comments: Please provide the Supplemental Loss Development and Trend Information associated with the 1/1/24 filing which presents information for the latest 15 policy years.

**Conclusion:**

Please respond to this letter by the above date. This submission will be held in suspense pending your response. Feel free to contact me at [Patrick.Lennon@insurance.mo.gov](mailto:Patrick.Lennon@insurance.mo.gov) or 573-751-1946 should you have any questions or concerns.

Sincerely,

Patrick Lennon

**State:** Missouri  
**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, 2024  
**Project Name/Number:** /

## Objection Letter

Objection Letter Status	PENDING INDUSTRY RESPONSE
Objection Letter Date	10/10/2023
Submitted Date	10/10/2023
Respond By Date	10/17/2023

Dear Carla Townsend,

### Introduction:

Thank you for your submission of this filing. Upon review, areas of concern for Missouri insurance regulatory guidelines were found. Please address the following objections and respond by the date above.

### Objection 1

Comments: Have there been any changes in the underlying data source (e.g., from which call data is pulled) from the prior filing to the current filing? If so, please explain the reason for such a change and the estimated impact of such change(s) on the filed indication.

### Objection 2

Comments: Please provide the overall impact of each methodology change from the prior filing.

### Objection 3

Comments: Were the adjustments to the 2020 and 2021 AWW values to exclude the estimated impact of pandemic-related, industry-sector mix changes calculated in the same manner as the comparable adjustments reflected in the prior filing?

### Objection 4

Comments: For total experience (voluntary plus ARM as reflected in the filed indication), please provide extended triangles which present at least 10 diagonals of loss data for each of indemnity loss and medical loss (i.e., policy year paid and paid plus case reserve loss development from a 1st through a 19th report for indemnity vs. medical).

### Objection 5

Comments: Did you consider any basis for selecting loss development factors other than those shown in the filing?

### Objection 6

Comments: Related to the patterns, or shifts of experience in loss development, please provide the following: ratios of policy year paid to paid plus case data at all available evaluations for indemnity vs. medical, for as many years as possible case reserves per open lost-time claim for each of indemnity and medical loss by policy year closed and reported lost-time claims by policy year, as well as ratios of closed-to-reported claim counts

### Objection 7

Comments: Please provide the supporting calculations underlying Appendix A-II, Section G, Columns (6) and (13).

### Objection 8

Comments: Please supply payroll by class so that we may complete the tables required for our report.

### Objection 9

Comments: Please supply the derivation of the factor of 0.768 used to adjust the 19th to ultimate LDF to a limited basis as presented in Appendix A-II of the technical supplement.

### Objection 10

Comments: Related to Section A of Exhibit II:

a. Please provide the underlying data and calculations which led to the ultimate AOE ratios.

**State:** Missouri  
**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, 2024  
**Project Name/Number:** /

b. Please provide the ultimate AOE ratios for Missouri-only data.

c. Have you maintained the prior approach to selecting an AOE ratio which considers both countrywide data and data for Missouri Employers Mutual (MEM)? If so, please provide the AOE provision for

the MEM, as well as the calculation of the weightings applied to each indicated provision to derive the selected Missouri AOE provision.

#### **Objection 11**

Comments: Related to Section B of Exhibit II:

a. Please expand the presentation of ultimate DCCE ratios to include policy years 2012 through 2016.

b. Please provide the underlying data and calculations which led to the values in Columns (2) and (3), including applicable development triangles which present at least 10 diagonals of paid DCCE to paid loss ratio development factors from a 1st through 19th report.

#### **Objection 12**

Comments: What is the 1/1/24 indication if you exclude all assigned risk experience?

#### **Objection 13**

Comments: Please provide supporting work papers which reflect voluntary-only data and document the underlying components of the excluding-ARM indication, such as premium development, loss development, on-level factors, LAE and trend.

#### **Objection 14**

Comments: For voluntary-only experience, please provide extended triangles which present 10 diagonals of loss data for each of indemnity loss and medical loss.

#### **Objection 15**

Comments: Please provide the calculation of Column (7) of Appendix A-I, Section A and Section D.

#### **Objection 16**

Comments: Please provide the underlying calculations of the likely-to-develop and non-likely-to-develop columns on Appendix B-I, Section A-I, #1.

#### **Objection 17**

Comments: Please provide a file which shows the following information by class code: exposure, proposed loss cost change, loss cost change effective in each of 2023, 2022 and 2021.

#### **Conclusion:**

Please respond to this letter by the above date. This submission will be held in suspense pending your response. Feel free to contact me at Patrick.Lennon@insurance.mo.gov or 573-751-1946 should you have any questions or concerns.

Sincerely,

Patrick Lennon



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, 2024  
 Project Name/Number: /

## Response Letter

Response Letter Status Submitted to State  
 Response Letter Date 10/27/2023  
 Submitted Date 10/27/2023

Dear Patrick Lennon,

**Introduction:**

Hello,

**Response 1**

**Comments:**

Responses are in the Supporting Documentation tab.

**Related Objection 1**

Comments: Please provide the Missouri Employers Mutual (MEM) ultimate AOE ratios by accident year which led to the selected MEM provision of 12.5% found on Exhibit 10c of your response to interrogatory #10.

**Changed Items:**

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

Supporting Document Schedule Item Changes	
Satisfied - Item:	Interrogatory Response 10/27/2023
Comments:	
Attachment(s):	NCCI_Responses_to_the_Missouri_DCI_Requests_dated_102323.pdf NCCI_Responses_to_Missouri_DCI_Requests_dated_102323_Attachments.zip

**Response 2**

**Comments:**

Responses are in the Supporting Documentation tab.

**Related Objection 2**

Comments: Please provide the underlying calculations which support and lead to the selected 19-to-ultimate ratio of DCCE-to-loss development factor of 0.995 shown in Column (2) of Exhibit 11b of your response to interrogatory #11.

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, 2024  
Project Name/Number: /

**Changed Items:**

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

Supporting Document Schedule Item Changes	
Satisfied - Item:	Interrogatory Response 10/27/2023
Comments:	
Attachment(s):	NCCI_Responses_to_the_Missouri_DCI_Requests_dated_102323.pdf NCCI_Responses_to_Missouri_DCI_Requests_dated_102323_Attachments.zip

**Response 3**

**Comments:**

Responses are in the Supporting Documentation tab.

**Related Objection 3**

Comments: Please provide the Supplemental Loss Development and Trend Information associated with the 1/1/24 filing which presents information for the latest 15 policy years.

**Changed Items:**

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

Supporting Document Schedule Item Changes	
Satisfied - Item:	Interrogatory Response 10/27/2023
Comments:	
Attachment(s):	NCCI_Responses_to_the_Missouri_DCI_Requests_dated_102323.pdf NCCI_Responses_to_Missouri_DCI_Requests_dated_102323_Attachments.zip

**Conclusion:**

Thank you,  
Sincerely,  
Nancy Mattei

**State:** Missouri  
**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, 2024  
**Project Name/Number:** /

**Filing Company:** NCCI Inc

## Response Letter

Response Letter Status Submitted to State  
 Response Letter Date 10/17/2023  
 Submitted Date 10/17/2023

Dear Patrick Lennon,

### Introduction:

Hello,

### Response 1

#### Comments:

Responses are in the Supporting Documentation tab.

### Related Objection 1

*Comments: Have there been any changes in the underlying data source (e.g., from which call data is pulled) from the prior filing to the current filing? If so, please explain the reason for such a change and the estimated impact of such change(s) on the filed indication.*

### Changed Items:

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

## Supporting Document Schedule Item Changes

<b>Satisfied - Item:</b>	Interrogatory Response
<b>Comments:</b>	
<b>Attachment(s):</b>	NCCI_Responses_to_Missouri_DCI_Requests_dated_101023.pdf NCCI_Responses_to_Missouri_DCI_Requests_dated_101023_Attachments.zip

### Response 2

#### Comments:

Responses are in the Supporting Documentation tab.

### Related Objection 2

*Comments: Please provide the overall impact of each methodology change from the prior filing.*

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, 2024  
 Project Name/Number: /

**Changed Items:**

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

Supporting Document Schedule Item Changes	
Satisfied - Item:	Interrogatory Response
Comments:	
Attachment(s):	NCCI_Responses_to_Missouri_DCI_Requests_dated_101023.pdf NCCI_Responses_to_Missouri_DCI_Requests_dated_101023_Attachments.zip

**Response 3**

**Comments:**

Responses are in the Supporting Documentation tab.

**Related Objection 3**

Comments: Were the adjustments to the 2020 and 2021 AWW values to exclude the estimated impact of pandemic-related, industry-sector mix changes calculated in the same manner as the comparable adjustments reflected in the prior filing?

**Changed Items:**

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

Supporting Document Schedule Item Changes	
Satisfied - Item:	Interrogatory Response
Comments:	
Attachment(s):	NCCI_Responses_to_Missouri_DCI_Requests_dated_101023.pdf NCCI_Responses_to_Missouri_DCI_Requests_dated_101023_Attachments.zip

**Response 4**

**Comments:**

Responses are in the Supporting Documentation tab.

**Related Objection 4**

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, 2024  
 Project Name/Number: /

Comments: For total experience (voluntary plus ARM as reflected in the filed indication), please provide extended triangles which present at least 10 diagonals of loss data for each of indemnity loss and medical loss (i.e., policy year paid and paid plus case reserve loss development from a 1st through a 19th report for indemnity vs. medical).

**Changed Items:**

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

Supporting Document Schedule Item Changes	
Satisfied - Item:	Interrogatory Response
Comments:	
Attachment(s):	NCCI_Responses_to_Missouri_DCI_Requests_dated_101023.pdf NCCI_Responses_to_Missouri_DCI_Requests_dated_101023_Attachments.zip

**Response 5**

**Comments:**

Responses are in the Supporting Documentation tab.

**Related Objection 5**

Comments: Did you consider any basis for selecting loss development factors other than those shown in the filing?

**Changed Items:**

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

Supporting Document Schedule Item Changes	
Satisfied - Item:	Interrogatory Response
Comments:	
Attachment(s):	NCCI_Responses_to_Missouri_DCI_Requests_dated_101023.pdf NCCI_Responses_to_Missouri_DCI_Requests_dated_101023_Attachments.zip

**Response 6**

**Comments:**

Responses are in the Supporting Documentation tab.

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<b>State:</b>	Missouri	<b>Filing Company:</b>	NCCI Inc
<b>TOI/Sub-TOI:</b>	16.0 Workers Compensation/16.0004 Standard WC		
<b>Product Name:</b>	Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2024		
<b>Project Name/Number:</b>	/		

**Related Objection 6**

*Comments: Related to the patterns, or shifts of experience in loss development, please provide the following: ratios of policy year paid to paid plus case data at all available evaluations for indemnity vs. medical, for as many years as possible case reserves per open lost-time claim for each of indemnity and medical loss by policy year closed and reported lost-time claims by policy year, as well as ratios of closed-to-reported claim counts*

**Changed Items:**

*No Form Schedule items changed.*

*No Rate/Rule Schedule items changed.*

*No Supporting Documents changed.*

**Response 7****Comments:**

*Responses are in the Supporting Documentation tab.*

**Related Objection 7**

*Comments: Please provide the supporting calculations underlying Appendix A-II, Section G, Columns (6) and (13).*

**Changed Items:**

*No Form Schedule items changed.*

*No Rate/Rule Schedule items changed.*

*No Supporting Documents changed.*

**Response 8****Comments:**

*Responses are in the Supporting Documentation tab.*

**Related Objection 8**

*Comments: Please supply payroll by class so that we may complete the tables required for our report.*

**Changed Items:**

*No Form Schedule items changed.*

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**State:** Missouri  
**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, 2024  
**Project Name/Number:** /

**Filing Company:** NCCI Inc

No Rate/Rule Schedule items changed.

No Supporting Documents changed.

### Response 9

#### Comments:

Responses are in the Supporting Documentation tab.

### Related Objection 9

Comments: Please supply the derivation of the factor of 0.768 used to adjust the 19th to ultimate LDF to a limited basis as presented in Appendix A-II of the technical supplement.

#### Changed Items:

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

No Supporting Documents changed.

### Response 10

#### Comments:

Responses are in the Supporting Documentation tab.

### Related Objection 10

Comments: Related to Section A of Exhibit II:

a. Please provide the underlying data and calculations which led to the ultimate AOE ratios.

b. Please provide the ultimate AOE ratios for Missouri-only data.

c. Have you maintained the prior approach to selecting an AOE ratio which considers both countrywide data and data for Missouri Employers Mutual (MEM)? If so, please provide the AOE provision for

the MEM, as well as the calculation of the weightings applied to each indicated provision to derive the selected Missouri AOE provision.

#### Changed Items:

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

No Supporting Documents changed.

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**State:** Missouri  
**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, 2024  
**Project Name/Number:** /

**Filing Company:** NCCI Inc

### **Response 11**

#### **Comments:**

Responses are in the Supporting Documentation tab.

### **Related Objection 11**

Comments: Related to Section B of Exhibit II:

a. Please expand the presentation of ultimate DCCE ratios to include policy years 2012 through 2016.

b. Please provide the underlying data and calculations which led to the values in Columns (2) and (3), including applicable development triangles which present at least 10 diagonals of paid DCCE to paid

loss ratio development factors from a 1st through 19th report.

### **Changed Items:**

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

No Supporting Documents changed.

### **Response 12**

#### **Comments:**

Responses are in the Supporting Documentation tab.

### **Related Objection 12**

Comments: What is the 1/1/24 indication if you exclude all assigned risk experience?

### **Changed Items:**

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

No Supporting Documents changed.

### **Response 13**

#### **Comments:**

Responses are in the Supporting Documentation tab.



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, 2024  
Project Name/Number: /

**Related Objection 13**

Comments: Please provide supporting work papers which reflect voluntary-only data and document the underlying components of the excluding-ARM indication, such as premium development, loss development, on-level factors, LAE and trend.

**Changed Items:**

- No Form Schedule items changed.
- No Rate/Rule Schedule items changed.
- No Supporting Documents changed.

**Response 14**

**Comments:**

Responses are in the Supporting Documentation tab.

**Related Objection 14**

Comments: For voluntary-only experience, please provide extended triangles which present 10 diagonals of loss data for each of indemnity loss and medical loss.

**Changed Items:**

- No Form Schedule items changed.
- No Rate/Rule Schedule items changed.
- No Supporting Documents changed.

**Response 15**

**Comments:**

Responses are in the Supporting Documentation tab.

**Related Objection 15**

Comments: Please provide the calculation of Column (7) of Appendix A-I, Section A and Section D.

**Changed Items:**

- No Form Schedule items changed.
- No Rate/Rule Schedule items changed.

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, 2024  
 Project Name/Number: /

No Supporting Documents changed.

**Response 16**

**Comments:**

Responses are in the Supporting Documentation tab.

**Related Objection 16**

Comments: Please provide the underlying calculations of the likely-to-develop and non-likely-to-develop columns on Appendix B-I, Section A-I, #1.

**Changed Items:**

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

No Supporting Documents changed.

**Response 17**

**Comments:**

Responses are in the Supporting Documentation tab.

**Related Objection 17**

Comments: Please provide a file which shows the following information by class code: exposure, proposed loss cost change, loss cost change effective in each of 2023, 2022 and 2021.

**Changed Items:**

No Form Schedule items changed.

No Rate/Rule Schedule items changed.

Supporting Document Schedule Item Changes	
Satisfied - Item:	Interrogatory Response
Comments:	
Attachment(s):	NCCI_Responses_to_Missouri_DCI_Requests_dated_101023.pdf NCCI_Responses_to_Missouri_DCI_Requests_dated_101023_Attachments.zip

**Conclusion:**

Thank you,

**SERFF Tracking #:**

NCCI-133792650

**State Tracking #:**

137

**Company Tracking #:**

MISSOURI LC 01012024

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**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, 2024

**Project Name/Number:**

/

Sincerely,

Nancy Mattei

**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, 2024  
**Project Name/Number:** /

## Rate Information

Rate data applies to filing.

**Filing Method:** SERFF  
**Rate Change Type:** Decrease  
**Overall Percentage of Last Rate Revision:** -6.400%  
**Effective Date of Last Rate Revision:** 01/01/2023  
**Filing Method of Last Filing:** SERFF  
**SERFF Tracking Number of Last Filing:** NCCI-133377918

## 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	-7.500%	0.000%	\$0	0	\$0	0.000%	0.000%

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, 2024  
 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 11/29/2023	New Filing	N/A	Replacement	MO-2022-03	MO 1-1-2024 Filing.pdf



# Missouri

## Advisory Loss Costs and Rating Values Filing

Proposed Effective January 1, 2024



**Carla Townsend, WCP**  
Regulatory Division  
(P) 561-893-3819  
Email: Carla\_Townsend@ncci.com

August 24, 2023

The Honorable Chlora Lindley-Myers  
Director  
Missouri Department of Commerce and Insurance  
Harry S Truman State Office Building  
301 W. High St., Room 530  
Jefferson City, Missouri 65101

**Re: Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2024**

Dear Director Lindley-Myers:

In accordance with the applicable statutes and regulations of the state of Missouri, we are filing advisory voluntary loss costs and rating values to be effective January 1, 2024, for new and renewal policies.

Enclosed are NCCI's Voluntary Loss Costs Including Trend proposed to be effective January 1, 2024. The proposed loss costs represent an overall average change of -7.5% from the current, similar set of loss costs that have been in effect since January 1, 2023.

Reported COVID-19-related claims have been excluded from the data on which this filing is based to better reflect the conditions likely to prevail during the proposed effective period.

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. I hereby certify that I am familiar with Missouri's insurance laws, rules, and regulations, and to the best of my knowledge, information, and belief, this filing complies in all respects to such laws, rules, and regulations.

In the enclosed appendix is a list of companies that, 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 if you have any questions or need further information.

Sincerely,

A handwritten signature in black ink that reads "Carla Townsend". The signature is written in a cursive, flowing style.

Carla Townsend, WCP  
Senior State Relations Executive



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## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Actuarial Certification

I, Brian Stein, am an Assistant 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.

*Brian Stein*

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Brian Stein, ACAS, MAAA  
Assistant Actuary  
Actuarial and Economic Services



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### 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, 2024.

The intended users of this report are:

- The Missouri Department of Commerce and Insurance
- 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.

NCCI utilizes widely accepted general ratemaking methodologies in the calculation of voluntary loss costs, including (i) experience base determination, (ii) chain ladder development method, (iii) trending procedure, (iv) expense calculation, and (v) application of indemnity and medical benefit changes. Since the onset of the COVID-19 pandemic, NCCI has conducted in-depth reviews and analyses and has determined that the continued use of data from the pandemic-impacted time-period remains appropriate for use in its ratemaking methodologies.



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Disclosures

##### Data Sources

##### Key Dates

Financial Data Valuation Date	December 31, 2022
Financial Call Data Cutoff Date	June 26, 2023
Unit Statistical Plan Data Cutoff Date	June 30, 2023
Filing Preparation Date	July 10, 2023

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 the Financial Call Data Cutoff Date were not considered for inclusion in the analysis.

Loss cost level changes at the classification code level are based on five years of Unit Statistical Plan Data, which is the audited exposure, premium and loss information reported to NCCI on a policy level. In this filing, Unit Statistical Plan Data submissions received after the Unit Statistical Plan Data Cutoff Date 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.

Events that have occurred after the Filing Preparation Date that may have a material impact on workers compensation costs in this jurisdiction have not been considered in the analysis.

##### Data Exclusions

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.



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Disclosures

In this year's filing, data for all carriers writing at least one-tenth of one percent of the Missouri workers compensation written premium volume have been included in the experience period on which this filing is based.

NCCI categorizes catastrophic events as those that incur aggregate workers compensation losses in excess of \$50 million per occurrence. Pandemics have the potential to be catastrophic in terms of the costs they impose on the workers compensation system. NCCI's ratemaking methodology excludes losses related to catastrophes from the calculation of loss costs. This is because the actual experience from such events is not considered predictive of future experience. In line with this methodology, NCCI is proposing to treat COVID-19 claims with accident dates between December 1, 2019 through December 31, 2022 as a catastrophe in this filing. These reported claims have been excluded from Financial Call Data and Unit Statistical Plan Data for use in ratemaking to better reflect the conditions expected to prevail in the filing's proposed effective period.

Below is a summary of COVID-19-related lost-time claim counts and indemnity and medical combined paid plus case losses, as reported in NCCI's Financial Call 31 as of year-end 2022.

<u>Year</u>	<u>COVID-19 Lost-Time Claim Counts</u>	<u>COVID-19 Paid+Case Losses</u>
PY 2019	134	\$1,877,245
PY 2020	739	\$8,294,365
PY 2021	216	\$4,601,985
AY 2020	796	\$8,830,481
AY 2021	241	\$5,753,685
AY 2022	76	\$241,417

*Excludes large deductible and expense-only claims.*

Reported COVID-19-related losses would have represented less than a 2% share of the reported paid plus case losses in Missouri's experience period.

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



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Disclosures

##### 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
- Unanticipated changes to wage or medical inflation
- 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.

The course of the COVID-19 pandemic and related considerations, such as future economic conditions and the labor market, contribute additional uncertainty when estimating future costs.



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

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- 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

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- NCCI Affiliate List
- Key Contacts



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### **Part 1 Filing Overview**

- Executive Summary
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- Summary of Selections
- Additional Proposed Changes



# MISSOURI

## Advisory Loss Costs and Rating Values Filing – January 1, 2024

### Executive Summary

Based on its review of the most recently available data, NCCI has proposed the following overall average workers compensation voluntary loss cost change in Missouri to become effective January 1, 2024.

#### Key Components

Impact of change in Experience and Development	-5.1%
Impact of change in Trend	-2.8%
Impact of change in Benefits	0.0%
<u>Impact of change in Loss-based Expenses</u>	<u>+0.3%</u>
<b>Proposed Overall Average Voluntary Loss Cost Level Change</b>	<b>-7.5%*</b>

\*The loss cost change varies by classification code, each of which belongs to one of five Industry Groups.

#### Items of Note:

Experience and Development:

- This filing is based on premium and loss experience for Policy Years 2020 and 2021 evaluated as of December 31, 2022. The financial data experience period evaluated as of December 31, 2022 shows continued improvement when compared to the data evaluated as of December 31, 2021. Refer to Exhibit I for the considerations underlying the Experience Period and Loss Base selections.
  - A combination of both paid and paid plus case data was selected to best reflect the conditions likely to prevail in the proposed effective period.
  - The most recent experience observed in Policy Year 2021 shows improvement from prior policy years. The use of the two most recently available full policy years appropriately balances stability and responsiveness. This methodology is consistent with prior filings in Missouri.
  - Reported COVID-19-related claims have been excluded from the data on which this filing is based.
- Similar to previous Missouri filings, the reported loss amounts are projected to an ultimate basis using a 2-year average for paid losses and a 5-year average for paid plus case losses. The most recent valuation of development factors shows no clear deviation from historical values. Refer to Appendix A-II for considerations underlying the Development selection.





## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Executive Summary

##### Trend:

- Generally, the selected annual loss ratio trends in this year's filing are more heavily based on the observed longer-term patterns, which exhibit more of a decreasing pattern in loss ratios than the prior filing. Refer to Appendix A-III for considerations underlying the Trend selection.
  - After adjusting to a common wage level, Missouri's lost-time claim frequency has flattened in recent policy years but continues to show a long-term pattern of decline.
  - After adjusting to a common wage level, both the average indemnity and medical cost per lost-time claim figures decreased in recent years. While there had previously been increasing patterns in the indemnity and medical average cost per lost-time claim, the trends appear to have moderated and are relatively flat over a longer period.
  - Both the selected annual indemnity and medical loss ratio trends are -2.5%. This represents a half-point decrease from the previous filing's indemnity loss ratio trend and a full-point decrease from the previous filing's medical loss ratio trend.

##### Other Items of Note:

- The primary driver of the proposed change is attributable to improved experience. The decrease in the experience and trend components includes changes in loss experience, as well as changes in development and trend selections.
- Additional proposed methodology changes in this filing include changes to experience rating values, occupational disease provisions, and calendar year wage adjustments. Please refer to the Additional Proposed Changes section for additional information.



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Overview of Methodology

The following methodologies 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.

##### 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 portions 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 via a non-catastrophe excess ratio (with excess ratios at limits beyond \$50 million set equal to zero)
- 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")



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**Advisory Loss Costs and Rating Values Filing – January 1, 2024**

**Summary of Selections**

The following is a summary of selections underlying the voluntary loss costs proposed to be effective January 1, 2024, along with the selections underlying the filing effective January 1, 2023.

<b><u>Voluntary Loss Costs</u></b>	<b><u>Effective January 1, 2023</u></b>	<b><u>Proposed Effective January 1, 2024</u></b>
Experience Period	Policy Years 2019 and 2020	Policy Years 2020 and 2021
Premium Development	3-yr avg	3-yr avg
Loss Experience Base	Avg Paid and P+C	Avg Paid and P+C
Loss Development - Paid	2-yr avg	2-yr avg
Loss Development - Paid+Case	5-yr avg	5-yr avg
Tail Factor – Indemnity	1.012	1.012
Tail Factor – Medical	1.020	1.020
Trend Factor – Indemnity Loss Ratio	0.980	0.975
Trend Factor – Medical Loss Ratio	0.985	0.975
Base Threshold for Limiting Losses	\$10,138,997	\$9,571,063
Excess Ratio	1.0%	1.2%
Loss-based Expense Provision	20.0%	20.3%
Classification Swing Limits (applied by Industry Group)	+/-20%	+/-20%



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Additional Proposed Changes

##### Experience Rating Values

The experience rating values in this filing reflect the updates approved in Item E-1409— Enhancement to NCCI's Experience Rating Plan Methodology, which revised certain underlying components of the methodology used in NCCI's Experience Rating Plan (Plan):

- The primary/excess loss split point (split point) now differs by jurisdiction to better reflect state cost differences.
- The state per claim accident limitation (SAL) and United States Longshore and Harbor Workers' Compensation (USL&HW) per claim accident limitation are now based on the 95<sup>th</sup> percentile of lost time claims and are generally smaller in magnitude than the limitations under the prior methodology.
- The credibility parameters underlying the calculation of the weight (W) and ballast (B) values have been recalibrated with more recently available data to improve equity within the Plan.
- The G value has been adjusted to enhance consistency with other Plan parameters.
- The Discount ratios (D-ratios) no longer differ for class codes in the same hazard group.

The benefits of these updates include:

- A more accurate and predictive experience rating modification.
- More comparable Plan performance in states with claim costs that vary significantly from the countrywide average.
- Reduced sensitivity to large outlier claims without sacrificing predictive accuracy.
- The elimination of complex calculations where no value is added.

As described above, the split point is now a state-specific value reflecting Missouri costs; because D-ratios are a measure of the expected proportion of losses below the split point, the average D-ratio in Missouri has increased.

No statewide premium impact is anticipated from these experience rating plan updates.



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Additional Proposed Changes

##### Occupational Disease Provisions

NCCI recently completed a comprehensive review of Occupational Diseases (OD), excluding coal workers pneumoconiosis. The review found that the vast majority of loss experience for OD-related conditions is reported within 10 years of policy expiration and thus captured by our Unit Statistical Plan Data. As this data is included in our ratemaking analysis each year, it was determined that there is no need for separate ratemaking handling. Based on this research, NCCI is proposing to remove all disease loadings specific to any classification that is not related to coal mining. This includes supplementary disease loss costs/rates, where applicable.

The premium generated from disease provisions is negligible, accounting for less than 0.1% of the total premium in the state. Therefore, no offset is being proposed due to the removal of OD provisions. The losses associated with OD claims will continue to be included in the ratemaking data underlying the annual loss cost filings.

As stated in the **Basic Manual** (Rule ID: BM-SUPD-S1257), carriers will continue to have the option to include a load for supplemental OD exposure. The supplemental disease loading proposed must be based on the carrier's judgment after an evaluation of the operation.

##### Calendar Year Wage Adjustments

NCCI's standard methodology is to adjust frequency and severity values included in its loss cost filings to a common wage level before analyzing trends that may be present in those values.

This practice allows NCCI to analyze trends over and above changes that may be due solely to wage inflation. In this year's filing, the frequency and severity values have been adjusted to the Policy Year 2021 average weekly wage (AWW) level using data from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW).

In addition to the traditional growth in wages/salaries that may be expected to occur each year, the observed 2019-to-2020 and 2020-to-2021 AWW changes were also impacted by COVID-19 pandemic-related shifts in employment across industry sectors. While a change in industry-sector mix occurs to a small degree each year, its impact on the 2020 and 2021 AWW changes was unusually large, due to pandemic-related job losses, followed by wage growth in relatively low-wage industries. Therefore, the 2020 and 2021 AWW values were adjusted to exclude the estimated impact of the pandemic-related, industry-sector mix change.

The impact of industry-sector mix changes on the 2022 AWW change was less atypical than what was observed in 2020 and 2021. As such, the 2022 AWW value has not been modified to exclude the impact of industry-sector mix changes.



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### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Additional Proposed Changes

The adjustment made to the 2020 and 2021 AWW is reflected in the frequency and severity values shown in Appendix A-III Trend Factors. The overall impact of the 2020 and 2021 AWW adjustment, and the return to an unadjusted 2022 AWW, is expected to be immaterial.



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Part 2 Proposed Values

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

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.
- The updated experience rating plan parameters reflect the methodology enhancements from Item E-1409.
- As a result of Item E-1410, claims attributable to COVID-19 with accident dates on or after July 1, 2023 will be included in experience rating calculations. Experience modifications calculated using the values on the following pages which are effective beginning July 1, 2024\* and subsequent have the potential to be affected by COVID-19 claim experience.
- As a result of Item R-1421, the retrospective rating plan parameters have been updated.

\* In certain rare circumstances, a few experience modifications effective as early as March 16, 2024 may be affected.



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

### Proposed Voluntary Loss Costs for Inclusion in the Basic Manual

The following pages include proposed:

- Voluntary loss costs by class code, along with associated footnotes
- Advisory miscellaneous values, such as:
  - Catastrophe and Terrorism provisions
  - Maximum weekly payroll applicable for select class codes
  - Premium determination for Partners and Sole Proprietors
  - United States Longshore and Harbor Workers' Compensation Coverage Percentage



**NCCI INCLUDING TREND ADVISORY LOSS COSTS - NOT RATES**

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

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Effective January 1, 2024

CLASS CODE	LOSS COST	CLASS CODE	LOSS COST	CLASS CODE	LOSS COST	CLASS CODE	LOSS COST	CLASS CODE	LOSS COST	CLASS CODE	LOSS COST	CLASS CODE	LOSS COST
0005	2.19	2039	2.42	2790	1.65	3315	2.20	4130	2.84	4777	3.61	6045	3.05
0008	1.86	2041	2.20	2791	-	3334	1.62	4131	4.02	4825	0.63	6204	5.08
0016	3.02	2065	1.44	2797	3.10	3336	2.07	4133	2.00	4828	1.60	6206	1.73
0034	2.28	2070	3.32	2799	4.30	3365	2.96	4149	0.70	4829	0.86	6213	1.37
0035	1.48	2081	4.00	2802	4.18	3372	2.15	4206	2.53	4902	1.63	6214	1.11
0036	3.18	2089	2.10	2835	1.96	3373	4.21	4207	1.72	4923	1.00	6216	3.09
0037	2.76	2095	2.61	2836	2.10	3383	1.19	4239	1.58	5020	2.99	6217	2.51
0042	4.83	2105	3.41	2841	3.40	3385	0.82	4240	2.15	5022	4.69	6229	3.40
0050	4.18	2110	1.98	2881	2.38	3400	3.08	4243	1.69	5037	6.41	6233	1.57
0059D	-	2111	1.74	2883	1.91	3507	2.13	4244	2.17	5040	6.12	6235	3.62
0065D	-	2112	3.21	2915	2.24	3515	1.76	4250	1.74	5057	3.10	6236	3.59
0066D	-	2114	1.99	2916	2.48	3548	1.27	4251	3.15	5059	15.04	6237	1.00
0067D	-	2121	0.96	2923	1.28	3559	1.65	4263	3.71	5067	-	6251D	2.41
0079	2.18	2130	1.63	2960	3.59	3574	1.67	4273	1.84	5102	4.07	6252D	2.95
0083	3.40	2131	2.07	3004	1.08	3581	1.04	4279	2.65	5146	3.11	6306	3.59
0106	4.93	2143	1.69	3018	2.58	3612	1.61	4282	-	5160	1.43	6319	2.14
0113	3.53	2157	3.19	3022	2.56	3620	2.65	4283	1.36	5183	2.32	6325	2.23
0170	1.61	2172	1.31	3027	1.71	3629	1.27	4299	1.63	5188	2.11	6400	3.60
0251	2.74	2174	2.47	3028	3.28	3632	2.31	4304	3.75	5190	1.78	6503	1.66
0401	7.10	2211	6.28	3030	3.80	3634	1.19	4307	1.70	5191	0.67	6504	1.76
0771N	0.39	2220	1.94	3040	3.61	3635	1.37	4351	0.92	5192	2.37	6702M*	2.71
0908P	101.00	2286	-	3041	2.90	3638	1.89	4352	1.27	5213	3.82	6703M*	4.89
0913P	362.00	2288	3.41	3042	3.17	3642	1.17	4360	-	5215	3.88	6704M*	3.01
0917	2.83	2302	1.57	3064	2.91	3643	2.37	4361	0.54	5221	3.22	6824F	4.44
1005*	4.10	2305	1.72	3076	2.43	3647	2.42	4410	2.51	5222	5.09	6825F	1.33
1016*	14.22	2361	1.48	3081D	3.04	3648	1.04	4420	2.55	5223	2.85	6826F	2.50
1164D	3.80	2362	2.03	3082D	3.72	3681	0.51	4431	0.92	5348	2.71	6834	1.71
1165D	2.02	2380	1.72	3085D	3.66	3685	0.75	4432	1.01	5402	3.71	6835	2.17
1320	1.19	2388	1.11	3110	3.09	3719	0.60	4452	1.95	5403	3.19	6836	2.17
1322	5.57	2402	1.95	3111	1.62	3724	3.04	4459	1.91	5437	3.74	6845a	a
1430	4.09	2413	1.77	3113	1.38	3726	2.36	4470	1.93	5443	2.05	6872F	4.76
1438	6.03	2416	2.07	3114	2.20	3803	1.93	4484	2.14	5445	3.06	6874F	7.50
1452	2.19	2417	1.23	3118	1.56	3807	1.60	4493	1.96	5462	3.39	6882	2.30
1463	7.26	2501	1.75	3119	1.03	3808	3.10	4511	0.28	5472	5.05	6884	3.84
1472	2.60	2503	0.94	3122	1.52	3821	3.96	4557	1.95	5473	5.44	7016M	2.11
1624D	2.39	2570	2.86	3126	1.37	3822	2.96	4558	1.32	5474	3.99	7024M	2.34
1642	2.67	2585	2.62	3131	1.23	3824	2.80	4568	2.45	5478	3.10	7038M	3.91
1654	3.13	2586	3.44	3132	3.86	3826	0.75	4581	1.09	5479	4.81	7046M	7.64
1655	-	2587	2.16	3145	1.75	3827	1.57	4583	3.85	5480	4.62	7047M	3.80
1699	2.20	2589	1.66	3146	1.70	3830	0.65	4611	0.81	5491	1.55	7050M	7.04
1701	2.37	2600	3.78	3169	1.75	3851	1.57	4635	1.89	5505	-	7090M	4.34
1710D	2.96	2623	3.85	3179	1.53	3865	2.69	4653	1.61	5506	3.78	7098M	8.49
1741	-	2651	1.29	3180	2.52	3881	2.83	4665	6.09	5507	2.64	7099M	13.78
1747	2.56	2660	1.77	3188	1.82	4000	2.93	4670	-	5508	-	7133	2.11
1748	4.50	2670	-	3220	1.57	4018D	4.07	4683	3.86	5535	4.57	7151M	2.56
1803D	5.32	2683	-	3224	2.79	4021	3.56	4686	1.57	5537	2.55	7152M	4.62
1853	-	2688	1.94	3227	2.31	4034	5.49	4692	0.66	5551	10.56	7153M	2.85
1860	-	2701	8.63	3240	-	4036	2.01	4693	0.96	5606	0.93	7219	4.87
1924	2.27	2702	12.59	3241	2.41	4038	2.89	4703	1.56	5610	3.24	7222	4.98
1925	2.24	2709	9.02	3255	2.07	4062	1.98	4717	1.81	5645	6.76	7225	6.41
2002	2.81	2710	9.40	3257	1.99	4101	1.90	4720	1.94	5703	12.05	7230	4.98
2003	2.94	2714	3.60	3270	2.43	4109	0.53	4740	0.90	5705	13.32	7231	6.70
2014	3.71	2731	2.70	3300	3.60	4110	0.79	4741	2.23	5951	0.46	7232	6.39
2016	2.17	2735	3.29	3303	2.09	4111	1.57	4751	2.19	6003	4.01	7309F	4.72
2021	2.26	2759	4.05	3307	1.88	4114	2.13	4771N	2.19	6005	3.25	7313F	1.87

**REFER TO UPDATE PAGE FOR ALL SUBSEQUENT REVISIONS TO ALL CLASS CODES**

Refer to the Classification codes section of the **Basic Manual** for any state specific classification phraseology.

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

**MISSOURI NCCI INCLUDING TREND ADVISORY LOSS COSTS - NOT RATES**  
**Advisory loss costs exclude all expense provisions except loss adjustment expense.**

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CLASS CODE	LOSS COST	CLASS CODE	LOSS COST	CLASS CODE	LOSS COST	CLASS CODE	LOSS COST	CLASS CODE	LOSS COST	CLASS CODE	LOSS COST	CLASS CODE	LOSS COST
7317F	4.10	8039	1.19	8738M	0.39	9178	7.57						
7327F	9.59	8044	1.65	8742	0.18	9179	13.84						
7333M	1.77	8045	0.47	8745	2.75	9180	3.47						
7335M	1.97	8046	1.91	8748	0.40	9182	1.64						
7337M	3.20	8047	0.65	8755	0.23	9186	7.12						
7350F	4.85	8058	1.92	8799	0.37	9220	3.23						
7360	3.29	8061	1.24	8800	1.08	9402	3.47						
7370	3.42	8072	0.47	8803	0.04	9403	5.55						
7380	4.51	8102	1.52	8805M	0.12	9410	2.47						
7382	4.11	8103	2.05	8810	0.09	9501	2.31						
7390	3.86	8106	3.51	8814M	0.11	9505	2.38						
7394M	3.19	8107	2.14	8815M	0.20	9516	1.57						
7395M	3.54	8111	1.53	8820	0.08	9519	2.64						
7398M	5.75	8116	1.81	8824	1.46	9521	2.81						
7402	0.08	8203	6.02	8825	-	9522	5.57						
7403	3.02	8204	2.67	8826	1.27	9534	3.06						
7405N	0.95	8209	2.72	8829	-	9554	4.75						
7420	5.34	8215	2.74	8831	0.84	9586	0.38						
7421	0.44	8227	2.74	8832	0.19	9600	2.29						
7422	0.91	8232	4.46	8833	0.79	9620	1.05						
7425	1.10	8233	1.94	8835	1.53								
7431N	0.63	8235	3.08	8855	0.09								
7445N	0.51	8263	4.41	8856	0.34								
7453N	0.34	8264	3.45	8861	0.88								
7502	1.16	8265	3.15	8868	0.31								
7515	0.75	8279	4.93	8869	0.68								
7520	2.04	8288	5.32	8871	0.04								
7538	2.33	8291	2.35	8901	0.09								
7539	1.16	8292	2.63	9012	0.52								
7540	2.11	8293	4.53	9014	1.63								
7580	1.87	8304	3.97	9015	2.35								
7590	2.34	8350	4.50	9016	1.93								
7600	2.66	8353	3.01	9019	1.93								
7605	1.52	8370	3.24	9033	1.43								
7610	0.33	8381	1.42	9040	3.01								
7705	3.09	8385	1.65	9044	0.80								
7710	3.96	8387	1.88	9052	1.26								
7711	3.96	8391	1.64	9058	1.15								
7720	2.38	8392	1.65	9060	1.06								
7855	2.42	8393	1.19	9061	0.96								
8001	1.50	8500	3.63	9062	0.96								
8002	1.47	8601	0.17	9063	0.58								
8006	1.27	8602	0.94	9077F	3.78								
8008	0.74	8603	0.05	9082	0.92								
8010	1.49	8606	1.18	9083	0.80								
8013	0.26	8709F	2.12	9084	0.93								
8015	0.51	8719	1.35	9088a	a								
8017	1.00	8720	0.74	9089	0.68								
8018	1.92	8721	0.20	9093	0.86								
8021	2.02	8723	0.08	9101	2.27								
8031	1.50	8725	1.32	9102	1.90								
8032	1.27	8726F	0.99	9110	2.42								
8033	1.21	8728	0.37	9154	1.29								
8034	1.63	8734M	0.24	9156	1.44								
8037	1.40	8737M	0.22	9170	9.32								

**REFER TO UPDATE PAGE FOR ALL SUBSEQUENT REVISIONS TO ALL CLASS CODES**

Refer to the Classification codes section of the *Basic Manual* for any state specific classification phraseology.

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

**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 no longer includes disease loading. A supplemental disease loading may be added, as described in the **Basic Manual** rule, Supplemental disease exposure.
- 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.

**\* Class Codes with Specific Footnotes**

- 1005 Advisory loss cost includes a non-ratable disease element of \$0.47. (For coverage written separately for federal benefits only, \$0.45. For coverage written separately for state benefits only, \$0.02.)
- 1016 Advisory loss cost includes a non-ratable disease element of \$1.41. (For coverage written separately for federal benefits only, \$1.34. For coverage written separately for state benefits only, \$0.07.)
- 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 2.191 and elr x 2.12.
- 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.

**REFER TO UPDATE PAGE FOR ALL SUBSEQUENT REVISIONS TO ALL CLASS CODES**

Effective January 1, 2024

**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	1.1%	0.8%	0.6%	0.5%	0.3%	0.2%	0.2%
\$200	2.1%	1.6%	1.2%	0.9%	0.7%	0.5%	0.3%
\$300	3.0%	2.4%	1.7%	1.3%	1.0%	0.7%	0.5%
\$400	3.9%	3.1%	2.2%	1.7%	1.3%	0.9%	0.7%
\$500	4.8%	3.7%	2.7%	2.1%	1.6%	1.1%	0.8%
\$1,000	8.3%	6.5%	4.8%	3.8%	2.9%	2.0%	1.6%
\$1,500	11.1%	8.6%	6.6%	5.2%	4.0%	2.8%	2.2%
\$2,000	13.4%	10.5%	8.1%	6.4%	5.0%	3.6%	2.8%
\$2,500	15.3%	12.1%	9.4%	7.5%	5.9%	4.3%	3.4%
\$5,000	22.5%	18.1%	14.5%	12.0%	9.6%	7.3%	5.9%
\$10,000	31.6%	26.3%	21.8%	18.7%	15.2%	12.1%	10.0%
\$15,000	38.0%	32.4%	27.4%	23.9%	19.7%	16.1%	13.5%
\$20,000	43.1%	37.4%	32.0%	28.3%	23.6%	19.5%	16.5%

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

Employee operated vehicle.....	\$88,100
Leased or rented vehicle.....	\$58,800

**Catastrophe (other than Certified Acts of Terrorism)** - (Advisory Loss Cost) ..... 0.01

**Maximum Weekly Payroll** applicable in accordance with the *Basic Manual* notes for Code 9178 -- "Athletic Sports or Park: Noncontact Sports," and Code 9179 -- "Athletic Sports or Park: Contact Sports" ..... \$1,100

**Premium Determination for Executive Officers, Members of Limited Liability Companies, Partners and Sole Proprietors** in accordance with the *Basic Manual* rules, Rule for premium determination of executive officers, Rule for premium determination of members of LLCs, and Rule for premium determination for partners or sole proprietors (Annual Payroll) ..... \$52,900

**Terrorism** - (Advisory Loss Cost) ..... 0.005

**United States Longshore and Harbor Workers' Compensation Coverage Percentage** applicable only in connection with the *Basic Manual* rule, Federal coverages..... 82%

(Multiply a Non-F classification loss cost by a factor of 1.82 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 (1.04).)

**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, 2024

#### Proposed Values for Inclusion in the Experience Rating Plan Manual

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

- Description of Expected Loss Rates and D-ratios
- Description of the Weighting and Ballast values
- Expected Loss Rates and D-ratios by class code
- Table of Weighting Values
- Table of Ballast Values
- Experience Rating Premium Eligibility Amounts



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Proposed Rating Values

##### **Description of Expected Loss Rates and D-ratios**

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 proposed loss costs are adjusted to reflect the average loss levels of the 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 (HG), remove the effects of the following: loss development, expected losses in excess of the State Accident Limit, a portion of medical-only losses, benefit changes, trend, loss-based expenses, experience, and assigned risk programs.

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 excess losses to be used in the experience mod calculation.

D-ratios are calculated by hazard group and are based on the latest three years of Unit Statistical Data trended to the midpoint of the proposed experience rating period. A comparison of the resulting D-ratios across hazard groups is done to ensure that they 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 the hazard group D-ratio.

An adjustment to the ELR factors is necessary so that the resulting ELRs produce an expected intrastate experience rating off-balance that equals the targeted intrastate experience rating off-balance used in the calculation of the overall loss cost level change for the state. Preliminary ELR factors are calculated by class code utilizing the appropriate hazard group factors and underlying pure premiums. Intrastate experience rating modifications for the most recent year of rating effective dates available at the time of the production of the filing are calculated based on the preliminary ELRs and D-ratios, and the losses underlying the mod calculations are adjusted for trend and to the appropriate benefit level of the data that will be used for experience ratings in the proposed effective period. The trend is applied separately by frequency and severity using selected values that are appropriate for the time period covered. It should be noted that the loss ratio trends used in other parts of the filing may not match the ELR trends due to possible differences between the experience rating trend periods and the ratemaking trend periods. An average of these intrastate experience modifications is calculated, and an iterative process follows where the ELR factors are adjusted up or down, class ELRs are recalculated, and experience rating modifications are restated until the target average intrastate experience mod is achieved.



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Proposed Rating Values

For the calculation of experience mods, the experience rating plan for Missouri uses actual losses net of the deductible reimbursement amount reported for the calculation of experience mods. As a result, the ELR adjustment mentioned above is calculated using actual losses net of the deductible reimbursement to target the average intrastate experience mod.

The final ELR for each classification is calculated as follows:

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

#### Description of the Weighting and Ballast Values

The weighting value (W) and ballast value (B) influence the degree to which an employer's actual losses impact the experience rating modification for employers of various sizes - generally described as excess loss credibility - and are governed by the formulas in Item E-1409.

One element of these formulas is the G-value, which represents the state average claim severity in thousands of dollars and reflects the state accident limitation and the reduction of medical only losses. The state accident limit is used to curtail the impact of large claims on the experience modification and is based on a state-level 95th percentile of lost-time claims so that the limitation is expected to impact the largest 5% of lost-time claims.

The values for W and B are such that larger employers receive higher excess loss credibility in their experience modification calculation than smaller employers.

The ballast value is a stabilizing value designed to control the effect of actual loss experience on the experience rating modification. It is added to both the numerator and denominator in the experience modification calculation and increases as expected losses increase.

The weighting value for various levels of expected losses is provided in the Table of Weighting Values.

The ballast value for various levels of expected losses is provided in the Table of Ballast Values.

Effective January 1, 2024

TABLE OF EXPECTED LOSS RATES AND DISCOUNT RATIOS  
APPLICABLE TO ALL POLICIES

CLASS CODE	ELR	D RATIO	CLASS CODE	ELR	D RATIO	CLASS CODE	ELR	D RATIO	CLASS CODE	ELR	D RATIO	CLASS CODE	ELR	D RATIO
0005	1.73	0.44	2039	1.91	0.44	2790	1.39	0.45	3315	1.73	0.44	4130	2.24	0.44
0008	1.47	0.44	2041	1.74	0.44	2791	2.69	0.44	3334	1.21	0.41	4131	3.17	0.44
0016	2.07	0.37	2065	1.09	0.41	2797	2.61	0.45	3336	1.55	0.41	4133	1.69	0.45
0034	1.72	0.41	2070	2.49	0.41	2799	2.99	0.41	3365	1.70	0.34	4149	0.58	0.45
0035	1.12	0.41	2081	3.36	0.45	2802	3.16	0.41	3372	1.62	0.41	4206	2.00	0.44
0036	2.51	0.44	2089	1.66	0.44	2835	1.65	0.45	3373	3.31	0.44	4207	1.07	0.34
0037	1.89	0.37	2095	1.97	0.41	2836	1.76	0.45	3383	0.94	0.44	4239	0.99	0.34
0042	3.36	0.41	2105	2.86	0.45	2841	2.69	0.44	3385	0.65	0.44	4240	1.81	0.45
0050	2.64	0.37	2110	1.56	0.44	2881	2.00	0.45	3400	2.43	0.44	4243	1.27	0.41
0059	-	-	2111	1.37	0.44	2883	1.51	0.44	3507	1.61	0.41	4244	1.48	0.37
0065	-	-	2112	2.53	0.44	2915	1.53	0.37	3515	1.33	0.41	4250	1.31	0.41
0066	-	-	2114	1.67	0.45	2916	1.70	0.37	3548	1.00	0.44	4251	2.48	0.44
0067	-	-	2121	0.81	0.45	2923	1.07	0.45	3559	1.24	0.41	4263	2.80	0.41
0079	1.65	0.41	2130	1.23	0.41	2960	2.70	0.41	3574	1.31	0.44	4273	1.38	0.41
0083	2.56	0.41	2131	1.63	0.44	3004	0.67	0.34	3581	0.82	0.44	4279	1.81	0.37
0106	3.08	0.34	2143	1.41	0.45	3018	1.62	0.34	3612	1.21	0.41	4282	1.81	0.37
0113	2.79	0.44	2157	2.50	0.44	3022	2.02	0.44	3620	1.81	0.37	4283	1.06	0.44
0170	1.26	0.44	2172	0.88	0.37	3027	1.17	0.37	3629	0.96	0.41	4299	1.23	0.41
0251	2.07	0.41	2174	1.95	0.44	3028	2.23	0.37	3632	1.74	0.41	4304	2.82	0.41
0401	4.46	0.34	2211	4.28	0.37	3030	2.60	0.37	3634	0.90	0.41	4307	1.43	0.45
0771	-	-	2220	1.46	0.41	3040	2.72	0.41	3635	1.03	0.41	4351	0.73	0.44
0908	76.49	0.41	2286	1.46	0.41	3041	2.19	0.41	3638	1.49	0.44	4352	1.00	0.44
0913	272.49	0.41	2288	2.68	0.44	3042	2.38	0.41	3642	0.92	0.44	4360	0.22	0.37
0917	2.38	0.45	2302	1.19	0.41	3064	2.20	0.41	3643	1.62	0.37	4361	0.43	0.44
1005	2.06	0.32	2305	1.17	0.37	3076	1.92	0.44	3647	1.83	0.41	4410	1.98	0.44
1016	7.27	0.32	2361	1.12	0.41	3081	2.29	0.41	3648	0.87	0.45	4420	1.59	0.34
1164	2.19	0.32	2362	1.60	0.44	3082	2.56	0.37	3681	0.40	0.44	4431	0.77	0.45
1165	1.15	0.32	2380	1.36	0.44	3085	2.76	0.41	3685	0.59	0.44	4432	0.85	0.45
1320	0.74	0.34	2388	0.94	0.45	3110	2.34	0.41	3719	0.31	0.32	4452	1.47	0.41
1322	2.93	0.32	2402	1.34	0.37	3111	1.28	0.44	3724	1.61	0.32	4459	1.31	0.37
1430	2.79	0.37	2413	1.34	0.41	3113	1.04	0.41	3726	1.24	0.32	4470	1.45	0.41
1438	4.11	0.37	2416	1.63	0.44	3114	1.65	0.41	3803	1.51	0.44	4484	1.69	0.44
1452	1.49	0.37	2417	0.97	0.44	3118	1.30	0.45	3807	1.26	0.44	4493	1.48	0.41
1463	4.17	0.32	2501	1.38	0.44	3119	0.89	0.49	3808	2.34	0.41	4511	0.21	0.41
1472	1.78	0.37	2503	0.74	0.44	3122	1.27	0.45	3821	2.71	0.37	4557	1.33	0.37
1624	1.49	0.34	2570	2.26	0.44	3126	1.03	0.41	3822	2.34	0.44	4558	0.99	0.41
1642	1.83	0.37	2585	1.98	0.41	3131	0.93	0.41	3824	2.21	0.44	4568	1.66	0.37
1654	2.13	0.37	2586	2.73	0.44	3132	3.07	0.44	3826	0.56	0.41	4581	0.69	0.34
1655	1.83	0.37	2587	1.70	0.44	3145	1.32	0.41	3827	1.24	0.44	4583	2.41	0.34
1699	1.51	0.37	2589	1.26	0.41	3146	1.28	0.41	3830	0.48	0.41	4611	0.64	0.44
1701	1.48	0.34	2600	2.96	0.44	3169	1.38	0.44	3851	1.23	0.44	4635	1.18	0.34
1710	2.00	0.37	2623	2.63	0.37	3179	1.21	0.44	3865	2.25	0.45	4653	1.27	0.44
1741	1.48	0.34	2651	1.02	0.44	3180	2.00	0.44	3881	2.13	0.41	4665	4.17	0.37
1747	1.74	0.37	2660	1.49	0.45	3188	1.38	0.41	4000	1.82	0.34	4670	2.90	0.41
1748	3.09	0.37	2670	1.54	0.44	3220	1.18	0.41	4018	2.75	0.37	4683	2.90	0.41
1803	3.64	0.37	2683	1.38	0.44	3224	2.32	0.45	4021	2.67	0.41	4686	1.07	0.37
1853	1.48	0.34	2688	1.54	0.44	3227	1.81	0.44	4034	3.75	0.37	4692	0.52	0.44
1860	1.81	0.37	2701	5.37	0.34	3240	1.57	0.44	4036	1.38	0.37	4693	0.76	0.44
1924	1.79	0.44	2702	7.21	0.32	3241	1.90	0.44	4038	2.40	0.45	4703	1.17	0.41
1925	1.70	0.41	2709	5.65	0.34	3255	1.73	0.45	4062	1.49	0.41	4717	1.52	0.45
2002	2.21	0.44	2710	6.46	0.37	3257	1.57	0.44	4101	1.43	0.41	4720	1.47	0.41
2003	2.21	0.41	2714	2.84	0.44	3270	1.93	0.44	4109	0.42	0.44	4740	0.51	0.32
2014	2.53	0.37	2731	2.13	0.44	3300	3.02	0.45	4110	0.61	0.44	4741	1.68	0.41
2016	1.70	0.44	2735	2.61	0.44	3303	1.65	0.44	4111	1.23	0.44	4751	1.50	0.37
2021	1.70	0.41	2759	3.20	0.44	3307	1.42	0.41	4114	1.60	0.41	4771	1.37	0.34

REFER TO UPDATE PAGE FOR ALL SUBSEQUENT REVISIONS TO ALL CLASS CODES



Effective January 1, 2024

TABLE OF EXPECTED LOSS RATES AND DISCOUNT RATIOS  
APPLICABLE TO ALL POLICIES

CLASS CODE	ELR	D RATIO	CLASS CODE	ELR	D RATIO	CLASS CODE	ELR	D RATIO	CLASS CODE	ELR	D RATIO	CLASS CODE	ELR	D RATIO
4777	2.26	0.34	6045	1.91	0.37	7317F	1.76	0.27	8039	1.01	0.45	8738	0.25	0.37
4825	0.43	0.37	6204	2.93	0.34	7327F	4.12	0.27	8044	1.30	0.44	8742	0.12	0.37
4828	1.00	0.34	6206	0.91	0.32	7333	1.01	0.32	8045	0.37	0.44	8745	2.08	0.41
4829	0.54	0.34	6213	0.72	0.32	7335	1.11	0.32	8046	1.51	0.44	8748	0.25	0.34
4902	1.29	0.44	6214	0.64	0.34	7337	1.74	0.32	8047	0.51	0.44	8755	0.15	0.37
4923	0.76	0.41	6216	1.62	0.32	7350F	2.23	0.30	8058	1.52	0.44	8799	0.29	0.44
5020	1.71	0.34	6217	1.32	0.32	7360	2.24	0.37	8061	0.98	0.44	8800	0.85	0.44
5022	2.48	0.32	6229	2.13	0.37	7370	2.69	0.44	8072	0.39	0.45	8803	0.03	0.37
5037	3.35	0.32	6233	0.83	0.32	7380	3.07	0.37	8102	1.20	0.44	8805	0.09	0.44
5040	3.23	0.32	6235	1.91	0.32	7382	3.10	0.41	8103	1.55	0.41	8810	0.07	0.44
5057	1.63	0.32	6236	2.24	0.37	7390	3.02	0.44	8106	2.40	0.37	8814	0.08	0.44
5059	7.92	0.32	6237	0.57	0.34	7394	1.82	0.32	8107	1.34	0.34	8815	0.15	0.44
5067	3.23	0.32	6251	1.37	0.34	7395	2.01	0.32	8111	1.15	0.41	8820	0.05	0.37
5102	2.34	0.34	6252	1.55	0.32	7398	3.16	0.32	8116	1.37	0.41	8824	1.27	0.49
5146	1.95	0.37	6306	2.07	0.34	7402	0.06	0.44	8203	4.52	0.41	8825	1.07	0.45
5160	0.75	0.32	6319	1.13	0.32	7403	2.37	0.44	8204	2.02	0.41	8826	1.07	0.45
5183	1.33	0.34	6325	1.18	0.32	7405	0.74	0.44	8209	2.15	0.44	8829	1.27	0.49
5188	1.21	0.34	6400	2.27	0.37	7420	3.00	0.32	8215	1.88	0.37	8831	0.74	0.49
5190	1.03	0.34	6503	1.31	0.44	7421	0.30	0.37	8227	1.58	0.34	8832	0.15	0.44
5191	0.46	0.37	6504	1.39	0.44	7422	0.56	0.34	8232	3.05	0.37	8833	0.63	0.44
5192	1.79	0.41	6702	1.84	0.37	7425	0.68	0.34	8233	1.31	0.37	8835	1.21	0.44
5213	2.01	0.32	6703	3.20	0.37	7431	0.39	0.34	8235	2.32	0.41	8855	0.07	0.44
5215	2.43	0.37	6704	2.05	0.37	7445	-	-	8263	3.33	0.41	8856	0.27	0.44
5221	1.85	0.34	6824F	2.17	0.33	7453	-	-	8264	2.36	0.37	8861	0.70	0.44
5222	2.70	0.32	6825F	0.57	0.27	7502	0.79	0.37	8265	1.97	0.34	8868	0.26	0.45
5223	1.80	0.37	6826F	1.22	0.33	7515	0.43	0.32	8279	3.10	0.34	8869	0.57	0.45
5348	1.70	0.37	6834	1.35	0.44	7520	1.54	0.41	8288	4.04	0.41	8871	0.04	0.44
5402	2.69	0.44	6835	1.23	0.32	7538	1.23	0.32	8291	1.77	0.41	8901	0.06	0.37
5403	1.83	0.34	6836	1.64	0.41	7539	0.73	0.34	8292	2.07	0.44	9012	0.36	0.37
5437	2.15	0.34	6845	a	a	7540	1.21	0.32	8293	3.55	0.44	9014	1.28	0.44
5443	1.42	0.41	6872F	2.05	0.27	7580	1.27	0.37	8304	2.49	0.34	9015	1.77	0.41
5445	1.61	0.32	6874F	3.22	0.27	7590	1.60	0.37	8350	2.80	0.34	9016	1.54	0.44
5462	2.13	0.37	6882	1.43	0.34	7600	1.80	0.37	8353	2.05	0.37	9019	1.32	0.37
5472	2.66	0.32	6884	2.37	0.34	7605	0.87	0.34	8370	2.20	0.37	9033	1.08	0.41
5473	2.87	0.32	7016	1.20	0.32	7610	0.22	0.37	8381	1.07	0.41	9040	2.54	0.45
5474	2.11	0.32	7024	1.32	0.32	7705	2.32	0.41	8385	1.24	0.41	9044	0.67	0.45
5478	1.78	0.34	7038	2.27	0.32	7710	2.47	0.34	8387	1.42	0.41	9052	1.06	0.45
5479	3.04	0.37	7046	4.35	0.32	7711	2.47	0.34	8391	1.24	0.41	9058	1.01	0.49
5480	2.66	0.34	7047	2.07	0.32	7720	1.62	0.37	8392	1.39	0.45	9060	0.90	0.45
5491	0.89	0.34	7050	3.96	0.32	7855	1.51	0.37	8393	0.81	0.37	9061	0.80	0.45
5505	2.18	0.34	7090	2.52	0.32	8001	1.19	0.44	8500	2.47	0.37	9062	0.80	0.45
5506	2.18	0.34	7098	4.83	0.32	8002	1.16	0.44	8601	0.11	0.34	9063	0.49	0.45
5507	1.52	0.34	7099	7.58	0.32	8006	1.07	0.45	8602	0.64	0.37	9077F	2.04	0.40
5508	1.52	0.34	7133	1.32	0.34	8008	0.62	0.45	8603	0.04	0.44	9082	0.81	0.49
5535	2.42	0.32	7151	1.60	0.34	8010	1.18	0.44	8606	0.74	0.34	9083	0.71	0.49
5537	1.60	0.37	7152	2.80	0.34	8013	0.20	0.41	8709F	0.91	0.27	9084	0.79	0.45
5551	5.61	0.32	7153	1.78	0.34	8015	0.39	0.41	8719	0.84	0.34	9088	a	a
5606	0.49	0.32	7219	3.02	0.34	8017	0.84	0.45	8720	0.46	0.34	9089	0.57	0.45
5610	2.04	0.37	7222	3.08	0.34	8018	1.51	0.44	8721	0.14	0.37	9093	0.72	0.45
5645	3.59	0.32	7225	4.34	0.37	8021	1.60	0.44	8723	0.06	0.41	9101	1.91	0.45
5703	7.64	0.37	7230	3.75	0.41	8031	1.18	0.44	8725	0.90	0.37	9102	1.44	0.41
5705	8.43	0.37	7231	5.02	0.41	8032	1.00	0.44	8726F	0.48	0.33	9110	1.92	0.44
5951	0.36	0.44	7232	3.96	0.34	8033	1.01	0.45	8728	0.25	0.37	9154	1.02	0.44
6003	2.31	0.34	7309F	2.03	0.27	8034	1.36	0.45	8734	0.16	0.37	9156	1.21	0.45
6005	2.04	0.37	7313F	0.80	0.27	8037	1.23	0.49	8737	0.15	0.37	9170	5.86	0.34

REFER TO UPDATE PAGE FOR ALL SUBSEQUENT REVISIONS TO ALL CLASS CODES

*Effective January 1, 2024*  
**TABLE OF EXPECTED LOSS RATES AND DISCOUNT RATIOS**  
**APPLICABLE TO ALL POLICIES**

CLASS CODE	ELR	D RATIO	CLASS CODE	ELR	D RATIO	CLASS CODE	ELR	D RATIO	CLASS CODE	ELR	D RATIO	CLASS CODE	ELR	D RATIO
9178	6.70	0.49												
9179	12.19	0.49												
9180	2.63	0.41												
9182	1.30	0.44												
9186	4.50	0.34												
9220	2.43	0.41												
9402	2.17	0.34												
9403	3.47	0.34												
9410	1.95	0.44												
9501	1.58	0.37												
9505	1.80	0.41												
9516	1.18	0.41												
9519	1.79	0.37												
9521	1.92	0.37												
9522	4.61	0.45												
9534	1.61	0.32												
9554	2.73	0.34												
9586	0.32	0.45												
9600	1.81	0.44												
9620	0.72	0.37												

**REFER TO UPDATE PAGE FOR ALL SUBSEQUENT REVISIONS TO ALL CLASS CODES**

Effective January 1, 2024

**TABLE OF WEIGHTING VALUES  
APPLICABLE TO ALL POLICIES**

Expected Losses	Weighting Values	Expected Losses	Weighting Values
0 -- 2,715	0.14	1,530,579 -- 1,607,566	0.49
2,716 -- 7,648	0.15	1,607,567 -- 1,688,696	0.50
7,649 -- 12,700	0.16	1,688,697 -- 1,774,310	0.51
12,701 -- 17,874	0.17	1,774,311 -- 1,864,792	0.52
17,875 -- 19,680	0.18	1,864,793 -- 1,960,573	0.53
19,681 -- 22,258	0.17	1,960,574 -- 2,062,128	0.54
22,259 -- 25,779	0.16	2,062,129 -- 2,169,999	0.55
25,780 -- 31,079	0.15	2,170,000 -- 2,284,797	0.56
31,080 -- 41,163	0.14	2,284,798 -- 2,407,208	0.57
41,164 -- 94,592	0.13	2,407,209 -- 2,538,018	0.58
94,593 -- 127,112	0.14	2,538,019 -- 2,678,123	0.59
127,113 -- 155,511	0.15	2,678,124 -- 2,828,551	0.60
155,512 -- 182,829	0.16	2,828,552 -- 2,990,486	0.61
182,830 -- 209,928	0.17	2,990,487 -- 3,165,302	0.62
209,929 -- 237,204	0.18	3,165,303 -- 3,354,601	0.63
237,205 -- 264,882	0.19	3,354,602 -- 3,560,262	0.64
264,883 -- 293,113	0.20	3,560,263 -- 3,784,502	0.65
293,114 -- 322,009	0.21	3,784,503 -- 4,029,957	0.66
322,010 -- 351,663	0.22	4,029,958 -- 4,299,790	0.67
351,664 -- 382,154	0.23	4,299,791 -- 4,597,822	0.68
382,155 -- 412,221	0.24	4,597,823 -- 4,928,718	0.69
412,222 -- 441,770	0.25	4,928,719 -- 5,298,234	0.70
441,771 -- 472,249	0.26	5,298,235 -- 5,713,550	0.71
472,250 -- 503,710	0.27	5,713,551 -- 6,183,743	0.72
503,711 -- 536,205	0.28	6,183,744 -- 6,720,461	0.73
536,206 -- 569,795	0.29	6,720,462 -- 7,338,900	0.74
569,796 -- 604,538	0.30	7,338,901 -- 8,059,263	0.75
604,539 -- 640,498	0.31	8,059,264 -- 8,909,009	0.76
640,499 -- 677,745	0.32	8,909,010 -- 9,926,439	0.77
677,746 -- 716,352	0.33	9,926,440 -- 11,166,621	0.78
716,353 -- 756,396	0.34	11,166,622 -- 12,711,703	0.79
756,397 -- 797,964	0.35	12,711,704 -- 14,689,889	0.80
797,965 -- 841,145	0.36	14,689,890 -- 17,312,969	0.81
841,146 -- 886,037	0.37	17,312,970 -- 20,957,716	0.82
886,038 -- 932,744	0.38	20,957,717 -- 26,365,393	0.83
932,745 -- 981,383	0.39	26,365,394 -- 35,223,091	0.84
981,384 -- 1,032,077	0.40	35,223,092 -- 52,378,949	0.85
1,032,078 -- 1,084,959	0.41	52,378,950 -- 99,769,231	0.86
1,084,960 -- 1,140,177	0.42	99,769,232 -- 849,993,615	0.87
1,140,178 -- 1,197,888	0.43	849,993,616 -- AND OVER	0.88
1,197,889 -- 1,258,268	0.44		
1,258,269 -- 1,321,508	0.45		
1,321,509 -- 1,387,816	0.46		
1,387,817 -- 1,457,422	0.47		
1,457,423 -- 1,530,578	0.48		

(a) G .....	12.55
(b) State Per Claim Accident Limitation .....	\$151,500
(c) State Multiple Claim Accident Limitation .....	\$303,000
(d) USL&HW Per Claim Accident Limitation .....	\$286,500
(e) USL&HW Multiple Claim Accident Limitation .....	\$573,000
(f) Employers Liability Accident Limitation .....	\$55,000
(g) Primary/Excess Loss Split Point .....	\$21,000
(h) USL&HW Act -- Expected Loss Factor -- Non-F Classes .....	1.75
<i>(Multiply a Non-F classification ELR by the USL&amp;HW Act - Expected Loss Factor of 1.75.)</i>	

Effective January 1, 2024

TABLE OF BALLAST VALUES  
APPLICABLE TO ALL POLICIES

Expected Losses	Ballast Values	Expected Losses	Ballast Values	Expected Losses	Ballast Values
0 -- 452,841	57,730	4,253,259 -- 4,365,282	277,355	8,174,588 -- 8,286,633	496,980
452,842 -- 562,861	64,005	4,365,283 -- 4,477,308	283,630	8,286,634 -- 8,398,678	503,255
562,862 -- 673,532	70,280	4,477,309 -- 4,589,335	289,905	8,398,679 -- 8,510,724	509,530
673,533 -- 784,586	76,555	4,589,336 -- 4,701,364	296,180	8,510,725 -- 8,622,771	515,805
784,587 -- 895,885	82,830	4,701,365 -- 4,813,394	302,455	8,622,772 -- 8,734,817	522,080
895,886 -- 1,007,348	89,105	4,813,395 -- 4,925,424	308,730	8,734,818 -- 8,846,863	528,355
1,007,349 -- 1,118,928	95,380	4,925,425 -- 5,037,456	315,005	8,846,864 -- 8,958,910	534,630
1,118,929 -- 1,230,593	101,655	5,037,457 -- 5,149,489	321,280	8,958,911 -- 9,070,957	540,905
1,230,594 -- 1,342,322	107,930	5,149,490 -- 5,261,522	327,555	9,070,958 -- 9,183,004	547,180
1,342,323 -- 1,454,100	114,205	5,261,523 -- 5,373,557	333,830	9,183,005 -- 9,295,051	553,455
1,454,101 -- 1,565,918	120,480	5,373,558 -- 5,485,592	340,105	9,295,052 -- 9,407,099	559,730
1,565,919 -- 1,677,767	126,755	5,485,593 -- 5,597,628	346,380	9,407,100 -- 9,519,146	566,005
1,677,768 -- 1,789,641	133,030	5,597,629 -- 5,709,664	352,655	9,519,147 -- 9,631,194	572,280
1,789,642 -- 1,901,536	139,305	5,709,665 -- 5,821,701	358,930	9,631,195 -- 9,743,242	578,555
1,901,537 -- 2,013,449	145,580	5,821,702 -- 5,933,739	365,205	9,743,243 -- 9,855,290	584,830
2,013,450 -- 2,125,377	151,855	5,933,740 -- 6,045,778	371,480	9,855,291 -- 9,967,338	591,105
2,125,378 -- 2,237,317	158,130	6,045,779 -- 6,157,817	377,755	9,967,339 -- 10,079,386	597,380
2,237,318 -- 2,349,268	164,405	6,157,818 -- 6,269,856	384,030	10,079,387 -- 10,191,434	603,655
2,349,269 -- 2,461,228	170,680	6,269,857 -- 6,381,896	390,305	10,191,435 -- 10,303,482	609,930
2,461,229 -- 2,573,196	176,955	6,381,897 -- 6,493,937	396,580	10,303,483 -- 10,415,531	616,205
2,573,197 -- 2,685,171	183,230	6,493,938 -- 6,605,978	402,855	10,415,532 -- 10,527,580	622,480
2,685,172 -- 2,797,153	189,505	6,605,979 -- 6,718,019	409,130	10,527,581 -- 10,639,628	628,755
2,797,154 -- 2,909,140	195,780	6,718,020 -- 6,830,061	415,405	10,639,629 -- 10,751,677	635,030
2,909,141 -- 3,021,132	202,055	6,830,062 -- 6,942,103	421,680	10,751,678 -- 10,863,726	641,305
3,021,133 -- 3,133,129	208,330	6,942,104 -- 7,054,145	427,955	10,863,727 -- 10,975,775	647,580
3,133,130 -- 3,245,129	214,605	7,054,146 -- 7,166,188	434,230	10,975,776 -- 11,086,670	653,855
3,245,130 -- 3,357,133	220,880	7,166,189 -- 7,278,231	440,505		
3,357,134 -- 3,469,140	227,155	7,278,232 -- 7,390,275	446,780		
3,469,141 -- 3,581,150	233,430	7,390,276 -- 7,502,319	453,055		
3,581,151 -- 3,693,163	239,705	7,502,320 -- 7,614,363	459,330		
3,693,164 -- 3,805,178	245,980	7,614,364 -- 7,726,407	465,605		
3,805,179 -- 3,917,195	252,255	7,726,408 -- 7,838,452	471,880		
3,917,196 -- 4,029,214	258,530	7,838,453 -- 7,950,497	478,155		
4,029,215 -- 4,141,235	264,805	7,950,498 -- 8,062,542	484,430		
4,141,236 -- 4,253,258	271,080	8,062,543 -- 8,174,587	490,705		

For Expected Losses greater than \$11,086,670, the Ballast Value can be calculated using the following formula (rounded to the nearest 1):

$$\text{Ballast} = (0.056)(\text{Expected Losses}) + 2876.4(\text{Expected Losses})(12.55) / (\text{Expected Losses} + (600)(12.55))$$

G = 12.55

REFER TO UPDATE PAGE FOR ALL SUBSEQUENT REVISIONS.

# 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>7/1/24 and after</u>	<u>9,000</u>	<u>4,500</u>
	<u>7/1/23 - 6/30/24</u>	9,000	4,500
	<u>7/1/22 - 6/30/23</u>	8,500	4,250

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-c. 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, 2024

#### Proposed Values for Inclusion in the Retrospective Rating Plan Manual

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

- Average Cost per Case
- Excess Loss Pure Premium Factors

*Effective January 1, 2024*

**Original Printing**

**1. Average Cost per Case by Hazard Group**

A	B	C	D	E	F	G
9,316	11,916	16,652	21,485	29,171	43,488	56,900

**Average Cost per Case including ALAE by Hazard Group**

A	B	C	D	E	F	G
10,353	13,224	18,458	23,795	32,238	48,005	62,779

**2.**

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

<b>Per Accident Limitation</b>	<b>Hazard Groups</b>						
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>
\$10,000	0.570	0.614	0.651	0.678	0.706	0.733	0.750
\$15,000	0.517	0.563	0.605	0.634	0.669	0.699	0.721
\$20,000	0.474	0.522	0.566	0.597	0.636	0.670	0.695
\$25,000	0.439	0.487	0.533	0.566	0.608	0.644	0.672
\$30,000	0.409	0.456	0.504	0.537	0.583	0.621	0.651
\$35,000	0.383	0.430	0.479	0.512	0.560	0.600	0.632
\$40,000	0.360	0.406	0.456	0.489	0.539	0.580	0.614
\$50,000	0.322	0.367	0.416	0.450	0.502	0.545	0.582
\$75,000	0.257	0.297	0.345	0.377	0.432	0.476	0.516
\$100,000	0.214	0.251	0.296	0.326	0.382	0.426	0.466
\$125,000	0.184	0.218	0.261	0.289	0.345	0.387	0.427
\$150,000	0.161	0.193	0.234	0.260	0.316	0.357	0.395
\$175,000	0.144	0.173	0.213	0.237	0.292	0.331	0.369
\$200,000	0.129	0.157	0.195	0.218	0.272	0.310	0.347
\$225,000	0.118	0.144	0.181	0.203	0.255	0.293	0.328
\$250,000	0.108	0.133	0.168	0.189	0.241	0.277	0.311
\$275,000	0.099	0.123	0.157	0.177	0.228	0.263	0.297
\$300,000	0.092	0.115	0.148	0.167	0.217	0.251	0.284
\$325,000	0.086	0.108	0.140	0.158	0.207	0.240	0.272
\$350,000	0.081	0.102	0.133	0.150	0.198	0.231	0.261
\$375,000	0.076	0.096	0.126	0.143	0.190	0.222	0.252
\$400,000	0.072	0.091	0.120	0.137	0.183	0.214	0.243
\$425,000	0.068	0.087	0.115	0.131	0.177	0.207	0.235
\$450,000	0.065	0.083	0.111	0.125	0.171	0.200	0.227
\$475,000	0.062	0.079	0.106	0.121	0.165	0.194	0.220
\$500,000	0.059	0.076	0.102	0.116	0.160	0.188	0.214
\$600,000	0.050	0.066	0.089	0.102	0.143	0.169	0.192
\$700,000	0.043	0.058	0.080	0.091	0.130	0.153	0.175
\$800,000	0.039	0.052	0.072	0.082	0.119	0.141	0.161
\$900,000	0.035	0.047	0.066	0.075	0.110	0.131	0.150
\$1,000,000	0.032	0.043	0.061	0.069	0.103	0.123	0.140
\$2,000,000	0.017	0.024	0.036	0.041	0.065	0.078	0.089
\$3,000,000	0.012	0.017	0.026	0.030	0.049	0.059	0.067
\$4,000,000	0.009	0.013	0.021	0.024	0.039	0.047	0.054
\$5,000,000	0.007	0.011	0.017	0.019	0.032	0.039	0.045
\$6,000,000	0.006	0.009	0.014	0.016	0.027	0.033	0.039
\$7,000,000	0.005	0.007	0.012	0.013	0.023	0.029	0.033
\$8,000,000	0.004	0.006	0.010	0.012	0.020	0.025	0.029
\$9,000,000	0.003	0.005	0.008	0.010	0.017	0.022	0.026
\$10,000,000	0.003	0.004	0.007	0.009	0.015	0.019	0.023

Effective January 1, 2024

**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	0.642	0.689	0.729	0.757	0.787	0.815	0.833
\$15,000	0.584	0.634	0.679	0.711	0.747	0.780	0.803
\$20,000	0.537	0.589	0.637	0.671	0.713	0.749	0.776
\$25,000	0.498	0.550	0.601	0.636	0.682	0.721	0.751
\$30,000	0.465	0.517	0.569	0.606	0.654	0.696	0.728
\$35,000	0.436	0.487	0.541	0.578	0.629	0.672	0.708
\$40,000	0.410	0.461	0.516	0.553	0.606	0.651	0.688
\$50,000	0.368	0.417	0.472	0.509	0.566	0.613	0.653
\$75,000	0.294	0.338	0.391	0.427	0.488	0.536	0.580
\$100,000	0.246	0.286	0.337	0.370	0.431	0.480	0.525
\$125,000	0.211	0.249	0.297	0.328	0.389	0.436	0.481
\$150,000	0.186	0.221	0.266	0.295	0.356	0.401	0.445
\$175,000	0.166	0.198	0.242	0.269	0.329	0.373	0.415
\$200,000	0.149	0.180	0.222	0.248	0.306	0.349	0.390
\$225,000	0.136	0.165	0.205	0.230	0.288	0.329	0.369
\$250,000	0.125	0.153	0.191	0.215	0.271	0.311	0.350
\$275,000	0.115	0.142	0.179	0.202	0.257	0.296	0.333
\$300,000	0.107	0.133	0.169	0.190	0.245	0.283	0.319
\$325,000	0.100	0.125	0.160	0.180	0.234	0.270	0.306
\$350,000	0.094	0.117	0.151	0.171	0.224	0.260	0.294
\$375,000	0.089	0.111	0.144	0.163	0.215	0.250	0.283
\$400,000	0.084	0.105	0.137	0.155	0.207	0.241	0.273
\$425,000	0.079	0.100	0.132	0.149	0.199	0.232	0.264
\$450,000	0.075	0.096	0.126	0.143	0.192	0.225	0.256
\$475,000	0.072	0.092	0.121	0.137	0.186	0.218	0.248
\$500,000	0.069	0.088	0.117	0.132	0.180	0.211	0.241
\$600,000	0.058	0.075	0.102	0.116	0.161	0.190	0.216
\$700,000	0.051	0.066	0.091	0.103	0.146	0.173	0.197
\$800,000	0.045	0.059	0.082	0.093	0.134	0.159	0.181
\$900,000	0.040	0.054	0.075	0.085	0.124	0.148	0.169
\$1,000,000	0.037	0.049	0.070	0.079	0.116	0.138	0.158
\$2,000,000	0.020	0.028	0.041	0.047	0.073	0.088	0.100
\$3,000,000	0.014	0.020	0.030	0.034	0.055	0.066	0.075
\$4,000,000	0.010	0.015	0.024	0.027	0.044	0.053	0.061
\$5,000,000	0.008	0.012	0.019	0.022	0.036	0.045	0.051
\$6,000,000	0.007	0.010	0.016	0.018	0.031	0.038	0.044
\$7,000,000	0.005	0.008	0.014	0.016	0.026	0.033	0.038
\$8,000,000	0.005	0.007	0.012	0.013	0.023	0.029	0.034
\$9,000,000	0.004	0.006	0.010	0.012	0.020	0.025	0.030
\$10,000,000	0.003	0.005	0.009	0.010	0.017	0.023	0.026





## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### **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



# MISSOURI

## Advisory Loss Costs and Rating Values Filing – January 1, 2024

### Exhibit I – Determination of the Indicated Loss Cost Level Change

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 the proposed experience period, as shown in the exhibits on the next few pages.

#### Determination of the Loss Base

In analyzing losses for the purpose of Aggregate Ratemaking, NCCI reviews both “paid” and “paid plus case” loss data, which are (i) the benefit amounts already paid by insurers on reported claims and (ii) the benefit amounts already paid by insurers on reported claims plus the amounts set aside to cover future payments on those claims.

During this year’s analysis, which included an assessment of possible pandemic claim-related impacts, a combination of both paid and paid plus case data was selected to best reflect the conditions likely to prevail in the proposed effective period. This methodology makes the most use of the available financial data information and is consistent with prior filings made in Missouri.

#### Determination of the Experience Period

This year’s analysis included a review of various experience periods and an assessment of possible pandemic claim-related impacts. The most recent five policy year and calendar-accident year projected loss ratios are shown below. Policy year data is given greater consideration by NCCI because policy year data reflects the best match between exposure and losses.

<u>Policy Year</u>	<u>Loss Ratio</u>	<u>Calendar-Accident Year</u>	<u>Loss Ratio</u>
2017	1.012	2018	1.026
2018	1.032	2019	1.002
2019	0.951	2020	0.914
2020	0.939	2021	0.926
2021	0.904	2022	0.934

Note the following regarding the projected loss ratios:

- Based on NCCI’s Financial Call data reported through 12/31/2022, on-leveled, developed to an ultimate report, and trended to the prospective period. Projected losses do not include the change in expenses and standard earned premium at Designated Statistical Reporting (DSR) level is adjusted to a pure premium level.
- The Calendar-Accident Year analysis was not conducted separately; the displayed loss ratios are trended using the policy year loss ratio selections underlying this filing.
- Calendar-Accident Year 2019–2022 loss ratios include a premium audit adjustment due to changes in audit activity primarily attributable to the COVID-19 pandemic-related recession.

The Missouri loss ratio experience for the most recent policy years shows improvement compared to the recent history.



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Exhibit I – Determination of the Indicated Loss Cost Level Change

While some pandemic-related effects may be contributing to the favorable loss ratio experience observed in Policy Years 2019–2021, the impact appears to be relatively limited. Upon a review of the calendar-accident year loss ratios, the most favorable experience is observed in Calendar-Accident Year 2020, which coincides with the height of the pandemic. While the improvement observed between Calendar-Accident Years 2019 and 2020 appears notable, the improved experience is generally sustained in Calendar-Accident Years 2021 and 2022, which are further removed from the peak of the pandemic and likely a good indicator of future experience in Missouri. The relatively limited impact of pandemic-related effects in Missouri could be attributed to factors such as the state of the economy before and during the pandemic as well as the mix of business within the state not being materially affected. This notion is supported by the fact that Missouri's unemployment rate had recovered to pre-COVID-19 pandemic levels by the end of 2021.

Furthermore, the volume of large loss activity in the most recent policy years is consistent with the average level observed in historical periods. Additionally, the relatively less favorable experience observed in Policy Years 2017 and 2018 is attributable in part to large losses, which are present in Policy Year 2020 at a similar level.

Data for the two most recently available full policy years was selected as the most appropriate experience period on which to base this year's filing. The selection provides a balance between stability and responsiveness and best reflects the conditions likely to prevail in the proposed effective period. This method is consistent with prior filings in Missouri.

#### Determination of the Indicated Change

NCCI utilizes 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, on-leveled to the current loss cost level, and adjusted to a pure premium 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. Limited losses are adjusted to an unlimited basis via a non-catastrophe excess ratio (with excess ratios at limits beyond \$50 million set equal to zero).
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



## MISSOURI

### **Advisory Loss Costs and Rating Values Filing – January 1, 2024**

#### **Exhibit I – Determination of the Indicated Loss Cost Level Change**

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 2021 Experience

###### Premium:

(1) Standard Earned Premium Developed to Ultimate (Appendix A-II)	\$697,255,617
(2) Premium On-level Factor (Appendix A-I)	0.724
(3) Pure Premium Available for Benefit Costs = (1) x (2)	\$504,813,067

###### Indemnity Benefit Cost:

(4) Limited Indemnity Losses Developed to Ultimate (Appendix A-II)	\$205,587,958
(5) Indemnity Loss On-level Factor (Appendix A-I)	1.000
(6) Adjusted Limited Indemnity Losses = (4) x (5)	\$205,587,958
(7) Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.407
(8) Factor to Reflect Indemnity Trend (Appendix A-III)	0.927
(9) Projected Limited Indemnity Cost Ratio = (7) x (8)	0.377
(10) Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis (Appendix A-II)	1.012
(11) Projected Indemnity Cost Ratio = (9) x (10)	0.382
(12) Factor to Reflect Proposed Changes in Indemnity Benefits (Appendix C)	1.000
(13) Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.382

###### Medical Benefit Cost:

(14) Limited Medical Losses Developed to Ultimate (Appendix A-II)	\$281,396,944
(15) Medical Loss On-level Factor (Appendix A-I)	1.000
(16) Adjusted Limited Medical Losses = (14) x (15)	\$281,396,944
(17) Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.557
(18) Factor to Reflect Medical Trend (Appendix A-III)	0.927
(19) Projected Limited Medical Cost Ratio = (17) x (18)	0.516
(20) Factor to Adjust Medical Cost Ratio to an Unlimited Basis (Appendix A-II)	1.012
(21) Projected Medical Cost Ratio = (19) x (20)	0.522
(22) Factor to Reflect Proposed Changes in Medical Benefits (Appendix C)	1.000
(23) Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.522

###### Total Benefit Cost:

(24) Indicated Change Based on Experience, Trend and Benefits = (13) + (23)	0.904
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## MISSOURI

### EXHIBIT I

#### Determination of Indicated Loss Cost Level Change

##### Section B - Policy Year 2020 Experience

###### Premium:

(1) Standard Earned Premium Developed to Ultimate (Appendix A-II)	\$627,746,363
(2) Premium On-level Factor (Appendix A-I)	0.725
(3) Pure Premium Available for Benefit Costs = (1) x (2)	\$455,116,113

###### Indemnity Benefit Cost:

(4) Limited Indemnity Losses Developed to Ultimate (Appendix A-II)	\$193,596,790
(5) Indemnity Loss On-level Factor (Appendix A-I)	1.000
(6) Adjusted Limited Indemnity Losses = (4) x (5)	\$193,596,790
(7) Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.425
(8) Factor to Reflect Indemnity Trend (Appendix A-III)	0.904
(9) Projected Limited Indemnity Cost Ratio = (7) x (8)	0.384
(10) Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis (Appendix A-II)	1.012
(11) Projected Indemnity Cost Ratio = (9) x (10)	0.389
(12) Factor to Reflect Proposed Changes in Indemnity Benefits (Appendix C)	1.000
(13) Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.389

###### Medical Benefit Cost:

(14) Limited Medical Losses Developed to Ultimate (Appendix A-II)	\$273,405,631
(15) Medical Loss On-level Factor (Appendix A-I)	1.000
(16) Adjusted Limited Medical Losses = (14) x (15)	\$273,405,631
(17) Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.601
(18) Factor to Reflect Medical Trend (Appendix A-III)	0.904
(19) Projected Limited Medical Cost Ratio = (17) x (18)	0.543
(20) Factor to Adjust Medical Cost Ratio to an Unlimited Basis (Appendix A-II)	1.012
(21) Projected Medical Cost Ratio = (19) x (20)	0.550
(22) Factor to Reflect Proposed Changes in Medical Benefits (Appendix C)	1.000
(23) Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.550

###### Total Benefit Cost:

(24) Indicated Change Based on Experience, Trend and Benefits = (13) + (23)	0.939
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**EXHIBIT I**

**Determination of Indicated Loss Cost Level Change**

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

(1) Policy Year 2021 Indicated Change Based on Experience, Trend, and Benefits	0.904
(2) Policy Year 2020 Indicated Change Based on Experience, Trend, and Benefits	0.939
(3) Indicated Change Based on Experience, Trend, and Benefits* = (1) x 50.0% + (2) x 50.0%	0.922

\* The weight applied to each loss ratio in the experience period does not vary by year.

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

(1) Indicated Loss Cost Level Change	0.922
(2) Effect of the Change in Loss-based Expenses (Exhibit II)	1.003
(3) Indicated Change Modified to Reflect the Change in Loss-based Expenses = (1) x (2)	0.925

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

Industry Group Differentials (Appendix A-IV):

Manufacturing	1.003
Contracting	0.999
Office & Clerical	0.960
Goods & Services	1.005
Miscellaneous	1.010

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	0.925	1.003	0.928	(-7.2%)
Contracting	0.925	0.999	0.924	(-7.6%)
Office & Clerical	0.925	0.960	0.888	(-11.2%)
Goods & Services	0.925	1.005	0.930	(-7.0%)
Miscellaneous	0.925	1.010	0.934	(-6.6%)
Overall	0.925	1.000	0.925	(-7.5%)



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### 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 state-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 are calculated on a countrywide basis using private carrier-only data after removing the reported COVID-19-related losses.

The reported DCCE and losses from COVID-19-related claims have been excluded from the underlying data in this year’s analysis to better reflect the conditions likely to prevail in the proposed effective period. NCCI used the following general methodology to determine the proposed DCCE provision based on Missouri-specific paid DCCE and losses obtained from NCCI’s Call for Policy Year Data:

- Ratios of reported paid DCCE-to-paid losses by policy year are developed to a 19<sup>th</sup> report using DCCE ratio development factors.
- A 19<sup>th</sup>-to-ultimate tail factor is applied to reflect expected development beyond a 19<sup>th</sup> 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 page.





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**EXHIBIT II**

**Workers Compensation Loss Adjustment Expense Provision**

**Section A - Determination of Loss Adjustment Expense Provision**

In this filing, NCCI proposes a 20.3% loss adjustment expense allowance as a percentage of losses. The DCCE provision is based on Missouri-specific data reported to NCCI on the Policy Year Call for Experience. The AOE provision is based on data reported to NCCI on the Call for Loss Adjustment Expense.

<u>Policy Year</u>	<u>Developed DCCE Ratio</u>	<u>Accident Year</u>	<u>Developed AOE Ratio</u>		
2017	9.9%	2018	9.1%		
2018	10.1%	2019	9.6%		
2019	10.1%	2020	10.2%		
2020	10.4%	2021	9.6%		
2021	<u>10.3%</u>	2022	<u>9.3%</u>		
Countrywide selected:			9.4%		
Missouri selected:	10.2%	+	10.1%	=	<b>20.3%</b>

**Section B - Defense and Cost Containment Expense (DCCE) Ratio**

(1) <u>Policy Year</u>	(2) <u>Reported Ratio of Paid DCCE to Paid Losses</u>	(3) <u>Age-to-Ultimate Development Factor</u>	(4) = (2) x (3) <u>Ultimate DCCE Ratio</u>
2017	10.2%	0.971	9.9%
2018	10.4%	0.973	10.1%
2019	10.2%	0.991	10.1%
2020	10.2%	1.017	10.4%
2021	9.5%	1.087	<u>10.3%</u>
		Missouri selected:	10.2%

**Section C - Proposed Change in the Missouri Loss Adjustment Expense (LAE) Provision**

	(5) <u>Current</u>	(6) <u>Proposed</u>
Missouri LAE Provision	20.0%	20.3%
Proposed Change in LAE Provision = [1.000 + (6)] / [1.000 + (5)] - 1		1.003 (+0.3%)



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### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### 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 Plan Data. Additional adjustments applied as part of the premium on-level factor calculation include:

- Adjustment for Expense Removal: This factor is applied to remove loss adjustment 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 expected during the proposed filing effective period. Additional details on this adjustment factor are provided in the sub-section below.

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.

##### Experience Rating Off-Balance Adjustment Factor

The term “off-balance” refers to the average experience rating modification factor (E-mod) across all employers for a given time period. Historical off-balance values are calculated as a weighted average—using expected losses as weights—of the following:

- E-mods for intrastate rated employers
- E-mods for interstate rated employers
- A unity factor for all non-rated employers

NCCI reviews changes in each state’s average off-balance annually. The historical data review combined with the experience rating parameters included in the previous filing provide all necessary information to adjust historical premiums to reflect any changes in the off-balance values over time. Specifically, the premiums in the financial data experience period are adjusted



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Appendix A – Factors Underlying the Proposed Loss Cost Level Change

to the off-balance expected in the proposed filing period. This adjustment can be seen in the premium on-level adjustment factors provided in Appendix A-I.

The key components used to estimate the off-balance for the proposed filing include:

- A targeted average E-mod of 0.960 for intrastate rated employers is used to estimate the off-balance. A targeted average intrastate E-mod slightly below unity is desirable because employers who qualify for experience rating typically have better loss experience, on average, than non-rated employers. NCCI's off-balance adjustments are premium-neutral on a statewide basis while promoting loss cost adequacy for non-rated employers.
- An average interstate E-mod is used to estimate the off-balance. The average interstate E-mod is estimated based on experience rating data for interstate rated employers compiled within the most recent twelve months. Unlike intrastate rated employers, interstate employers have exposure in multiple states, where each state's data and underlying experience rating parameters are used to determine the employer's interstate E-mod. Because E-mods for interstate employers are influenced by experience rating values for multiple states, NCCI's standard approach is to assume that the average interstate E-mod during the proposed filing period is best approximated by the average interstate E-mod observed over the most recent twelve months of experience rating data available at the time of the analysis.



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APPENDIX A-I

Determination of Policy Year On-level Factors

Section A - Factor Adjusting 2021 Policy Year Premium to Present Level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Date	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)
NR 01/01/21	Base	1.000	1.000	1.000	0.864	0.833	1.005	0.724
NR 01/01/22	0.923	0.923						
NR 01/01/23	0.936	0.864						
				1.000				

Section B - Factor Adjusting 2021 Policy Year Indemnity Losses to Present Benefit Level

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

Section C - Factor Adjusting 2021 Policy Year Medical Losses to Present Benefit Level

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

NR New and renewal business.

\*  $1.005 = 0.948 / 0.943 = (\text{Targeted Off-balance}) / (\text{Off-balance for Policy Year 2021})$



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APPENDIX A-I

Determination of Policy Year On-level Factors

Section D - Factor Adjusting 2020 Policy Year Premium to Present Level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Date	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)
NR 01/01/20	Base	1.000	1.000	1.000	0.872	0.833	0.999	0.725
NR 01/01/21	1.010	1.010						
NR 01/01/22	0.923	0.932						
NR 01/01/23	0.936	0.872						
				1.000				

Section E - Factor Adjusting 2020 Policy Year Indemnity Losses to Present Benefit Level

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

Section F - Factor Adjusting 2020 Policy Year Medical Losses to Present Benefit Level

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

NR New and renewal business.

\* 0.999 = 0.948 / 0.949 = (Targeted Off-balance) / (Off-balance for Policy Year 2020)



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### 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 on the following pages.

##### 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. It is calculated as one percent of the total volume of premium from the state's experience period underlying the previous filing. The base threshold is then 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.

After developing limited indemnity and medical losses to an ultimate report, a statewide, non-catastrophe excess ratio at the base threshold is used to adjust the limited losses to an unlimited basis. The excess ratios are non-catastrophe because excess ratios at limits beyond \$50 million are set equal to zero. The excess ratio is derived from Missouri's Retrospective Rating Plan Parameters.

##### Premium Development

Premium at an ultimate report is estimated by incorporating a review of historical patterns of premium development over time—primarily due to payroll audits. For premium development, link ratios are used from 1<sup>st</sup> report through 5<sup>th</sup> report. It is assumed that no further development occurs after the 5<sup>th</sup> report.

In this filing, a three-year average of historical premium development factors was selected to strike a balance between responsiveness to recently observed changes and maintaining stability in the selected development factors from one filing to the next.



# MISSOURI

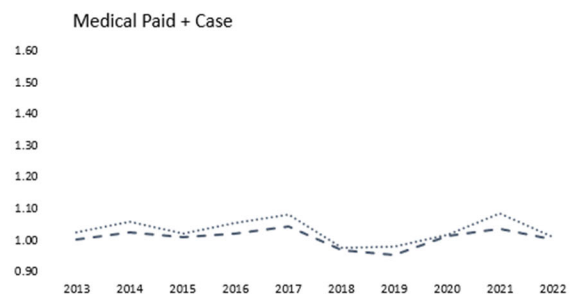
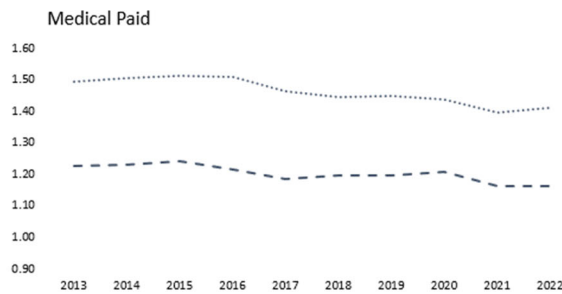
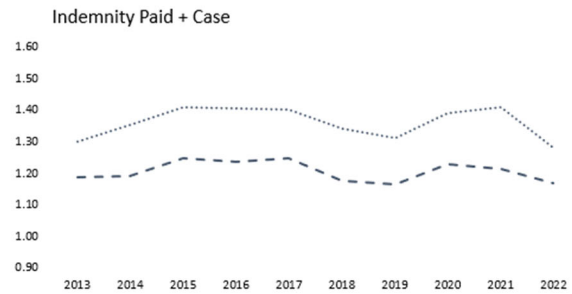
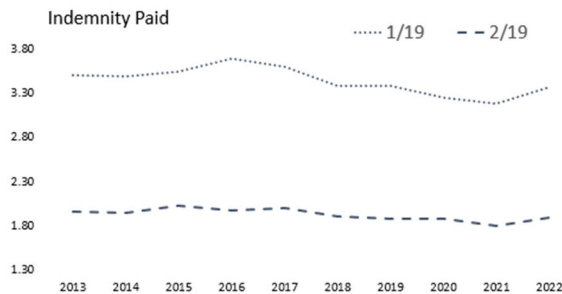
## Advisory Loss Costs and Rating Values Filing – January 1, 2024

### Appendix A – Factors Underlying the Proposed Loss Cost Level Change

#### Loss Development

Loss development factors are needed since total paid losses and case reserve estimates on a given claim change over time until the claim is finally closed. For indemnity and medical loss development, link ratios calculated from limited losses are used from 1<sup>st</sup> through 19<sup>th</sup> report. For indemnity and medical loss development past the 19<sup>th</sup> report, a 19<sup>th</sup>-to-ultimate "tail" factor is used to reflect all future expected emergence. The loss development factors are calculated based on how paid losses and case reserve estimates change over time for claims in older years.

The graphs below display the age-to-19<sup>th</sup> cumulative loss development factors over the last ten valuations.



The specific loss development link ratio selections underlying this filing are shown below:

- A two-year average of historical paid loss development factors through a 19<sup>th</sup> report
- A five-year average of historical paid plus case loss development factors through a 19<sup>th</sup> report



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Appendix A – Factors Underlying the Proposed Loss Cost Level Change

As can be seen in the graphs above, development factors in the latest valuation are generally consistent with those from historical periods for both indemnity and medical paid development as well as indemnity and medical paid plus case development and show no clear deviation from historical values. Therefore, there was no change in these selected development averages compared to the previous filing.

The development factor selections were made to strike a balance between responsiveness to recently observed changes and maintaining stability in the selected development factors from one filing to the next. A shorter-term average was selected for paid losses to capture more recent changes in paid development patterns over time, while a longer-term average was selected for paid plus case losses to limit the amount of volatility from year to year.

#### 19<sup>th</sup>-to-Ultimate Tail Factor

Tail factors are calculated separately for indemnity and medical unlimited 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. To adjust for these differences in the volume of losses between policy years, a growth adjustment factor is applied. The tail factors are brought from an unlimited basis to a limited basis through the application of a tail adjustment factor, which is based on countrywide data and the state-specific large loss threshold.

The calculation of indemnity and medical paid plus case 19<sup>th</sup>-to-ultimate tail factors utilizes all available experience for the years prior to the tail attachment point and are calculated for the most recent ten available policy years. Loss development tail factors from a nineteenth report to ultimate were judgmentally selected in this filing based on a review of the ten most recently available factors. Additionally, the medical tail factor selection contemplates the difference resulting from the standard countrywide limiting adjustment described above and the application of Missouri-specific large loss thresholds where possible.

Paid plus case data is used in the calculation of 19<sup>th</sup>-to-ultimate loss development factors since it is most reflective of the expected ultimate losses. Since this filing utilizes both paid and paid plus case data, the selected paid plus case loss development tail factors are converted to a paid basis using paid-to-paid plus case ratios. Both the indemnity and medical conversion ratios were selected based on a review of historical conversion ratios, but also consider the conversion ratios for the underlying experience period at early reports.





## MISSOURI

### APPENDIX A-II

#### Determination of Premium and Losses Developed to an Ultimate Report

##### Section A - Premium and Loss Summary Valued as of 12/31/2022

###### Policy Year 2021

(1) Standard Earned Premium	\$690,352,096
(2) Factor to Develop Premium to Ultimate	1.010
(3) Standard Earned Premium Developed to Ultimate = (1)x(2)	\$697,255,617
(4) Limited Indemnity Paid Losses	\$59,428,405
(5) Limited Indemnity Paid Development Factor to Ultimate	3.406
(6) Limited Indemnity Paid Losses Developed to Ultimate = (4)x(5)	\$202,413,147
(7) Limited Indemnity Paid+Case Losses	\$153,728,106
(8) Limited Indemnity Paid+Case Development Factor to Ultimate	1.358
(9) Limited Indemnity Paid+Case Losses Developed to Ultimate = (7)x(8)	\$208,762,768
(10) Policy Year 2021 Limited Indemnity Losses Developed to Ultimate = [(6)+(9)]/2	\$205,587,958
(11) Limited Medical Paid Losses	\$191,624,167
(12) Limited Medical Paid Development Factor to Ultimate	1.471
(13) Limited Medical Paid Losses Developed to Ultimate = (11)x(12)	\$281,879,150
(14) Limited Medical Paid+Case Losses	\$273,263,364
(15) Limited Medical Paid+Case Development Factor to Ultimate	1.028
(16) Limited Medical Paid+Case Losses Developed to Ultimate = (14)x(15)	\$280,914,738
(17) Policy Year 2021 Limited Medical Losses Developed to Ultimate = [(13)+(16)]/2	\$281,396,944

###### Policy Year 2020

(1) Standard Earned Premium	\$627,746,363
(2) Factor to Develop Premium to Ultimate	1.000
(3) Standard Earned Premium Developed to Ultimate = (1)x(2)	\$627,746,363
(4) Limited Indemnity Paid Losses	\$97,061,405
(5) Limited Indemnity Paid Development Factor to Ultimate	1.919
(6) Limited Indemnity Paid Losses Developed to Ultimate = (4)x(5)	\$186,260,836
(7) Limited Indemnity Paid+Case Losses	\$167,443,953
(8) Limited Indemnity Paid+Case Development Factor to Ultimate	1.200
(9) Limited Indemnity Paid+Case Losses Developed to Ultimate = (7)x(8)	\$200,932,744
(10) Policy Year 2020 Limited Indemnity Losses Developed to Ultimate = [(6)+(9)]/2	\$193,596,790
(11) Limited Medical Paid Losses	\$222,103,998
(12) Limited Medical Paid Development Factor to Ultimate	1.217
(13) Limited Medical Paid Losses Developed to Ultimate = (11)x(12)	\$270,300,566
(14) Limited Medical Paid+Case Losses	\$273,772,966
(15) Limited Medical Paid+Case Development Factor to Ultimate	1.010
(16) Limited Medical Paid+Case Losses Developed to Ultimate = (14)x(15)	\$276,510,696
(17) Policy Year 2020 Limited Medical Losses Developed to Ultimate = [(13)+(16)]/2	\$273,405,631



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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>
2018	1.008	2017	1.000	2016	1.001	2015	1.000
2019	1.009	2018	1.000	2017	1.000	2016	0.999
2020	1.013	2019	1.000	2018	0.999	2017	1.000
Average	1.010	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>
1.010	1.000	1.000	1.000



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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>
2019	1.770	2018	1.284	2017	1.114	2016	1.066
2020	1.780	2019	1.276	2018	1.139	2017	1.085
Average	1.775	Average	1.280	Average	1.127	Average	1.076
<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>
2015	1.047	2014	1.026	2013	1.024	2012	1.014
2016	1.057	2015	1.028	2014	1.035	2013	1.015
Average	1.052	Average	1.027	Average	1.030	Average	1.015
<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>
2011	1.009	2010	1.006	2009	1.006	2008	1.009
2012	1.007	2011	1.005	2010	1.010	2009	1.002
Average	1.008	Average	1.006	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>
2007	1.006	2006	1.003	2005	1.003	2004	1.004
2008	1.004	2007	1.007	2006	1.005	2005	1.004
Average	1.005	Average	1.005	Average	1.004	Average	1.004
<u>Policy Year</u>	<u>17th/18th</u>	<u>Policy Year</u>	<u>18th/19th</u>				
2003	1.005	2002	1.002				
2004	1.004	2003	1.002				
Average	1.005	Average	1.002				



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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>
2019	1.202	2018	1.047	2017	1.024	2016	1.011
2020	1.215	2019	1.056	2018	1.021	2017	1.019
Average	1.209	Average	1.052	Average	1.023	Average	1.015
<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>
2015	1.013	2014	1.010	2013	1.008	2012	1.006
2016	1.007	2015	1.009	2014	1.009	2013	1.005
Average	1.010	Average	1.010	Average	1.009	Average	1.006
<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>
2011	1.003	2010	1.003	2009	1.001	2008	1.004
2012	1.004	2011	1.001	2010	1.002	2009	1.000
Average	1.004	Average	1.002	Average	1.002	Average	1.002
<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>
2007	1.002	2006	1.002	2005	1.004	2004	1.003
2008	1.004	2007	1.001	2006	1.002	2005	1.004
Average	1.003	Average	1.002	Average	1.003	Average	1.004
<u>Policy Year</u>	<u>17th/18th</u>	<u>Policy Year</u>	<u>18th/19th</u>				
2003	1.005	2002	1.004				
2004	1.003	2003	1.003				
Average	1.004	Average	1.004				



**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>
2016	1.141	2015	1.063	2014	1.022	2013	1.040
2017	1.127	2016	1.063	2015	1.034	2014	1.028
2018	1.133	2017	1.075	2016	1.059	2015	1.021
2019	1.161	2018	1.062	2017	1.033	2016	1.025
2020	1.098	2019	1.054	2018	1.028	2017	1.035
Average	1.132	Average	1.063	Average	1.035	Average	1.030
<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>
2012	1.011	2011	1.004	2010	1.005	2009	1.001
2013	1.002	2012	1.009	2011	1.002	2010	1.000
2014	1.024	2013	1.012	2012	1.004	2011	0.997
2015	1.023	2014	1.030	2013	1.008	2012	1.003
2016	1.014	2015	1.013	2014	1.002	2013	0.997
Average	1.015	Average	1.014	Average	1.004	Average	1.000
<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>
2008	1.002	2007	1.002	2006	0.998	2005	1.004
2009	1.004	2008	1.002	2007	1.002	2006	1.002
2010	0.995	2009	0.999	2008	1.000	2007	1.002
2011	1.005	2010	1.002	2009	0.998	2008	0.998
2012	1.003	2011	1.004	2010	0.997	2009	0.998
Average	1.002	Average	1.002	Average	0.999	Average	1.001
<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>
2004	1.006	2003	1.004	2002	1.002	2001	1.000
2005	1.002	2004	1.002	2003	1.001	2002	1.001
2006	1.010	2005	1.002	2004	1.002	2003	1.004
2007	1.000	2006	0.999	2005	1.006	2004	1.000
2008	1.005	2007	1.005	2006	1.002	2005	0.999
Average	1.005	Average	1.002	Average	1.003	Average	1.001
<u>Policy Year</u>	<u>17th/18th</u>	<u>Policy Year</u>	<u>18th/19th</u>				
2000	0.996	1999	1.003				
2001	0.999	2000	1.001				
2002	1.001	2001	1.002				
2003	1.004	2002	1.000				
2004	1.001	2003	1.000				
Average	1.000	Average	1.001				



**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>
2016	1.007	2015	1.005	2014	0.992	2013	1.000
2017	1.027	2016	0.971	2015	1.008	2014	1.008
2018	1.002	2017	0.994	2016	1.003	2015	1.002
2019	1.044	2018	0.989	2017	1.014	2016	1.004
2020	1.008	2019	1.016	2018	0.998	2017	1.000
Average	1.018	Average	0.995	Average	1.003	Average	1.003
<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>
2012	0.987	2011	0.993	2010	1.001	2009	0.996
2013	0.981	2012	0.995	2011	1.006	2010	0.998
2014	1.004	2013	1.004	2012	1.004	2011	0.993
2015	1.015	2014	1.008	2013	1.020	2012	0.998
2016	0.995	2015	0.999	2014	0.997	2013	0.994
Average	0.996	Average	1.000	Average	1.006	Average	0.996
<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>
2008	0.990	2007	0.996	2006	1.001	2005	1.002
2009	0.997	2008	0.984	2007	1.001	2006	1.003
2010	1.003	2009	0.989	2008	1.001	2007	0.999
2011	0.999	2010	1.000	2009	0.999	2008	0.998
2012	1.002	2011	0.999	2010	1.001	2009	0.998
Average	0.998	Average	0.994	Average	1.001	Average	1.000
<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>
2004	0.994	2003	1.009	2002	1.001	2001	1.000
2005	1.000	2004	0.997	2003	1.001	2002	1.002
2006	1.005	2005	0.999	2004	0.997	2003	1.002
2007	0.998	2006	1.001	2005	0.989	2004	1.000
2008	1.001	2007	0.998	2006	1.002	2005	1.000
Average	1.000	Average	1.001	Average	0.998	Average	1.001
<u>Policy Year</u>	<u>17th/18th</u>	<u>Policy Year</u>	<u>18th/19th</u>				
2000	1.001	1999	0.999				
2001	0.996	2000	1.003				
2002	1.011	2001	1.002				
2003	1.001	2002	1.004				
2004	0.997	2003	1.004				
Average	1.001	Average	1.002				



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)	(2)	(3)	(4)	(5)	(6)	(7)
Policy Year	<u>Losses for Policy Year</u>		<u>Losses for All Prior Policy Years</u>		Factor to Adjust Losses for Prior Policy Years	Indicated 19th-to-Ult Development for Policy Year
	19th Report	20th Report	Previous	Current		
1993	183,188,006	183,535,361	2,399,277,237	2,401,159,473	0.934	1.013
1994	163,726,551	163,870,863	2,566,044,372	2,568,255,311	1.098	1.013
1995	141,313,490	141,545,426	2,727,688,854	2,729,411,452	1.309	1.011
1996	147,966,426	148,885,395	2,870,127,732	2,872,050,605	1.256	1.017
1997	154,311,500	154,746,190	3,017,195,817	3,016,590,277	1.201	1.000
1998	182,540,288	182,664,069	3,169,160,582	3,171,144,364	1.008	1.011
1999	178,274,607	178,699,133	3,218,869,043	3,221,131,468	0.987	1.015
2000	186,670,607	186,822,793	3,254,882,983	3,256,371,614	0.913	1.010
2001	197,160,321	196,820,323	3,593,453,410	3,595,717,434	0.869	1.011
2002	182,595,369	182,723,355	3,792,494,229	3,795,428,809	0.903	1.018
Selected Indemnity 19th-to-Ultimate Loss Development Factor						1.012

Medical Paid+Case Data for Matching Companies

(8)	(9)	(10)	(11)	(12)	(13)	(14)
Policy Year	<u>Losses for Policy Year</u>		<u>Losses for All Prior Policy Years</u>		Factor to Adjust Losses for Prior Policy Years	Indicated 19th-to-Ult Development for Policy Year
	19th Report	20th Report	Previous	Current		
1993	169,737,364	170,485,300	1,756,367,002	1,757,043,235	0.775	1.010
1994	151,270,232	149,612,389	1,915,056,614	1,916,008,300	0.935	0.996
1995	134,266,425	134,657,354	2,061,176,436	2,065,782,021	1.111	1.034
1996	128,546,172	128,496,716	2,199,686,714	2,200,950,027	1.194	1.008
1997	152,933,798	153,607,274	2,327,361,810	2,327,688,399	1.021	1.006
1998	156,288,073	155,917,719	2,480,377,273	2,483,028,345	1.011	1.014
1999	162,855,364	162,873,779	2,532,868,394	2,541,678,128	0.946	1.057
2000	176,217,899	175,902,987	2,578,710,212	2,587,101,774	0.849	1.054
2001	177,446,442	177,588,476	2,889,012,924	2,898,701,253	0.868	1.064
2002	176,655,270	177,348,120	3,076,232,244	3,076,506,784	0.829	1.006
Selected Medical 19th-to-Ultimate Loss Development Factor						1.020*

\*As shown in Section H line (2), NCCI's standard methodology involves the application of a factor to adjust the 19th-to-ultimate development factor to a limited basis, which is based on an analysis involving countrywide losses. The selected medical 19th-to-ultimate development factor in Section G reflects a review of how Missouri-specific large loss data in excess of the limiting threshold impacts the values shown in Section G column (14).

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

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

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.



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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
1999	0.968	0.986
2000	0.989	0.959
2001	0.972	0.971
2002	0.972	0.956
2003	0.956	0.967
Selected	0.970	0.970

	Indemnity	Medical
(1) Paid+Case 19th-to-Ultimate Loss Development Factor (Section G)	1.012	1.020
(2) Factor to Adjust 19th-to-Ultimate Development Factor to a Limited Basis	0.730	0.730
(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	0.970	0.970
(5) Limited Paid 19th-to-Ultimate Loss Development Factor = (3) / (4)	1.040	1.046

Section I - Summary of Limited Paid Loss Development Factors

Report	(1) Indemnity Paid Loss Development		Report	(3) Medical Paid Loss Development	
	to Next Report	to Ultimate		to Next Report	to Ultimate
1st	1.775	3.406	1st	1.209	1.471
2nd	1.280	1.919	2nd	1.052	1.217
3rd	1.127	1.499	3rd	1.023	1.157
4th	1.076	1.330	4th	1.015	1.131
5th	1.052	1.236	5th	1.010	1.114
6th	1.027	1.175	6th	1.010	1.103
7th	1.030	1.144	7th	1.009	1.092
8th	1.015	1.111	8th	1.006	1.082
9th	1.008	1.095	9th	1.004	1.076
10th	1.006	1.086	10th	1.002	1.072
11th	1.008	1.080	11th	1.002	1.070
12th	1.006	1.071	12th	1.002	1.068
13th	1.005	1.065	13th	1.003	1.066
14th	1.005	1.060	14th	1.002	1.063
15th	1.004	1.055	15th	1.003	1.061
16th	1.004	1.051	16th	1.004	1.058
17th	1.005	1.047	17th	1.004	1.054
18th	1.002	1.042	18th	1.004	1.050
19th		1.040	19th		1.046

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





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**APPENDIX A-II**

**Determination of Premium and Losses Developed to an Ultimate Report**

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

<u>Report</u>	<u>(1)</u> <u>Indemnity Paid+Case Loss Development</u>		<u>Report</u>	<u>(3)</u> <u>Medical Paid+Case Loss Development</u>	
	<u>to Next Report</u>	<u>to Ultimate</u>		<u>to Next Report</u>	<u>to Ultimate</u>
1st	1.132	1.358	1st	1.018	1.028
2nd	1.063	1.200	2nd	0.995	1.010
3rd	1.035	1.129	3rd	1.003	1.015
4th	1.030	1.091	4th	1.003	1.012
5th	1.015	1.059	5th	0.996	1.009
6th	1.014	1.043	6th	1.000	1.013
7th	1.004	1.029	7th	1.006	1.013
8th	1.000	1.025	8th	0.996	1.007
9th	1.002	1.025	9th	0.998	1.011
10th	1.002	1.023	10th	0.994	1.013
11th	0.999	1.021	11th	1.001	1.019
12th	1.001	1.022	12th	1.000	1.018
13th	1.005	1.021	13th	1.000	1.018
14th	1.002	1.016	14th	1.001	1.018
15th	1.003	1.014	15th	0.998	1.017
16th	1.001	1.011	16th	1.001	1.019
17th	1.000	1.010	17th	1.001	1.018
18th	1.001	1.010	18th	1.002	1.017
19th		1.009	19th		1.015

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

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



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**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*	9,571,063
(2) Statewide Excess Ratio for (1)	0.012
(3) Market Share for Carriers Missing from Large Loss and Catastrophe Call	0.000
(4) Factor to Adjust Limited Losses to an Unlimited Basis = $1.0 / \{1.0 - [(2) \times (1.0 - (3))]\}$	1.012

**Section L - Policy Year Large Loss Limits**

Experience Year	Policy Year Detrended Limit
2021	8,176,458
2020	7,687,778
2019	7,291,950
2018	7,004,734
2017	6,774,233
2016	6,565,423
2015	6,448,593
2014	6,313,567
2013	6,132,196
2012	6,032,022
2011	5,899,011
2010	5,750,131
2009	5,647,015
2008	5,650,492
2007	5,532,278
2006	5,304,305
2005	5,120,147
2004	4,956,579
2003	4,800,916
2002	4,683,593
2001	4,594,368
2000	4,473,297
1999	4,290,004

\* November 30, 2024 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, 2024

#### Appendix A – Factors Underlying the Proposed Loss Cost Level Change

##### Appendix A-III Trend Factors

The proposed loss costs are intended for use with policies with effective dates in the proposed effective period. However, the data underlying this filing is based on the years in the experience period. Thus, it is necessary to use trend factors that forecast how much future Missouri workers compensation experience will differ from historical experience.

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.

##### Overview of Methodology

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 in severity figures.

While claim frequency and severity are reviewed separately, NCCI selects annual indemnity and medical loss ratio trend factors in Missouri. Loss ratios are relied upon as they are less impacted by shifts in the industry mix since these impacts to frequency and severity tend to offset one another. Additionally, loss ratios do not require an adjustment to a common wage level, since the wage adjustment to frequency and severities nullify. In order to estimate the average annual percentage changes in the loss ratios, exponential curves are fit to the historical data points. Consideration in the trend factor selections includes a review of loss ratio patterns observed over an extended period of time, 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 trend lengths displayed on the following exhibits are calculated by comparing the average accident date, or midpoint, for the effective period of the proposed loss costs to each average accident date 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

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Appendix A – Factors Underlying the Proposed Loss Cost Level Change

##### Considerations Underlying Trend Selections in this Filing

The trend factors selected in this filing are meant to recognize the impact the changes in benefits and inflation will have on loss ratios between the midpoints of the experience period years on which the filing is based and the midpoint of the proposed loss cost effective period. Trends using the most recent 15 policy years are typically reviewed to allow one to evaluate changes over an extended period of time, including both economic and non-economic factors, and to mitigate short-term anomalous year-to-year changes. The selected annual loss ratio trends are based more on longer-term exponential fits because they are less volatile and the least influenced by the substantial improvement in experience observed in certain individual policy years.

The indicated exponential loss ratio trend fits for both indemnity and medical, on which the selections in this filing are based, are displayed on the following pages. These exhibits show the underlying frequency and severity components, as well as the exponential trend fits for periods ranging from 5 to 15 years for loss ratios. These figures have been adjusted to the common wage level and are based on an average of paid and paid plus case losses.

In general, long-term patterns of improving loss ratios have been observed over the most recent 15 years. The improved loss ratio experience observed in recent years is expected to continue going forward as the COVID-19 pandemic may have permanently altered aspects of the workplace and economy. For example, remote work and reduced business travel affecting some sectors, changes in job duties and workplaces, and changes in the mix of business are likely to persist into the future. The increasingly favorable policy year and calendar-accident year experience suggests such improvement is predictive of future experience and expected to persist into the filing effective period.

The effect of the pandemic in Missouri, from both an economic and workers compensation perspective, was minimal. The employment levels decreased in early 2020 but Missouri's employment has since recovered. The unemployment rate was 3.1% in 2019, rising to 6.1% in 2020, and returning to 4.4% in 2021. When employment levels are similar, it suggests a comparable industry composition in the historical data. Furthermore, a stronger level of employment suggests fewer return-to-work challenges.

The Great Reshuffle, characterized by significant worker mobility across jobs, sectors and occupations, led to an increase in the proportion of short-tenured workers in some industries, which NCCI studies have shown to be associated with both higher injury frequency and claim costs. However, hiring and separation rates have since fallen nearly to pre-pandemic levels.



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Appendix A – Factors Underlying the Proposed Loss Cost Level Change

This will likely lead to the share of short-tenured workers declining in 2023 toward historical averages.

Additionally, year-over-year wage growth is lower than its mid-2022 peak but still above what is historically typical in Missouri. As wages rise, premiums automatically increase, along with the associated workers compensation indemnity benefits. However, the impact on benefits—via updates to the State Average Weekly Wage—is lagged, which puts temporary downward pressure on the loss ratios in the experience period, as wage growth causes premium to increase without a corresponding increase in benefits. During the trend projection period, it is anticipated that indemnity losses will increase (relative to premium) as benefits begin to reflect the higher wages already observed in the premium. This temporary disconnect between premium and losses is considered in the selected annual indemnity loss ratio trend.

Wage inflation is expected to continue to outpace medical inflation, which may put downward pressure on future medical loss ratios. Medical inflation, as measured by the Chain-Weighted Personal Healthcare index, is projected to grow moderately over the next ten years, approximately 3.0% per year.

In Missouri, medical-only claim dollars decreased approximately 10% in Policy Year 2020. In Policy Year 2021, loss dollars associated with medical-only claims increased 18% relative to Policy Year 2020 and returned to pre-pandemic values. Although claims by injury type can experience year-to-year volatility, medical-only losses are expected to be stable over time because of the large volume.

For the reasons stated above, the selected annual loss ratio trends are based more heavily on longer term exponential trend fits because they are less volatile and strike a balance between responsiveness and stability. The increasingly favorable loss ratios, driven by a long-term decline in claim frequency and moderating severity trends, began prior to the onset of COVID-19. The long-term pattern of improving loss ratios is expected to continue. An annual loss ratio trend factor of  $-2.5\%$  was selected for the indemnity loss ratio, and an annual loss ratio trend factor of  $-2.5\%$  was selected for the medical loss ratio.

Also shown on the following pages are the underlying frequency and severity components. Note that frequency and severity trends were reviewed but not selected. These figures reflect today's loss cost and a common wage level and are based on an average of paid and paid plus case losses.



**MISSOURI**  
**APPENDIX A-III**  
**Policy Year Trend Factors**

**Section A - Calculation of Annual Loss Ratio Trend Factors**

(1) Selected Annual Loss Ratio Trends: Indemnity  
-2.5% Medical  
-2.5%

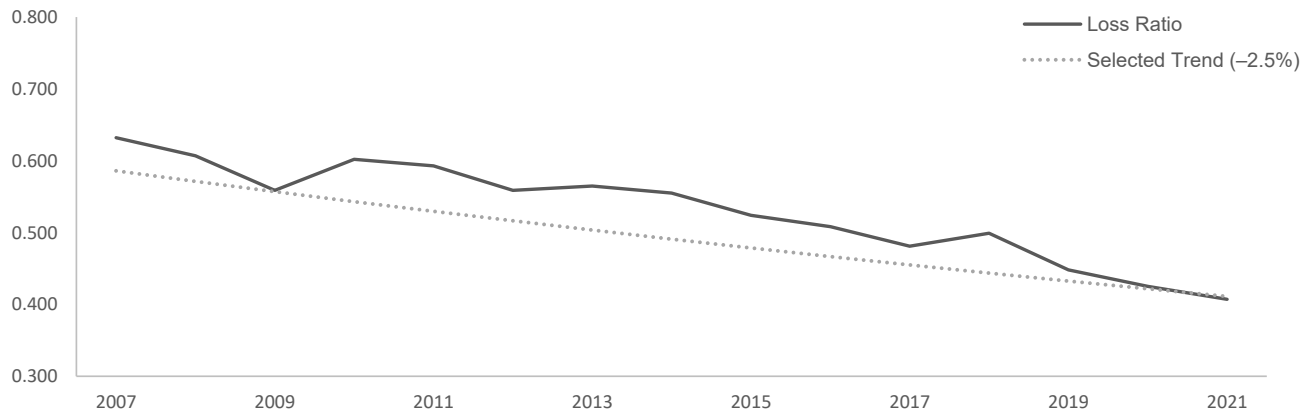
(2) Length of Trend Period from Midpoint of Policy Year to Midpoint of Effective Period:

Trend Length: PY 2021  
3.001 PY 2020  
4.001

(3) Trend Factors Applied to Experience Year Loss Ratios =  $[1 + (1)] ^ (2)$

Indemnity: PY 2021  
0.927 PY 2020  
0.904  
 Medical: 0.927 0.904

**Section B - Indemnity Loss Ratio Trend Data**



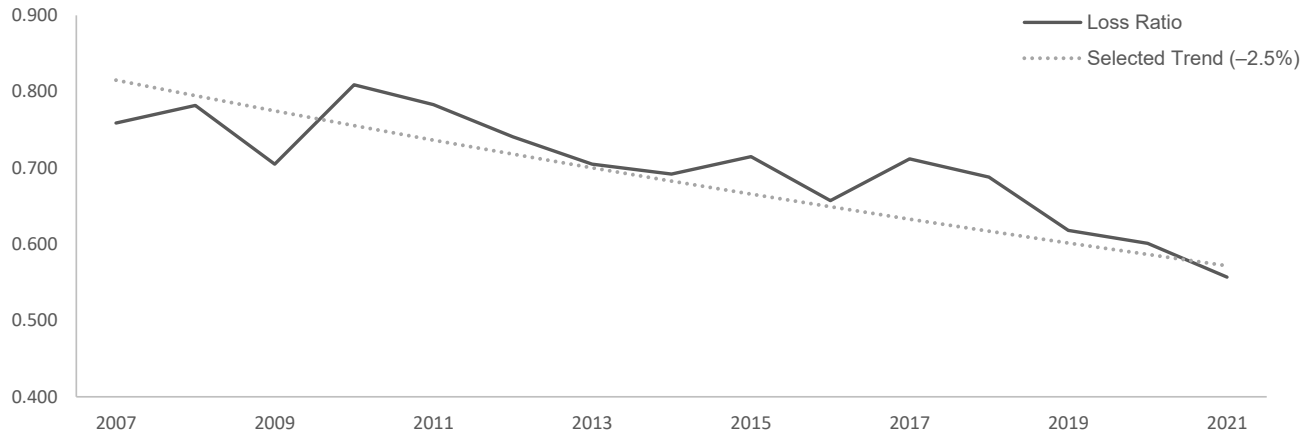
Policy Year	Indemnity Loss Ratio <sup>^</sup>	Annual Percent Change	# of Years in Fit	Exponential Fits
2007	0.632			
2008	0.607	-4.0%		
2009	0.559	-7.9%		
2010	0.602	7.7%		
2011	0.593	-1.5%	15	-2.8%
2012	0.559	-5.7%	14	-2.9%
2013	0.565	1.1%	13	-3.0%
2014	0.555	-1.8%	12	-3.4%
2015	0.524	-5.6%	11	-3.5%
2016	0.508	-3.1%	10	-3.6%
2017	0.481	-5.3%	9	-4.0%
2018	0.499	3.7%	8	-4.1%
2019	0.448	-10.2%	7	-4.1%
2020	0.425	-5.1%	6	-4.4%
2021	0.407	-4.2%	5	-4.8%

<sup>^</sup>Based on an average of paid and paid+case losses



**MISSOURI**  
**APPENDIX A-III**  
**Policy Year Trend Factors**

**Section C - Medical Loss Ratio Trend Data**



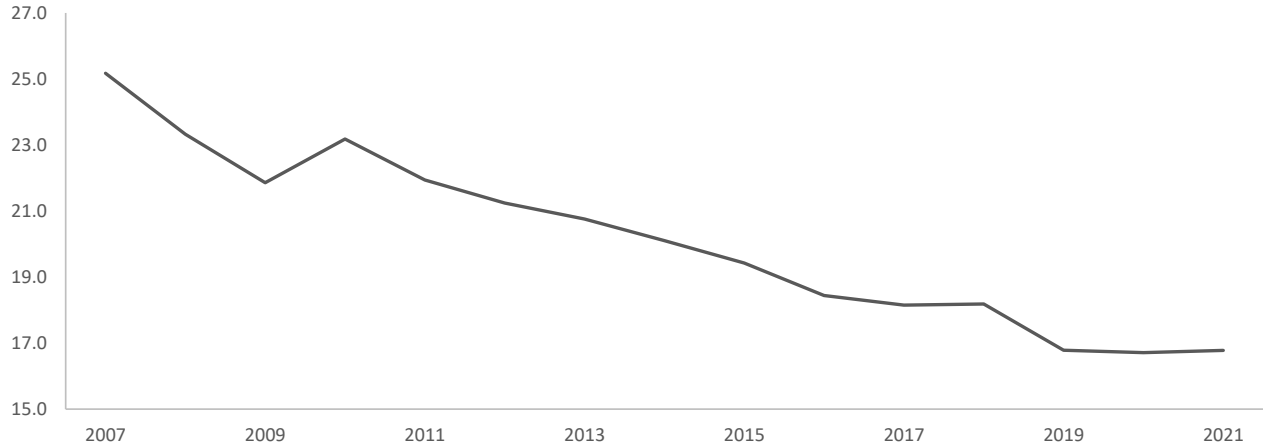
Policy Year	Medical Loss Ratio <sup>^</sup>	Annual Percent Change	# of Years in Fit	Exponential Fits
2007	0.759			
2008	0.782	3.0%		
2009	0.705	-9.8%		
2010	0.809	14.8%		
2011	0.783	-3.2%	15	-2.0%
2012	0.741	-5.4%	14	-2.1%
2013	0.705	-4.9%	13	-2.2%
2014	0.692	-1.8%	12	-2.7%
2015	0.715	3.3%	11	-2.6%
2016	0.657	-8.1%	10	-2.6%
2017	0.712	8.4%	9	-2.6%
2018	0.688	-3.4%	8	-3.1%
2019	0.618	-10.2%	7	-3.7%
2020	0.601	-2.8%	6	-4.0%
2021	0.557	-7.3%	5	-6.1%

<sup>^</sup>Based on an average of paid and paid+case losses



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**APPENDIX A-III**  
**Policy Year Trend Factors**

**Section D - Frequency Trend Data**



Policy Year	Claim Frequency <sup>^</sup>	Annual Percent Change	# of Years in Fit	Exponential Fits
2007	25.172	-		
2008	23.325	-7.3%		
2009	21.858	-6.3%		
2010	23.177	6.0%		
2011	21.940	-5.3%	15	-2.8%
2012	21.241	-3.2%	14	-2.7%
2013	20.758	-2.3%	13	-2.8%
2014	20.103	-3.2%	12	-3.0%
2015	19.425	-3.4%	11	-2.9%
2016	18.438	-5.1%	10	-2.8%
2017	18.149	-1.6%	9	-2.8%
2018	18.185	0.2%	8	-2.7%
2019	16.784	-7.7%	7	-2.5%
2020	16.711	-0.4%	6	-2.3%
2021	16.778	0.4%	5	-2.4%

<sup>^</sup>Per million of on-leveled, wage-adjusted premium





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**APPENDIX A-III**  
**Policy Year Trend Factors**

**Section E - Indemnity Severity Trend Data**



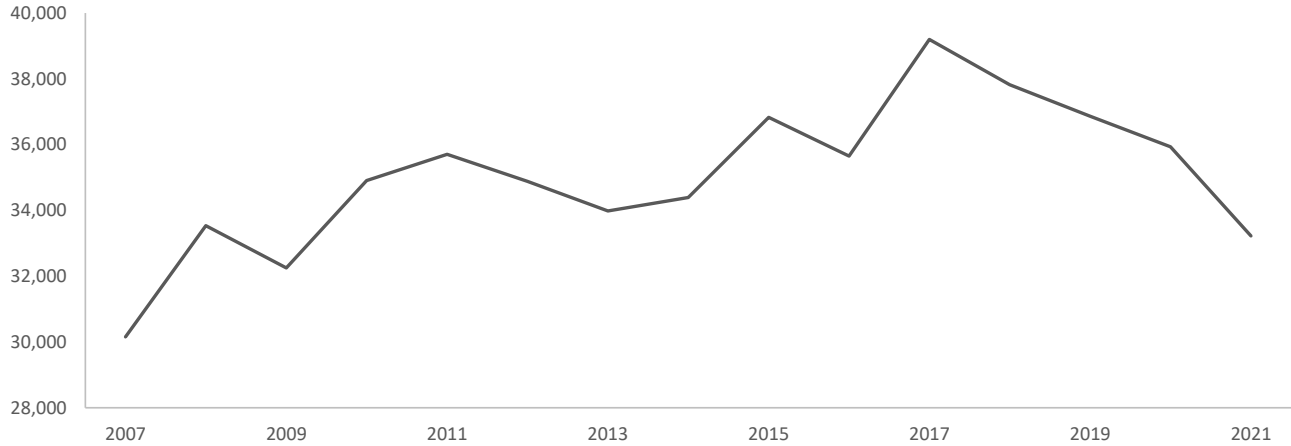
Policy Year	Indemnity Severity <sup>^</sup>	Annual Percent Change	# of Years in Fit	Exponential Fits
2007	25,119	-		
2008	26,032	3.6%		
2009	25,578	-1.7%		
2010	25,954	1.5%		
2011	27,021	4.1%	15	0.0%
2012	26,324	-2.6%	14	-0.1%
2013	27,239	3.5%	13	-0.2%
2014	27,605	1.3%	12	-0.4%
2015	26,977	-2.3%	11	-0.7%
2016	27,557	2.1%	10	-0.8%
2017	26,460	-4.0%	9	-1.2%
2018	27,434	3.7%	8	-1.5%
2019	26,729	-2.6%	7	-1.7%
2020	25,444	-4.8%	6	-2.2%
2021	24,272	-4.6%	5	-2.4%

<sup>^</sup>Adjusted to a common wage level, based on an average of paid and paid+case losses



**MISSOURI**  
**APPENDIX A-III**  
**Policy Year Trend Factors**

**Section F - Medical Severity Trend Data**



Policy Year	Medical Severity <sup>^</sup>	Annual Percent Change	# of Years in Fit	Exponential Fits
2007	30,157	-		
2008	33,536	11.2%		
2009	32,253	-3.8%		
2010	34,909	8.2%		
2011	35,702	2.3%	15	0.9%
2012	34,884	-2.3%	14	0.6%
2013	33,983	-2.6%	13	0.6%
2014	34,389	1.2%	12	0.3%
2015	36,825	7.1%	11	0.2%
2016	35,652	-3.2%	10	0.3%
2017	39,197	9.9%	9	0.2%
2018	37,818	-3.5%	8	-0.4%
2019	36,863	-2.5%	7	-1.3%
2020	35,934	-2.5%	6	-1.8%
2021	33,223	-7.5%	5	-3.7%

<sup>^</sup>Adjusted to a common wage level, based on an average of paid and paid+case losses



**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	180,187,084	829,190,703	767,652,121	1.262	1.267
Contracting	180,123,411	808,541,610	748,832,974	1.125	1.125
Office & Clerical	107,213,017	483,240,187	447,143,576	1.137	1.134
Goods & Services	285,528,381	1,293,578,655	1,196,874,694	1.089	1.086
Miscellaneous	207,261,028	906,766,074	840,198,145	1.068	1.068
Statewide	960,312,921	4,321,317,230	4,000,701,510		

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	179,476,006	825,918,443	764,622,712	1.080	1.000
Contracting	180,123,411	808,541,610	748,832,974	1.080	1.000
Office & Clerical	107,496,649	484,518,600	448,326,495	1.081	1.001
Goods & Services	286,317,134	1,297,152,077	1,200,180,978	1.081	1.001
Miscellaneous	207,261,028	906,766,074	840,198,145	1.079	0.999
Statewide	960,674,228	4,322,896,804	4,002,161,304	1.080	



**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 expected excess loss provisions are non-catastrophe and the excess ratios at a loss limit of \$50 million are set equal to zero. 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	769,001,453	1.006	1.004	15,611
Contracting	750,031,431	1.002	1.000	9,556
Office & Clerical	429,502,025	0.957	0.955	8,966
Goods & Services	1,211,379,339	1.008	1.006	28,400
Miscellaneous	850,198,972	1.013	1.011	14,265
Statewide	4,010,113,220	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	1.006	1.003
Contracting	12,000	0.89	1.002	0.999
Office & Clerical	12,000	0.86	0.963	0.960
Goods & Services	12,000	1.00	1.008	1.005
Miscellaneous	12,000	1.00	1.013	1.010
Statewide			1.003	1.000

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



## MISSOURI

### APPENDIX A-IV

#### III. Description of Industry Group Differentials

Column (2) reflects the indemnity and medical combined expected losses calculated as five years of payroll (in hundreds) extended separately by indemnity and medical pure premiums underlying the latest loss costs. Column (3) adjusts the current expected losses to the proposed level by applying the components of the proposed loss cost level change. These components are applied separately for indemnity and medical, where possible. These adjustments are reflected in Appendix B-I, Section B.

Column (4) shows the current manual premium to standard premium ratios that were calculated using the latest five years of WCSP data used in the current Missouri filing. Column (5) shows the proposed manual premium to standard premium ratios calculated using the latest five years of manual premium and experience modification factors reported in the WCSP data used in the proposed Missouri filing. "Proposed" ratio refers to the fact that these ratios are based on the latest available WCSP data in the proposed filing, and they are used to adjust the proposed industry group differentials to reflect the latest available impact of experience rating by industry group. The differences between columns (4) and (5) relate to the different periods of data being used, which are rolling 5-year periods.

Columns (6), (7), and (8) are based on columns (1), (2), and (3), respectively, and include an adjustment for the change in the average experience rating off-balance by Industry Group (IG). The adjustment for the change in the average experience rating off-balance by IG is reflected by multiplying columns (1), (2), and (3) by the ratio of column (4) to column (5). The ratio of column (4) to column (5) adjusts the current and proposed expected losses (and therefore the IG differentials) to reflect the latest available impact of experience rating by industry group.

The expected losses in column (6) are used as the IG weights when determining the statewide average Credibility Weighted Indicated-to-Expected Ratio in column (17).

The expected losses in columns (7) and (8) are used to determine the relative IG changes from the prior filing to the proposed filing in column (9). Since the indicated IG relativities in column (9) reflect a statewide average that differs from 1.000, the calculation in column (10) ensures that the indicated changes by IG balance to the overall proposed statewide loss cost level change.

Column (13) normalizes the indicated to expected ratios determined in column (12) to determine differentials before credibility weighting. The credibilities are calculated for each industry group using actual lost-time cases (column (14)) and the full credibility standard. The full credibility standard (column (15)) is determined based on an analysis of five successive years of five industry group differential fluctuations across 36 states. In column (16), the credibility is 1.00 when lost-time claims exceed 12,000. The final differentials reflected in column (18) are the normalized credibility weighted industry group differentials calculated in column (17).



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Appendix B – Calculations Underlying the Loss Cost Change by Classification

NCCI separately determines 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 industrial 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, swing limits, and where applicable, any additional loads



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**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
7/16-6/17	1.129	1.034	1.034	1.003
7/17-6/18	1.187	1.047	1.039	1.001
7/18-6/19	1.271	1.079	1.048	1.000
7/19-6/20	1.450	1.138	1.056	1.001
7/20-6/21	1.824	1.264	1.124	1.008

\*The likely/not-likely development factors reflect a 60% likely / 40% not-likely distribution of the total tail development.

**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
7/16-6/17	0.828	0.828
7/17-6/18	0.849	0.849
7/18-6/19	0.871	0.871
7/19-6/20	0.893	0.893
7/20-6/21	0.916	0.916

**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
7/16-6/17	1.000	1.000	1.000	1.000	1.000
7/17-6/18	1.000	1.000	1.000	1.000	1.000
7/18-6/19	1.000	1.000	1.000	1.000	1.000
7/19-6/20	1.000	1.000	1.000	1.000	1.000
7/20-6/21	1.000	1.000	1.000	1.000	1.000



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**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)
7/16-6/17	0.935	0.856	0.935	0.935	0.856	0.935	0.856	0.856	0.830
7/17-6/18	1.008	0.889	1.008	1.008	0.889	1.008	0.889	0.882	0.850
7/18-6/19	1.107	0.940	1.107	1.107	0.940	1.107	0.940	0.913	0.871
7/19-6/20	1.295	1.016	1.295	1.295	1.016	1.295	1.016	0.943	0.894
7/20-6/21	1.671	1.158	1.671	1.671	1.158	1.671	1.158	1.030	0.923

\* 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. The expected excess loss provisions are non-catastrophe and the excess ratios at a loss limit of \$50 million are set equal to zero. These factors are shown below.

Hazard Group	A	B	C	D	E	F	G
(1) Excess Ratios	0.065	0.085	0.116	0.133	0.185	0.219	0.250
(2) Excess Factors 1/(1-(1))	1.070	1.093	1.131	1.153	1.227	1.280	1.333

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.





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**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*	1.004	1.000	0.955	1.006	1.011
(2) Final Differentials**	1.003	0.999	0.960	1.005	1.010
(3) Adjustment (2)/(1)	0.999	0.999	1.005	0.999	0.999

\*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)
7/16-6/17	0.866	1.131	1.128	1.003	0.869
7/17-6/18	0.853	1.131	1.123	1.007	0.859
7/18-6/19	0.864	1.130	1.128	1.002	0.866
7/19-6/20	0.953	1.129	1.131	0.998	0.951
7/20-6/21	0.919	1.129	1.127	1.002	0.921

**3. Adjustment for Experience Change**

A factor of 0.949 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 1.203 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
7/16-6/17	0.991	0.991	0.997	0.991	0.991
7/17-6/18	0.980	0.980	0.986	0.980	0.980
7/18-6/19	0.988	0.988	0.994	0.988	0.988
7/19-6/20	1.085	1.085	1.091	1.085	1.085
7/20-6/21	1.050	1.050	1.057	1.050	1.050



**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 0.949 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, 0.983 and 0.965, 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.

Effective Date	Indemnity	Medical
Combined 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	1.200	1.200	1.203	1.203
(2) Loss-based Assessment	1.000	1.000	1.000	1.000
(3) = (1) + (2) – 1.000	1.200	1.200	1.203	1.203
(4) Overall Change (3b)/(3a)			1.003	1.003

**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	1.262	1.267	0.996
Contracting	1.125	1.125	1.000
Office & Clerical	1.137	1.134	1.003
Goods & Services	1.089	1.086	1.003
Miscellaneous	1.068	1.068	1.000



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**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	1.003	1.000	1.003
Contracting	0.999	1.000	0.999
Office & Clerical	0.960	1.001	0.961
Goods & Services	1.005	1.001	1.006
Miscellaneous	1.010	0.999	1.009

\*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	0.935	0.918
Contracting	0.935	0.918
Office & Clerical	0.902	0.886
Goods & Services	0.944	0.927
Miscellaneous	0.944	0.927



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### 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: \$35,899,905 for indemnity and \$24,769,087 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	1.0053
Contracting	1.0041
Office & Clerical	0.9839
Goods & Services	0.9924
Miscellaneous	1.0007

**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	1.267
Contracting	1.125
Office & Clerical	1.134
Goods & Services	1.086
Miscellaneous	1.068



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APPENDIX B-II

3. 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:

Table with 2 columns: Industry Group and Swing Limit Range. Rows include Manufacturing, Contracting, Office & Clerical, Goods & Services, and Miscellaneous.

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

List of Classifications Limited by the Lower Swing

2586 4263 5491 7711

1438 7538 8803 8871

4. 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 1.084 to offset the credits payable under the CCPAP.

A list of eligible class codes can be found under the Basic Manual state pricing programs.



**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
07/01/16 - 06/30/17	0	386,438	0	833,853	4,260,649	594,050	1,961,367	1,404,245	9,909,818
07/01/17 - 06/30/18	0	0	0	1,552,531	3,784,839	444,816	1,764,763	2,137,882	11,172,282
07/01/18 - 06/30/19	490,196	500,000	261,623	1,802,621	4,354,799	837,468	1,405,722	3,541,531	11,755,292
07/01/19 - 06/30/20	259,473	5,000	0	1,261,387	3,075,173	764,256	1,963,348	3,427,222	9,007,125
07/01/20 - 06/30/21	0	0	0	823,276	2,638,268	817,599	1,871,514	1,876,312	10,052,347

**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
07/01/16 - 06/30/17	0.935	0.856	0.935	0.935	0.856	0.935	0.856	0.856	0.830
07/01/17 - 06/30/18	1.008	0.889	1.008	1.008	0.889	1.008	0.889	0.882	0.850
07/01/18 - 06/30/19	1.107	0.940	1.107	1.107	0.940	1.107	0.940	0.913	0.871
07/01/19 - 06/30/20	1.295	1.016	1.295	1.295	1.016	1.295	1.016	0.943	0.894
07/01/20 - 06/30/21	1.671	1.158	1.671	1.671	1.158	1.671	1.158	1.030	0.923

**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	1.131

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%
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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
07/01/16 - 06/30/17	0	356,835	0	841,037	3,934,265	599,168	1,811,117	1,429,844	9,601,387
07/01/17 - 06/30/18	0	0	0	1,688,165	3,629,637	483,677	1,692,396	2,238,722	11,001,537
07/01/18 - 06/30/19	585,371	507,004	312,419	2,152,613	4,415,806	1,000,069	1,425,415	3,854,800	11,891,310
07/01/19 - 06/30/20	362,474	5,480	0	1,762,106	3,370,368	1,067,635	2,151,816	3,811,288	9,377,980
07/01/20 - 06/30/21	0	0	0	1,484,007	3,295,652	1,473,774	2,337,844	2,330,119	10,769,946

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

Policy Period	INDUSTRY GROUP: Office and Clerical
07/01/16 - 06/30/17	0.997
07/01/17 - 06/30/18	0.986
07/01/18 - 06/30/19	0.994
07/01/19 - 06/30/20	1.091
07/01/20 - 06/30/21	1.057

**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
07/01/16 - 06/30/17	25,355,247,657	1,435,884	6,083,910	1,425,554	9,572,583	7,519,794	10,998,137	18,517,931
07/01/17 - 06/30/18	26,454,768,399	2,141,436	5,247,525	2,207,380	10,847,515	7,388,961	13,054,895	20,443,856
07/01/18 - 06/30/19	27,316,529,988	4,026,169	6,310,136	3,831,671	11,819,962	10,336,305	15,651,633	25,987,938
07/01/19 - 06/30/20	27,047,230,113	3,482,707	6,030,681	4,158,115	10,231,376	9,513,388	14,389,491	23,902,879
07/01/20 - 06/30/21	29,503,473,276	3,126,375	5,954,605	2,462,936	11,383,833	9,080,980	13,846,769	22,927,749
<b>Total</b>	<b>135,677,249,433</b>	<b>14,212,571</b>	<b>29,626,857</b>	<b>14,085,656</b>	<b>53,855,269</b>	<b>43,839,428</b>	<b>67,940,925</b>	<b>111,780,353</b>
<b>INDICATED PURE PREMIUM</b>						<b>0.032</b>	<b>0.050</b>	<b>0.08</b>

The pure premiums shown were calculated using unrounded losses, while the converted losses have been rounded for display purposes.

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	0.033	0.057	0.09
Conversion Factors (App. B-I, Section B)	0.902	0.886	xxx
<b>PURE PREMIUMS PRESENT ON RATE LEVEL (Underlying Pure Premiums) x (Conversion Factor)</b>	<b>0.030</b>	<b>0.051</b>	<b>0.08</b>





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**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	0.032	0.050	0.08
2. Pure Premium Indicated by National Relativity	0.030	0.051	0.08
3. Pure Premium Present on Rate Level	0.030	0.051	0.08
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)	0.032	0.050	0.08
8. Test Correction Factor	0.9839	0.9839	xxx
9. Underlying Pure Premiums = (7) x (8) *	0.031	0.049	0.08
10. Ratio of Manual to Standard Premium			1.134
11. Loss Cost = (9) x (10)			0.09
12. Loss Cost Within Swing Limits			0.09
Current Loss Cost x Swing Limits			
a) Lower bound = 0.10 x 0.690 = 0.07			
b) Upper bound = 0.10 x 1.090 = 0.10			
13. Pure Premiums Underlying Proposed Loss Cost* = ((13TOT) / (9TOT)) x (9) , (13TOT) = (12) / (10)	0.031	0.049	0.08
14. Miscellaneous Loadings			0.00
15. Final Loaded Loss Cost			0.09

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



## MISSOURI

### APPENDIX B-IV

WCSP data is used to determine the F-Classification (F-Class) loss costs. The latest year of WCSP payroll is extended by both the current and proposed loss costs. Based on \$31,706,244 of payroll, the overall loss cost level change in Missouri is -19.8%.

#### I. Overview of Methodology

- Ten years of F-Class losses\* across all states for which the National Council on Compensation Insurance compiles workers compensation ratemaking data are converted and adjusted to a countrywide level and used with ten years of F-Class countrywide payroll to determine the F-class countrywide pure premiums at both an overall and individual classification level.
- F-class code countrywide relativities are then calculated by comparing the F-class countrywide pure premiums by class to the overall countrywide F-class pure premium. The relativity values are reflected in the table in Section II.
- A single state primary base pure premium is calculated by applying a countrywide to state relativity factor to bring the F-class overall countrywide pure premium to the Missouri proposed level.
- A final base pure premium is calculated by bringing the primary base pure premium to the proposed Missouri trend and benefit levels, and applying any applicable expenses and/or offsets.
- Final F-Class loss costs are calculated by applying the countrywide relativity by class code to the final base pure premium and applying swing limits.

\*Losses are limited to \$500,000 for a single claim occurrence and \$1,500,000 for each multiple claim occurrence. Texas data is included for policies effective 1/1/2013 and subsequent.



**MISSOURI**

**APPENDIX B-IV**

II. The F-class code countrywide relativities:

<b>Class Code</b>	<b>Countrywide Relativity**</b>
6006	1.686
6801*	1.000
6824	1.184
6825	0.351
6826	0.666
6828*	1.000
6829*	1.000
6843	1.358
6845	0.729
6872	1.268
6873*	1.000
6874	1.592
7309	1.227
7313	0.498
7317	0.946
7327	2.518
7350	1.023
8709	0.385
8726	0.264
9077*	1.000

\*Relativities for class codes with a limited amount of data are set to 1.000.

\*\*The relativities have been locked into the values from the prior filing

III. Swing Limits

The proposed loss costs are limited to the swing limits based on 20% above and 20% below the current loss costs.

Classifications Limited by the Upper Swing

NONE

Classifications Limited by the Lower Swing

6825	6874	7309	7317
7327	7350	8709	



MISSOURI

APPENDIX B-IV

Derivation of State Base Pure Premium

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
1. Overall Countrywide Pure Premium			2.76
2. State Act Pure Premium Relativity Factor			1.513
3. Countrywide State Act Weight			24%
<b>4. Primary Base Pure Premium</b> = [(1) x (2) x (3)] + [(1) x (1 - (3))]			<b>3.10</b>
5. Countrywide Weights	51%	49%	100%
6. Trend Factors	0.977	0.977	xx
7. Weighted Benefits	1.000	1.000	xx
8. Weighted Loss-Based Expenses	1.270	1.203	xx
<b>9. Secondary Base Pure Premium</b> = (4tot) x (5) x (6) x (7) x (8)	1.962	1.785	<b>3.75</b>
10. Additional Offsets			1.000
<b>11. Final Base Pure Premium</b> = (9) x (10)			<b>3.75</b>



**MISSOURI**

**APPENDIX B-IV**

**Derivation of Proposed Loss Cost - Code 6872**  
Industry Group - F-Class, Hazard Group - G

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

1. Missouri's Final Base Pure Premium	3.75
2. Countrywide Class Code 6872 Relativity (Section II)	1.268
3. Loss Cost = (1) x (2)	4.76
4. Loss Cost Within Swing Limits	4.76
Current Loss Cost x Swing Limits	
a) Lower bound = $5.84 \times 0.80 = 4.68$	
a) Upper bound = $5.84 \times 1.20 = 7.00$	
5. Miscellaneous Loadings	0.00
6. Final Loaded Loss Cost	4.76



## MISSOURI

### APPENDIX B-IV

#### 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.) Assessment Rate on Indemnity Losses *	8.8%
2.) Assessment Rate on Total Losses #	4.8%

\* Calculated using data provided by the U.S. Department of Labor

# Calculated using U.S. Department of Labor data and on-leveled and developed USL&HW losses - statistical plan data



## MISSOURI

### Appendix B-V

#### Calculation of Coal Mine Traumatic and Disease

Coal mine experience is reflected in the following class codes:

- Surface Coal Mine – Class Code 1005
- Underground Coal Mine – Class Code 1016

The traumatic loss cost for Surface Coal Mine Class Code 1005 is calculated based on WCSP data as explained in Appendices B-I through B-III. Class Code 1005 is in the Miscellaneous industry group.

The traumatic loss cost for Underground Coal Mine Class Code 1016 is calculated using WCSP data. Pure premiums are calculated and adjusted for trend, benefits, and any applicable offsets or expense provisions. Swing limits for Class Code 1016 are applied around the current loss cost.

The disease portion of class codes 1005 and 1016 is calculated by weighting a state and federal disease pure premium component. Expense provisions, where applicable, are applied as a final step in the calculation of the disease loss cost.

For benefits provided under the Federal Coal Mine Health & Safety Act (federal benefits), the expected number of claims is based on data from the U.S. Department of Labor's Federal Black Lung Database. Estimating the expected number of claims entitled to federal benefits for an individual jurisdiction is difficult due to the scarcity of historical data. Therefore, data pooled across multiple states is relied upon to develop a credible level of experience. The following changes were made to the analysis this year:

- One state was removed from the pooled data used in the countrywide federal cost calculation due to a substantively higher incidence rate of federal disease claims relative to the other states.
- Another state no longer has active coal mines and therefore was removed since it only contributes additional claims with no corresponding exposure.
- Selected indemnity escalation values to reflect updated wage growth.
- Selected updated medical escalation values based on a review of the projected chain-weighted personal healthcare price index published by the Centers for Medicare and Medicaid Services.
- Selected updated state claim frequency and severity values based on a review of the latest data.

The loss costs shown on the Basic Manual pages for class codes 1005 and 1016 are a combination of the traumatic and state and federal disease portions.



## MISSOURI

### APPENDIX B-V

#### Coal Mine Occupational Disease Proposed Underground and Surface Loss Costs

##### Part A - State Occupational Disease (OD) Pure Premium\*

1. Estimated Number of Claims per Year	2
2. Estimated Average Cost per Claim	\$150,000
3. Estimated Cost of State Act Disease Claims per Year = (1) x (2)	\$300,000
4. Estimated Coal Miner Payroll	\$728,299,709
5. State OD Pure Premium per \$100 of Payroll = (3) / (4) x 100	0.04

##### Part B - Federal Occupational Disease (OD) Pure Premium\*\*

6. Estimated Entitlements for Claims Filed by Living Miners	10
7. Average Cost per Case for Living Miners	\$534,961
8. Cost of Claims Filed by Living Miners = (6) x (7)	\$5,349,610
9. Estimated Entitlements for Claims Filed by Living Widows	1.0
10. Average Cost per Case for Living Widows	\$339,273
11. Cost of Claims Filed by Living Widows = (9) x (10)	\$339,273
12. Total Cost of Federal Claims (8) + (11)	\$5,688,883
13. Estimated Coal Miner Payroll	\$690,958,987
14. Federal OD Pure Premium per \$100 of Payroll = (12) / (13) x 100	0.82

##### Part C - Split Total Occupational Disease (OD) Pure Premium by Class Code

15. Code 1016 OD Costs Relative to Code 1005 Costs	3.000
16. Distribution of Coal Mining Payroll**	
a) 1005 Payroll as % of Total Coal Mining Payroll	40.2%
b) 1016 Payroll as % of Total Coal Mining Payroll	59.8%
17. Proposed State OD Pure Premiums	
a) 1005 State OD Pure Premium = (5) / [(16a) + (16b) x (15)]	0.02
b) 1016 State OD Pure Premium = (17a) x (15)	0.06
18. Proposed Federal OD Pure Premiums	
a) 1005 Federal OD Pure Premium = (14) / [(16a) + (16b) x (15)]	0.37
b) 1016 Federal OD Pure Premium = (18a) x (15)	1.11
19. Loss-Based Expense Provision	1.203
20. Proposed State OD Loss Cost	
a) 1005 State OD Loss Cost = (17a) x (19)	0.02
b) 1016 State OD Loss Cost = (17b) x (19)	0.07
21. Proposed Federal OD Loss Cost	
a) 1005 Federal OD Loss Cost = (18a) x (19)	0.45
b) 1016 Federal OD Loss Cost = (18b) x (19)	1.34

\* Based on a review of data for all NCCI states excluding IL, TN, KY, VA, and WV

\*\* Based on a review of data for all NCCI states excluding KY, TN, VA, and WV





## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Appendix C – Memoranda for Laws and Assessments

The purpose of this appendix is to provide 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 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 within this appendix is calculated as of the benefit effective date, which may differ from the overall impact on the filing as shown in the Executive Summary.

In this year's filing, there have been no newly enacted benefit changes in Missouri.



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Part 4 Additional Information

- Definitions
- NCCI Affiliate List
- Key Contacts



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### 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):**

- The 12-month period beginning January 1 and ending December 31.
- 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.



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### Definitions

**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.

**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, 2024

#### 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  
ACCREDITED SURETY & CASUALTY 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  
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 INTERSTATE INS CO  
AMERICAN INTERSTATE INS CO OF TX  
AMERICAN LIBERTY INSURANCE CO  
AMERICAN MODERN HOME INS CO  
AMERICAN NATIONAL PROPERTY AND CASUALTY CO  
AMERICAN SELECT INS CO  
AMERICAN STATES INS CO A SAFECO COMPANY  
AMERICAN SUMMIT INS CO  
AMERICAN ZURICH INS CO  
AMERISURE INS CO  
AMERISURE MUTUAL INS CO  
AMERISURE PARTNERS INS CO  
AMERITRUST INS CORP  
AMFED ADVANTAGE INSURANCE COMPANY  
AMFED CASUALTY INS CO  
AMFED NATIONAL INSURANCE COMPANY  
AMGUARD INS CO  
AMTRUST INSURANCE CO  
ARCH INDEMNITY INSURANCE COMPANY  
ARCH INSURANCE COMPANY  
ARCH PROPERTY CASUALTY INS CO  
ARGONAUT GREAT CENTRAL INS CO  
ARGONAUT INS CO  
ARGONAUT MIDWEST INS CO  
ASCOT INSURANCE COMPANY  
ASSOCIATION CASUALTY INS CO  
ATLANTIC SPECIALTY INS CO (INTACT )  
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, S.I.  
CIMARRON INSURANCE COMPANY INC  
CINCINNATI CASUALTY COMPANY  
CINCINNATI INDEMNITY COMPANY  
CINCINNATI INS CO  
CITIZENS INS CO OF AMERICA  
CLEAR SPRING PROPERTY AND CASUALTY COMPANY  
CLEARPATH MUTUAL INSURANCE COMPANY (KESA)  
COLONIAL AMERICAN CASUALTY & SURETY CO  
COLONIAL SURETY COMPANY  
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  
COPPERPOINT PREMIER INSURANCE COMPANY  
COREPOINTE INSURANCE COMPANY  
COUNTRY MUTUAL INSURANCE CO  
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



## MISSOURI

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#### NCCI Affiliate List

EMPLOYERS COMPENSATION INS CO  
EMPLOYERS INS CO OF WAUSAU  
EMPLOYERS INSURANCE COMPANY OF NEVADA  
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  
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  
FIRSTCOMP INSURANCE CO  
FLORISTS MUTUAL INSURANCE CO  
FRANK WINSTON CRUM INSURANCE CO  
FREEDOM SPECIALTY INSURANCE COMPANY  
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 INSURANCE COMPANY  
GUIDEONE SPECIALTY INSURANCE COMPANY  
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  
INCLINE CASUALTY 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 CASUALTY COMPANY  
INTREPID INSURANCE COMPANY  
KEY RISK INS CO  
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 ADVANTAGE INSURANCE 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



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### NCCI Affiliate List

NATIONAL LIABILITY & FIRE INSURANCE CO  
NATIONAL SPECIALTY INS CO  
NATIONAL SUMMIT 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 INS CO  
NATIONWIDE PROPERTY AND CASUALTY INS CO  
NETHERLANDS INSURANCE COMPANY  
NEW HAMPSHIRE INSURANCE COMPANY  
NEW YORK MARINE AND GENERAL INSURANCE CO  
NEXT INSURANCE US COMPANY  
NHRMA MUTUAL INSURANCE COMPANY  
NORGUARD INS CO  
NORMANDY INSURANCE COMPANY  
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  
OMAHA NATIONAL INS CO  
OWNERS INSURANCE COMPANY  
PA MANUFACTURERS ASSN INS CO  
PA MANUFACTURERS INDEMNITY CO  
PA NATIONAL MUTUAL CAS INS CO  
PACIFIC COMPENSATION INSURANCE CO  
PACIFIC EMPLOYERS INS CO  
PACIFIC INDEMNITY CO  
PARK NATIONAL INS COMPANY  
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  
PIE INSURANCE COMPANY  
PINNACLE NATIONAL INSURANCE COMPANY  
PINNACLEPOINT INSURANCE COMPANY  
PLAZA INSURANCE CO  
PRAETORIAN INSURANCE COMPANY  
PREFERRED EMPLOYERS INS CO  
PREFERRED PROFESSIONAL INSURANCE COMPANY  
PREMIER GROUP INS CO  
PRESCIENT NATIONAL INSURANCE COMPANY  
PRIVILEGE UNDERWRITERS RECIPROCAL EXCHANGE  
PROPERTY AND CASUALTY INS CO OF HARTFORD  
PROTECTIVE INS CO  
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 COMPANY  
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  
SENTINEL INS CO  
SENTRY CASUALTY CO  
SENTRY INS CO  
SENTRY SELECT INSURANCE COMPANY  
SEQUOIA INSURANCE CO  
SERVICE AMERICAN INDEMNITY COMPANY  
SERVICE LLOYDS INSURANCE CO, A STOCK COMPANY  
SFM MUTUAL INS CO  
SILVER OAK CASUALTY INC  
SIRIUSPOINT 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  
STONETRUST PREMIER CASUALTY INSURANCE CO  
STONEWOOD INSURANCE CO  
STONINGTON INS CO  
SUMMITPOINT INSURANCE COMPANY  
SUNZ INSURANCE COMPANY  
SUTTON NATIONAL INSURANCE COMPANY  
SWISS RE CORPORATE SOLUTIONS AMERICA INS CORP



## MISSOURI

### Advisory Loss Costs and Rating Values Filing – January 1, 2024

#### NCCI Affiliate List

SWISS RE CORPORATE SOLUTIONS ELITE INS CORP  
SWISS RE CORPORATE SOLUTIONS PREMIER INS CORP  
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  
TRIUMPHE CASUALTY COMPANY  
TRUCK INSURANCE EXCHANGE  
TRUMBULL INS CO  
TWIN CITY FIRE INS CO  
UNION INS CO OF PROVIDENCE  
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  
WAUSAU BUSINESS INSURANCE COMPANY  
WAUSAU UNDERWRITERS INSURANCE COMPANY  
WCF NATIONAL INSURANCE COMPANY  
WCF SELECT 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 CHAMPION INSURANCE COMPANY  
WESTFIELD INS CO  
WESTFIELD NATIONAL INS CO  
WESTFIELD PREMIER INSURANCE COMPANY  
WESTFIELD SUPERIOR INSURANCE COMPANY  
WESTFIELD TOUCHSTONE INSURANCE COMPANY  
WESTPORT INSURANCE CORPORATION  
WILLIAMSBURG NATIONAL INS CO  
WORK FIRST CASUALTY CO  
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, 2024

#### Key Contacts

Carla Townsend, WCP  
Senior 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

Brian Stein, ACAS, MAAA  
Assistant Actuary  
Actuarial and Economic Services Division  
National Council on Compensation Insurance, Inc. (NCCI)  
901 Peninsula Corporate Circle  
Boca Raton, Florida 33487-1362  
Phone (561) 893-3074

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

First Name\_Last Name@NCCI.com

**State:** Missouri  
**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, 2024  
**Project Name/Number:** /

**Filing Company:** NCCI Inc

## Supporting Document Schedules

<b>Bypassed - Item:</b>	Actuarial Justification
<b>Bypass Reason:</b>	N/A
<b>Attachment(s):</b>	
<b>Item Status:</b>	REVIEWED
<b>Status Date:</b>	11/29/2023

<b>Bypassed - Item:</b>	Electronic Rate Submission
<b>Bypass Reason:</b>	N/A
<b>Attachment(s):</b>	
<b>Item Status:</b>	REVIEWED
<b>Status Date:</b>	11/29/2023

<b>Bypassed - Item:</b>	Exhibits A & B (20 CSR 500-6.950)(2)
<b>Bypass Reason:</b>	N/A
<b>Attachment(s):</b>	
<b>Item Status:</b>	REVIEWED
<b>Status Date:</b>	11/29/2023

<b>Satisfied - Item:</b>	Filing Memorandum
<b>Comments:</b>	
<b>Attachment(s):</b>	MO 1-1-2024 Filing Cover Letter.pdf
<b>Item Status:</b>	REVIEWED
<b>Status Date:</b>	11/29/2023

<b>Satisfied - Item:</b>	Filing Narrative
<b>Comments:</b>	
<b>Attachment(s):</b>	MO 1-1-2024 Rate Filing Narrative.pdf
<b>Item Status:</b>	REVIEWED
<b>Status Date:</b>	11/29/2023

<b>Satisfied - Item:</b>	Interrogatory Response
<b>Comments:</b>	
<b>Attachment(s):</b>	NCCI_Responses_to_Missouri_DCI_Requests_dated_101023.pdf NCCI_Responses_to_Missouri_DCI_Requests_dated_101023_Attachments.zip
<b>Item Status:</b>	REVIEWED

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, 2024  
Project Name/Number: /

Status Date:	11/29/2023
Satisfied - Item:	Interrogatory Response 10/27/2023
Comments:	
Attachment(s):	NCCI_Responses_to_the_Missouri_DCI_Requests_dated_102323.pdf NCCI_Responses_to_Missouri_DCI_Requests_dated_102323_Attachments.zip
Item Status:	REVIEWED
Status Date:	11/29/2023

SERFF Tracking #:

NCCI-133792650

State Tracking #:

137

Company Tracking #:

MISSOURI LC 01012024

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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, 2024

Project Name/Number:

/

***Attachment NCCI\_Responses\_to\_Missouri\_DCI\_Requests\_dated\_101023\_Attachments.zip is not a PDF document and cannot be reproduced here.***

***Attachment NCCI\_Responses\_to\_Missouri\_DCI\_Requests\_dated\_102323\_Attachments.zip is not a PDF document and cannot be reproduced here.***



**Carla Townsend, WCP**  
Regulatory Division  
(P) 561-893-3819  
Email: Carla\_Townsend@ncci.com

August 24, 2023

The Honorable Chlora Lindley-Myers  
Director  
Missouri Department of Commerce and Insurance  
Harry S Truman State Office Building  
301 W. High St., Room 530  
Jefferson City, Missouri 65101

**Re: Missouri Advisory Loss Costs and Rating Values Filing Proposed Effective January 1, 2024**

Dear Director Lindley-Myers:

In accordance with the applicable statutes and regulations of the state of Missouri, we are filing advisory voluntary loss costs and rating values to be effective January 1, 2024, for new and renewal policies.

Enclosed are NCCI's Voluntary Loss Costs Including Trend proposed to be effective January 1, 2024. The proposed loss costs represent an overall average change of -7.5% from the current, similar set of loss costs that have been in effect since January 1, 2023.

Reported COVID-19-related claims have been excluded from the data on which this filing is based to better reflect the conditions likely to prevail during the proposed effective period.

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. I hereby certify that I am familiar with Missouri's insurance laws, rules, and regulations, and to the best of my knowledge, information, and belief, this filing complies in all respects to such laws, rules, and regulations.

In the enclosed appendix is a list of companies that, 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 if you have any questions or need further information.

Sincerely,

A handwritten signature in black ink that reads "Carla Townsend". The signature is written in a cursive, flowing style.

Carla Townsend, WCP  
Senior State Relations Executive



## Summary of the Proposed Missouri Workers Compensation Loss Cost Filing Effective January 1, 2024

The National Council on Compensation Insurance (NCCI)<sup>1</sup> is pleased to provide this summary of the accompanying proposed workers compensation insurance loss cost<sup>2</sup> filing that was filed under separate cover on August 24, 2023, with the Missouri Department of Commerce and Insurance for its review.

The filing recommends a –7.5% loss cost decrease in the voluntary market effective January 1, 2024. Due to the catastrophic nature of the COVID-19 pandemic, all reported COVID-19 claims were excluded from ratemaking in this filing.

### Missouri Overview

The proposed filing is based on premium and loss experience as of year-end 2022 from Policy Years 2020 and 2021 and shows improved experience relative to the data underlying the filing effective January 1, 2023. In particular, the experience observed in Policy Year 2021 shows improvement relative to prior policy years.

The recommended loss cost decrease is primarily driven by a decline in the average indemnity and medical costs per lost-time claim. While the measure of Missouri's lost-time claims relative to premium has remained mostly unchanged in the latest two policy years, the long-term pattern of decline in both indemnity and medical loss ratios is expected to continue. Accordingly, lower trend factors were applied in this filing. The proposed loss cost level change also includes an update to the loss-based expense component.

### Countrywide Overview


The performance of the workers compensation system remains healthy. Lost-time claims relative to premium have returned to their 20-year trend trajectory, declining 4% in the past year. Employment and wage growth marked a return to pre-pandemic levels. Recent wage increases are outpacing average claim costs along with continued nationwide declines in total claims. Payroll, as the exposure base, is inflation-sensitive, so as wages rise, premiums automatically increase along with the cost of associated workers compensation benefits. Consequently, wages, premiums, and indemnity benefits typically stay in balance.

On a nationwide basis, there was a notable rise in claim costs for 2022, with medical claim costs increasing about 5% and indemnity claim costs rising about 6% year over year. Over the pandemic period of 2019–2022, the average medical lost-time claim cost increased by about 3% and the average indemnity for lost-time claim costs increased by about 8%, reflecting average annual increases of 1% and just over 2%, respectively.

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<sup>1</sup> NCCI is a licensed advisory organization authorized to make recommended loss cost filings on behalf of workers compensation insurance companies in Missouri. NCCI's filings are objectively prepared, utilizing widely accepted actuarial ratemaking methodologies.

<sup>2</sup> "Loss cost" refers to the portion of workers compensation rates that are filed by the advisory organization and are allocated to pay losses but not carrier expenses. Some states include certain carrier expenses and assessments in the definition of "advisory loss costs." Carriers can use the approved loss costs as the basis for their rates, typically adjusting them for expenses with a loss cost multiplier.



Medical inflation is predicted to increase at a rate of about 3% per year compared with the long-term average of around 1.5%. Medical inflation continues to remain below the inflation rate of the Consumer Price Index.

### **COVID-19**

Earlier this year, NCCI filed Item E-1410, which proposed changes to the treatment of COVID-19 claims in experience rating. This filing was approved in Missouri. NCCI will be treating the pandemic and its resulting data, between accident dates of December 1, 2019, and June 30, 2023, as a catastrophic event. The claims that occurred during this period are not expected to be a reliable predictor of future years; therefore, all reported COVID-19 claims were excluded from ratemaking in this filing. Beginning July 1, 2023, new COVID-19 claims with accident dates after July 1 will be included in experience rating and will be reflected in ratemaking in subsequent years; however, COVID-19 claims before that date will continue to be excluded from experience rating and ratemaking.

### **Conclusion**

The workers compensation system continues to be healthy. Countrywide lost-time claims, relative to premium, declined 4% in the past year. Private carrier plus state fund net written premium increased about 10% to \$47.5 billion in 2022, just above the 2019 level. Private carriers posted a calendar year combined ratio of 84% (below 100% indicates underwriting profitability). This was the sixth consecutive year that the private workers compensation insurance market posted a combined ratio below 90% and the ninth consecutive year of underwriting profitability. Industry reserves are robust.



NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

MISSOURI  
ADVISORY LOSS COSTS AND RATING VALUES FILING  
EFFECTIVE JANUARY 1, 2024

RESPONSES TO THE DEPARTMENT OF COMMERCE AND INSURANCE'S  
REQUESTS DATED OCTOBER 10, 2023

- 1. Have there been any changes in the underlying data source (e.g., from which call data is pulled) from the prior filing to the current filing? If so, please explain the reason for such a change and the estimated impact of such change(s) on the filed indication.**

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

- 2. Please provide the overall impact of each methodology change from the prior filing.**

There have not been any changes in methodology between this and last year's filings.

- 3. Were the adjustments to the 2020 and 2021 AWW values to exclude the estimated impact of pandemic-related, industry-sector mix changes calculated in the same manner as the comparable adjustments reflected in the prior filing?**

The adjustments to the 2020 and 2021 AWW values to exclude the estimated impact of pandemic-related, industry-sector mix changes were calculated in the same manner as the comparable adjustments reflected in the prior filing, with the only difference being that in this filing the 2021 AWW fully reflects actual data (rather than being a partial estimate).

- 4. For total experience (voluntary plus ARM as reflected in the filed indication), please provide extended triangles which present at least 10 diagonals of loss data for each of indemnity loss and medical loss (i.e., policy year paid and paid plus case reserve loss development from a 1st through a 19th report for indemnity vs. medical).**

Please see the attached Exhibit 4 for the requested information.





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**5. Did you consider any basis for selecting loss development factors other than those shown in the filing?**

The paid and paid plus case loss development methods were the only ones considered during this year's filing analysis. The loss link ratio averages utilized in this year's filing have not changed from those used in last year's filing. Using a relatively shorter two-year average of paid link ratios is responsive to recent changes in the observed Missouri payment patterns. A longer five-year average of paid plus case link ratios was utilized to stabilize the relatively higher degree of volatility that may be present in those factors due to case reserve adjustments over time.

**6. Related to the patterns, or shifts of experience in loss development, please provide the following:**

- **ratios of policy year paid to paid plus case data at all available evaluations for indemnity vs. medical, for as many years as possible**
- **case reserves per open lost-time claim for each of indemnity and medical loss by policy year**
- **closed and reported lost-time claims by policy year, as well as ratios of closed-to-reported claim counts**

Please see the attached Exhibit 6 for the requested information that was available. Note that the triangles of case reserves per open lost-time claim have been on-leveled to bring all years to the present benefit level.

**7. Please provide the supporting calculations underlying Appendix A-II, Section G, Columns (6) and (13).**

Please see the attached Exhibit 7 for the requested information. The calculations are provided for all ten valuations separately for indemnity and medical.



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**8. Please supply payroll by class so that we may complete the tables required for our report.**

Please see the attached Exhibit 8 for the requested information. The payroll reflects the most recent policy period used in this year's filing.

**9. Please supply the derivation of the factor of 0.768 used to adjust the 19th to ultimate LDF to a limited basis as presented in Appendix A-II of the technical supplement.**

Please see the attached Exhibit 9 for the requested information.

Note: The question asks to provide the backup for a 19<sup>th</sup> to ultimate LDF limiting factor of 0.768. The value cited in the question looks to be last year's value. The value in this year's filing is 0.730. The attachment response for this question provides backup for the 0.730 value.

**10. Related to Section A of Exhibit II:**

- a. **Please provide the underlying data and calculations which led to the ultimate AOE ratios.**
- b. **Please provide the ultimate AOE ratios for Missouri-only data.**
- c. **Have you maintained the prior approach to selecting an AOE ratio which considers both countrywide data and data for Missouri Employers Mutual (MEM)? If so, please provide the AOE provision for the MEM, as well as the calculation of the weightings applied to each indicated provision to derive the selected Missouri AOE provision.**

- a. Please see the attached Exhibit 10a for the requested information.
- b. Unlike with DCCE, NCCI does not have the data required to calculate a Missouri-only AOE ratio. The data source for NCCI's AOE analysis, Financial Call #19, is reported to NCCI on a countrywide basis. Therefore, state-specific AOE data is not available. A "Missouri-only" AOE ratio can only be calculated for MEM because the carrier does not currently write business in any other states.



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- c. The approach to calculating the Missouri AOE provision remains the same as that of the previous year's filing. The Missouri AOE provision is based on a weighted average of the countrywide private carrier AOE provision and the indicated provision for Missouri Employers Mutual. Please see the attached Exhibit 10c for the indicated AOE provision for MEM and the calculation of the weightings applied to each provision to derive the calculated overall Missouri AOE provision.

**11. Related to Section B of Exhibit II:**

- a. **Please expand the presentation of ultimate DCCE ratios to include policy years 2012 through 2016.**
- b. **Please provide the underlying data and calculations which led to the values in Columns (2) and (3), including applicable development triangles which present at least 10 diagonals of paid DCCE to paid loss ratio development factors from a 1st through 19th report.**
  - a. Please see the attached Exhibit 11 (tab 11a)
  - b. Please see the attached Exhibit 11 (tabs 11b Part 1, 11b Part 2, and 11b Part 3)
    - i. The Part 1 tab provides the calculation of the age-to-ultimate factors used in the calculation of the DCCE provision.
    - ii. The Part 2 tab provides the calculation of the age-to-age factors used in the calculation of the DCCE provision.
    - iii. The Part 3 tab provides the age-to-age development factors for the latest 10 valuations from 1<sup>st</sup> through 19<sup>th</sup> report.

**12. What is the 1/1/24 indication if you exclude all assigned risk experience?**

All else equal, an overall average loss cost level indication of -8.8% results after excluding the assigned risk premium and loss experience reported to NCCI by Missouri's designated assigned risk plan administrator from the filing's experience period.



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**13. Please provide supporting work papers which reflect voluntary-only data and document the underlying components of the excluding-ARM indication, such as premium development, loss development, on-level factors, LAE and trend.**

Please see the attached Exhibit 13. The following are not available on a voluntary-only basis: premium development factors, loss development factors, on-level factors, LAE, and trend.

**14. For voluntary-only experience, please provide extended triangles which present 10 diagonals of loss data for each of indemnity loss and medical loss.**

Loss triangles on a voluntary-only basis are not available.

**15. Please provide the calculation of Column (7) of Appendix A-I, Section A and Section D.**

The premium used to calculate the statewide loss cost level indication is standard premium, which includes the impact of experience rating. The off-balance adjustment factor adjusts the premium in historical policy years to account for the difference between the observed off-balance for each of those years and the targeted off-balance.

The targeted off-balance factor (0.948) is a weighted average of the targeted intrastate experience rating modification factor (e-mod) and the current estimate of the average interstate e-mod, adjusted for risks that are not subject to experience rating. The targeted intrastate e-mod in this year's filing is 0.960, and the average interstate e-mod is 0.920. Using 50.9% as the intrastate percentage of experience rated risks, the combined weighted average e-mod factor is 0.940. The final targeted off-balance is calculated by multiplying 0.940 by the percentage of risks that are experience rated (86.6%) and then adding to that the percentage of risks not experience rated multiplied by unity. The calculation is as follows:

$$0.948 = 0.940 \times 0.866 + (1.000 - 0.866) \times 1.000$$



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The off-balance factor for each policy year is calculated in a similar manner, instead using the historical factors calculated from the experience rating values in place at that time. The table below summarizes the calculation for policy years 2020 and 2021.

	2020	2021
(1) Average intrastate e-mod	0.954	0.949
(2) Average interstate e-mod	0.926	0.918
(3) Intrastate %	52.8%	51.0%
(4) Combined average e-mod = (1)x(3)+(2)x[1-(3)]	0.941	0.934
(5) Rated %	87.2%	86.9%
(6) Off-Balance = (4)x(5)+[1-(5)]	0.949	0.943

The off-balance adjustment factor results from the ratio of the Targeted Off-Balance to the Off-Balance for the corresponding policy year.

	2020	2021
(1) Targeted Off-Balance	0.948	0.948
(2) Policy Year Off-Balance	0.949	0.943
(3) Off-Balance Adjustment Factor = (1)/(2)	0.999	1.005

**16. Please provide the underlying calculations of the likely-to-develop and non-likely-to-develop columns on Appendix B-I, Section A-I, #1.**

Please see the attached Exhibit 16 for the requested information.

**17. Please provide a file which shows the following information by class code: exposure, proposed loss cost change, loss cost change effective in each of 2023, 2022 and 2021.**

Please see the attached Exhibit 17 for the requested information. The exposure reflects the most recent policy period used in this year's filing.



NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

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RESPONSES TO THE DEPARTMENT OF COMMERCE AND INSURANCE'S  
REQUESTS DATED OCTOBER 23, 2023

- 1. Please provide the Missouri Employers Mutual (MEM) ultimate AOE ratios by accident year which led to the selected MEM provision of 12.5% found on Exhibit 10c of your response to interrogatory #10.**

Please see the attached Exhibit 1 for the requested information. In consideration of the observed volatility in the ultimate AOE ratios, the selected MEM provision of 12.5% is based on the five-year average of the values shown in column (3), excluding the highest and lowest.

- 2. Please provide the underlying calculations which support and lead to the selected 19-to-ultimate ratio of DCCE-to-loss development factor of 0.995 shown in Column (2) of Exhibit 11b of your response to interrogatory #11.**

Please see the attached Exhibit 2 for the available DCCE-to-loss development factors past 19th report. The italicized factors reflect years for which the reporting of DCCE is not mandatory. The selected 19-to-ultimate ratio of DCCE-to-loss development factor of 0.995 is intended to recognize that the observed development between 19th and 30th reports is generally slightly below unity. The selection is supported by the average observed cumulative 19<sup>th</sup>/30<sup>th</sup> development factor of 0.993.

- 3. Please provide the Supplemental Loss Development and Trend Information associated with the 1/1/24 filing which presents information for the latest 15 policy years.**

Please see the attached Exhibit 3 for the requested information.