



Connecticut

Voluntary Loss Costs, Assigned Risk Rates, and Rating Values Filing

Proposed Effective January 1, 2024

The “2024 Connecticut Workers Compensation Voluntary Loss Costs, Assigned Risk Rates” (“Filing”) is the copyrighted material of the National Council on Compensation Insurance, Inc. (“NCCI”). The NCCI Filing has been posted solely for the purpose of providing public comments to the Connecticut Department of Insurance. Accordingly, the NCCI Filing may not be used for any commercial purposes, including but not limited to redistribution, reposting, creating derivative works , or copying.



Justin Moulton, CPCU, WCP, ARC, AIAF, ARe
Senior State Relations Executive
Regulatory Division

(P) 561-893-3828
Email: Justin_Moulton@ncci.com

September 15, 2023

Andrew N. Mais
Insurance Commissioner
Connecticut Insurance Department
153 Market Street
Hartford, CT 06103

**Re: Connecticut Voluntary Loss Costs, Assigned Risk Rates, and Rating Values Filing—
Proposed Effective January 1, 2024**

Dear Commissioner Mais:

In accordance with applicable Connecticut statutes and regulations, we are filing for your consideration and approval voluntary loss costs, assigned risk rates, and rating values to become effective January 1, 2024 for new and renewal policies.

This filing proposes an overall average decrease of 9.8% to the current voluntary loss cost level and an average decrease of 10.5% to the current assigned risk rate level. These changes are applicable to new and renewal business only.

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.

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

Please contact me if you have any questions or need further information.

Sincerely,

A handwritten signature in black ink that reads "Justin Moulton". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Justin Moulton, CPCU, WCP, ARC, AIAF, ARe
Senior State Relations Executive



© Copyright 2023 National Council on Compensation Insurance, Inc. All Rights Reserved.

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

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



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Actuarial Certification

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

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

A handwritten signature in black ink that reads "Robert J. Moss". The signature is written in a cursive, flowing style.

Robert Moss, ACAS, MAAA
Actuary I
Actuarial and Economic Services



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Disclosures

Purpose of the Report

The purpose of this report is to provide the proposed voluntary loss costs and assigned risk rates for workers compensation policies in Connecticut, proposed to be effective January 1, 2024.

The intended users of this report are:

- The Connecticut Insurance Department
- 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 Connecticut must file a loss cost multiplier to be applied to the approved prospective loss costs 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 prospective loss costs.

Employers unable to secure coverage in the voluntary market can apply for such coverage in the assigned risk market. The proposed assigned risk rates are intended to cover the indemnity and medical benefits provided under the system, the expenses associated with providing these benefits (loss adjustment expenses), and any other costs associated with providing workers compensation insurance (such as commissions, taxes, etc.).

NCCI utilizes widely accepted general ratemaking methodologies in the calculation of advisory loss costs, including (i) experience base determination, (ii) chain ladder development method, (iii) trending procedure, and (iv) 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.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Disclosures

Data Sources

Key Dates

Financial Data Valuation Date	December 31, 2022
Financial Call Data Cutoff Date	July 11, 2023
Unit Statistical Plan Data Cutoff Date	July 28, 2023
Filing Preparation Date	August 14, 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 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.

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



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Disclosures

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 and rates. 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	295	\$11,193,793
PY 2020	444	\$4,981,023
PY 2021	155	\$294,600
AY 2020	688	\$15,634,444
AY 2021	156	\$802,796
AY 2022	72	\$69,135

Excludes large deductible and expense-only claims.

Reported COVID-19-related losses would have represented less than a 1.2% share of the reported paid plus case losses in Connecticut'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.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Table of Contents

Part 1 Filing Overview

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

Part 2 Proposed Values

- Proposed Voluntary Loss Costs for Inclusion in the Basic Manual
- Proposed Assigned Risk Rates for Inclusion in the Residual Market Manual
- Proposed Values for Inclusion in the Experience Rating Plan Manual
- Proposed Values for Inclusion in the Retrospective Rating Plan Manual

Part 3 Supporting Exhibits

- Exhibit I – Determination of the Indicated Loss Cost Level Change
- Exhibit II – Workers Compensation Loss Adjustment Expense Provision
- Appendix A – Factors Underlying the Proposed Loss Cost Level Change
- Appendix B – Calculations Underlying the Loss Cost Change by Classification
- Appendix C – Memoranda for Laws and Assessments
- Appendix D – Determination of Assigned Risk Rates

Part 4 Additional Information

- Definitions
- NCCI Affiliate List
- Key Contacts



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Part 1 Filing Overview

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



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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 and assigned risk rate changes in Connecticut to become effective January 1, 2024.

Key Components

Impact of change in Experience and Development	-9.2%
Impact of change in Trend	-1.5%
Impact of change in Benefits	+0.6%
<u>Impact of change in Loss Adjustment Expense</u>	<u>+0.2%</u>
Proposed Change in Overall Voluntary Loss Cost Level*	-9.8%
<u>Assigned Risk Loss Cost Multiplier Change</u>	<u>-0.8%</u>
Proposed Change in Overall Assigned Risk Rate Level	-10.5%

*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 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.
 - To best reflect the conditions likely to prevail in the proposed effective period, this filing utilizes paid plus case data for estimating the ultimate indemnity losses, and a combination of both paid and paid plus case data for estimating the ultimate medical losses. This is consistent with previous filings in Connecticut.
 - Reported COVID-19-related claims have been excluded from the data on which this filing is based.
- Similar to the January 1, 2023 loss cost filing, the reported loss amounts are projected to an ultimate basis using a 3-year average for paid losses and a 5-year average for paid plus case losses. Refer to Appendix A-II for considerations underlying the development selections.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Executive Summary

Trend:

- Generally, the selected annual loss ratio trends in this year’s filing are primarily based on observed longer-term patterns. Refer to Appendix A-III for considerations underlying the trend selection.
 - Exponential fits were reviewed to support maintaining the currently approved indemnity loss ratio trend of -3.5% and a decrease from -5.0% to -6.0% for the medical loss ratio trend.
 - After adjusting to a common wage level, Connecticut lost-time claim frequency has generally been declining. Although Connecticut’s claim frequency increased in both Policy Years 2020 and 2021, frequency exhibited a cumulative decline of 5.0% over the pandemic period from Policy Years 2018 to 2021.
 - After adjusting to a common wage level, the indemnity and medical average cost per case figures have been declining, on average. Recent declines in severity more than offset recent increases in frequency.

Other Items of Note:

- The primary driver of the proposed change is improved experience.
- The benefit change reflects the impact of recent updates to the Connecticut medical fee schedule.
- This filing proposes a decrease to the assigned risk profit and contingency provision from 1.0% to 0.0%, which considers the notable shift in interest rates in recent years and is the main difference between the advisory loss cost change and the assigned risk rate level change.
- 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.

Proposed Changes in Voluntary Loss Cost Level by Industry Group:

<u>Industry Group</u>	<u>Average Change</u>	<u>Maximum Increase</u>	<u>Maximum Decrease</u>
Manufacturing	-11.0%	+9%	-31%
Contracting	-10.0%	+10%	-30%
Office and Clerical	-9.2%	+11%	-29%
Goods and Services	-11.0%	+9%	-31%
Miscellaneous	-6.3%	+14%	-26%



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Overview of Methodology

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

Aggregate Ratemaking

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

- The reported historical premium totals are projected to an ultimate basis and adjusted to the current pure premium level
- The excess loss portion of individual large claims are removed from reported aggregate losses, based on a Connecticut-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")
- Currently approved pure premium adjusted to the proposed level ("present on rate level")
- Countrywide experience adjusted to state conditions ("national")



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Overview of Methodology

Assigned Risk Rates

The proposed assigned risk rates are then determined for each job classification as the product of the classification's voluntary loss cost and a loss cost multiplier (LCM). The LCM incorporates the indicated assigned risk market expense need, changes to the assigned risk differential, and the proposed uncollectible premium provision.



CONNECTICUT

Voluntary Loss Costs and Assigned Risk Rate Filing – January 1, 2024

Summary of Selections

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

<u>Voluntary Loss Costs</u>	<u>Currently Approved January 1, 2023</u>	<u>Proposed Effective January 1, 2024</u>
Experience Period	Policy Years 2019 and 2020	Policy Years 2020 and 2021
Premium Development	3-yr avg*	3-yr avg
Loss Experience Base	Indemnity: Paid + Case Medical: Avg Paid and P+C	Indemnity: Paid+Case Medical: Avg Paid and P+C
Loss Development - Paid	Indemnity: N/A Medical: 3-yr avg	Indemnity: N/A Medical: 3-yr avg
Loss Development - Paid+Case	Indemnity: 5-yr avg Medical: 5-yr avg	Indemnity: 5-yr avg Medical: 5-yr avg
Tail Factor – Indemnity	1.065	1.065
Tail Factor – Medical	1.035	1.025
Trend Factor – Indemnity Loss Ratio	0.965	0.965
Trend Factor – Medical Loss Ratio	0.950	0.940
Base Threshold for Limiting Losses	\$7,003,029	\$6,049,163
Excess Ratio	2.4%	3.0%
Loss-based Expense Provision	20.1%	20.4%
Classification Swing Limits (applied by Industry Group)	+/-20%	+/-20%

<u>Assigned Risk Rates</u>	<u>Currently Approved January 1, 2023</u>	<u>Proposed Effective January 1, 2024</u>
Assigned Risk Differential	1.491	1.500
Permissible Loss Ratio (PLR)	0.715	0.724
Uncollectible Premium Provision (UPP)	4.0%	4.0%
Servicing Carrier Allowance (SCA)	19.4%	19.1%
Profit and Contingencies Provision (P&C)	1.0%	0.0%
Maximum Minimum Premium	\$1,500	\$1,500
Minimum Premium Multiplier	320	320
Expense Constant	\$160	\$160

* A selection was made for the 1st/2nd premium development factor.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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 95th 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 Connecticut costs. In accordance with this change, the split point in this filing is being increased from \$18,500 to \$20,000. Since D-ratios are a measure of the expected proportion of losses below the split point, the average D-ratio in Connecticut has accordingly increased.

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

Occupational Disease Provisions

NCCI recently completed a comprehensive review of Occupational Diseases (OD), excluding coal worker’s 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.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Additional Proposed Changes

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/rate 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.

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.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Part 2 Proposed Values

- Proposed Voluntary Loss Costs for Inclusion in the Basic Manual
- Proposed Assigned Risk Rates for Inclusion in the Residual Market 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:

- 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.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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 and minimum weekly payroll applicable for select class codes
 - Premium determination for Partners and Sole Proprietors
 - United States Longshore and Harbor Workers' Compensation Coverage Percentage

CONNECTICUT

ADVISORY LOSS COSTS - NOT RATES

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

Page S2

Original Printing

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
7309F	5.00	8031	1.57	8742	0.18	9179	9.58						
7313F	2.02	8032	1.42	8745	2.64	9180	3.71						
7317F	3.46	8033	1.46	8748	0.37	9182	1.89						
7327F	9.32	8037	1.48	8754	0.57	9186	8.81						
7333M	1.81	8039	1.21	8755	0.23	9220	3.45						
7335M	2.01	8044	2.30	8799	0.33	9402	2.87						
7337M	2.77	8045	0.72	8800	1.14	9403	6.26						
7350F	5.04	8046	2.12	8803	0.04	9410	2.76						
7360	3.22	8047	0.69	8805M	0.09	9501	2.46						
7370	3.58	8058	1.72	8810	0.07	9505	2.51						
7380	5.75	8072	0.52	8814M	0.09	9516	2.04						
7382	2.60	8102	1.51	8815M	0.13	9519	2.91						
7390	9.95	8103	2.73	8820	0.10	9521	2.41						
7394M	2.73	8106	3.29	8824	2.11	9522	1.65						
7395M	3.03	8107	2.36	8825	-	9534	3.58						
7398M	4.18	8111	1.85	8826	1.51	9554	5.33						
7402	0.08	8116	2.17	8829	-	9586	0.39						
7403	2.28	8203	5.38	8831	0.76	9600	1.88						
7405N	0.90	8204	3.33	8832	0.28	9620	1.04						
7420	4.69	8209	2.81	8833	0.60								
7421	0.46	8215	2.88	8835	1.37								
7422	0.89	8227	3.47	8842	1.89								
7425	1.38	8232	4.11	8855	0.09								
7431N	0.60	8233	2.79	8856	0.29								
7445N	0.48	8235	3.24	8864	1.31								
7453N	0.32	8263	4.55	8868	0.25								
7502	1.30	8264	4.08	8869	0.59								
7515	0.91	8265	4.52	8871	0.04								
7520	1.68	8279	4.30	8901	0.11								
7538	1.97	8288	5.96	9012	0.67								
7539	1.00	8291	3.20	9014	2.03								
7540	2.16	8292	2.86	9015	2.18								
7580	1.97	8293	6.87	9016	1.51								
7590	3.44	8304	4.39	9019	2.11								
7600	4.48	8350	6.05	9033	2.49								
7605	1.83	8380	1.83	9040	2.45								
7607	0.08	8381	1.27	9044	0.97								
7610	0.22	8385	2.21	9052	1.54								
7705	3.33	8392	1.53	9058	1.07								
7710	3.33	8393	1.66	9060	0.95								
7711	21.13	8500	4.41	9061	0.88								
7720	2.35	8601	0.19	9063	0.55								
7723	1.15	8602	0.92	9077F	3.65								
7731*	2.41	8603	0.06	9082	0.71								
7855	2.57	8606	1.24	9083	0.72								
8001	1.53	8709F	4.84	9084	0.97								
8002	1.33	8719	2.20	9088a	a								
8006	1.58	8720	0.91	9089	0.64								
8008	0.70	8721	0.18	9093	0.95								
8010	1.27	8723	0.06	9101	2.49								
8013	0.27	8725	1.61	9102	2.05								
8015	0.61	8726F	1.10	9154	1.06								
8017	1.18	8734M	0.24	9156	1.31								
8018	2.80	8737M	0.22	9170	9.67								
8021	2.08	8738M	0.34	9178	3.75								

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.

Effective January 1, 2024

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.
- 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.
- 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**

- 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 class 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 and elr each x 1.863.
- 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.
- 7731 Loss cost per Service Response.

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 claim basis. They do not include a safety factor.

Deductible Amount	Total Losses						
	HAZARD GROUP						
	A	B	C	D	E	F	G
\$1,000	6.9%	5.3%	4.1%	3.6%	2.6%	2.1%	1.7%
\$5,000	17.3%	14.4%	11.9%	10.5%	8.3%	6.8%	5.9%
\$10,000	24.7%	21.3%	18.0%	16.2%	13.2%	11.1%	9.5%

Basis of premium applicable in accordance with the Basic Manual notes for Code 7370 --"Taxicab Co.":	
Employee operated vehicle.....	\$122,900
Leased or rented vehicle.....	\$81,900
Catastrophe (other than Certified Acts of Terrorism) - (Advisory Loss Cost).....	0.01
Maximum Weekly Payroll applicable in accordance with the Basic Manual rule, Rule for premium determination of executive officers and the Basic Manual notes for Code 9178 -- "Athletic Sports or Park: Noncontact Sports," and Code 9179 -- "Athletic Sports or Park: Contact Sports".....	\$1,600
Maximum Weekly Payroll applicable in accordance with the Basic Manual rules, Rule for premium determination of executive officers and Rule for premium determination of members of LLCs.....	\$3,200
Minimum Weekly Payroll applicable in accordance with the Basic Manual rules, Rule for premium determination of executive officers and Rule for premium determination of members of LLCs.....	\$1,600
Premium Determination for Partners and Sole Proprietors in accordance with the Basic Manual rule, Rule for premium determination for partners or sole proprietors (Annual Payroll).....	\$81,900
Terrorism - (Advisory Loss Cost)	0.025
United States Longshore and Harbor Workers' Compensation Coverage Percentage applicable only in connection with the Basic Manual rule, Federal coverages.....	50%
(Multiply a Non-F classification loss cost by a factor of 1.50 to adjust for the difference in state and federal benefits only.)	
Workers Compensation Administration Funds Assessment factors applicable in accordance with the Basic Manual rule, Rule for applying the Connecticut Workers Compensation Administration Fund Assessment factors	
Industrial Classifications and Maritime/FELA (Program I and Program II State Act).....	2.3%
F Classifications and Maritime/FELA (Program II USL Act).....	3.0%

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.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Proposed Assigned Risk Rates for Inclusion in the Residual Market Manual

The following pages include proposed:

- Assigned risk rates and minimum premiums by class code, along with associated footnotes
- Miscellaneous values, such as:
 - Catastrophe and Terrorism provisions
 - Expense Constant and Minimum Premium parameters
 - Maximum and minimum weekly payroll applicable for select class codes
 - Premium determination for Partners and Sole Proprietors
 - United States Longshore and Harbor Workers' Compensation Coverage Percentage

WORKERS COMPENSATION AND EMPLOYERS LIABILITY

CONNECTICUT

Page S1

Original Printing

Effective January 1, 2024

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM
0005	3.40	1248	2081	5.35	1500	2797	4.55	1500	3334	4.01	1443	4131	6.53	1500
0008	3.31	1219	2089	4.19	1500	2799	7.98	1500	3336	4.24	1500	4133	3.53	1290
0016	5.76	1500	2095	5.55	1500	2802	6.95	1500	3365	7.85	1500	4149	1.11	515
0034	4.85	1500	2105	5.71	1500	2835	4.69	1500	3372	4.60	1500	4206	5.76	1500
0035	2.79	1053	2110	5.55	1500	2836	4.53	1500	3373	6.43	1500	4207	3.11	1155
0036	5.12	1500	2111	3.31	1219	2841	5.07	1500	3383	2.08	826	4239	2.99	1117
0037	5.28	1500	2112	5.66	1500	2881	3.94	1421	3385	2.88	1082	4240	3.85	1392
0042	8.12	1500	2114	2.70	1024	2883	4.37	1500	3400	4.65	1500	4243	3.40	1248
0050	9.21	1500	2121	1.77	726	2915	4.03	1450	3507	3.94	1421	4244	3.85	1392
0059D	-	-	2130	2.88	1082	2916	4.08	1466	3515	2.85	1072	4250	2.90	1088
0065D	-	-	2131	2.34	909	2923	2.70	1024	3548	2.06	819	4251	4.19	1500
0066D	-	-	2143	3.76	1363	2960	6.52	1500	3559	4.12	1478	4263	4.28	1500
0067D	-	-	2157	8.99	1500	3004	1.90	768	3574	2.69	1021	4273	3.47	1270
0079	3.31	1219	2172	2.43	938	3018	4.49	1500	3581	1.32	582	4279	4.46	1500
0083	6.89	1500	2174	3.90	1408	3022	5.35	1500	3612	2.81	1059	4283	2.61	995
0106	12.08	1500	2211	9.54	1500	3027	3.96	1427	3620	3.67	1334	4299	3.37	1238
0113	5.53	1500	2220	3.87	1398	3028	4.06	1459	3629	2.08	826	4304	6.82	1500
0170	5.53	1500	2286	-	-	3030	9.99	1500	3632	3.11	1155	4307	2.20	864
0251	5.10	1500	2288	5.69	1500	3040	6.78	1500	3634	2.72	1030	4351	1.59	669
0401	14.70	A	2302	2.74	1037	3041	5.76	1500	3635	2.04	813	4352	1.92	774
0771N	0.81	-	2305	3.60	1312	3042	6.21	1500	3638	2.45	944	4360	-	-
0908P	217.00	342	2361	2.69	1021	3064	4.49	1500	3642	1.83	746	4361	0.91	451
0913P	721.00	846	2362	3.56	1299	3076	4.65	1500	3643	2.38	922	4410	4.17	1494
0917	5.37	1500	2380	2.95	1104	3081D	6.73	1500	3647	3.63	1322	4420	5.08	1500
0918	1.40	650	2386	-	-	3082D	5.39	1500	3648	1.90	768	4431	1.70	704
1005	8.16	1500	2388	1.79	733	3085D	6.80	1500	3681	1.36	595	4432	2.08	826
1164D	4.42	1500	2402	3.44	1261	3110	5.98	1500	3685	1.45	624	4452	4.12	1478
1165D	3.65	1328	2413	3.03	1130	3111	2.56	979	3719	1.38	602	4459	4.08	1466
1320	2.36	915	2416	3.29	1213	3113	2.47	950	3724	5.86	1500	4470	3.44	1261
1322	12.34	1500	2417	1.95	784	3114	3.51	1283	3726	5.18	1500	4484	3.85	1392
1430	5.14	1500	2501	3.37	1238	3118	2.40	928	3803	3.47	1270	4493	3.63	1322
1438	5.67	1500	2503	2.11	835	3119	1.38	602	3807	2.95	1104	4511	0.57	342
1452	3.31	1219	2534	-	-	3120	-	-	3808	4.82	1500	4557	2.85	1072
1463	9.45	1500	2560	-	-	3122	2.47	950	3821	7.71	1500	4558	2.92	1094
1472	4.39	1500	2570	4.98	1500	3126	3.35	1232	3822	5.44	1500	4568	3.47	1270
1624D	3.81	1379	2585	5.69	1500	3131	2.43	938	3824	4.33	1500	4581	1.32	582
1642	4.03	1450	2586	4.28	1500	3132	4.01	1443	3826	1.34	589	4583	5.14	1500
1654	6.09	1500	2587	3.65	1328	3145	3.06	1139	3827	2.69	1021	4611	1.29	573
1699	3.90	1408	2589	2.54	973	3146	4.31	1500	3830	2.36	915	4635	3.94	1421
1701	4.33	1500	2600	6.89	1500	3169	4.28	1500	3851	2.69	1021	4653	2.47	950
1710	4.33	1500	2623	7.59	1500	3179	3.13	1162	3865	4.48	1500	4665	10.65	1500
1747	5.35	1500	2651	1.84	749	3180	3.26	1203	3881	5.16	1500	4670	-	-
1748	6.28	1500	2660	3.11	1155	3188	2.60	992	4000	6.82	1500	4683	4.71	1500
1803D	9.43	1500	2670	-	-	3220	3.06	1139	4021	5.60	1500	4686	3.17	1174
1924	3.88	1402	2683	-	-	3224	5.03	1500	4024D	5.92	1500	4692	0.97	470
1925	4.17	1494	2688	2.31	899	3227	3.85	1392	4034	8.25	1500	4693	1.16	531
2002	5.10	1500	2701	15.25	1500	3240	-	-	4036	3.53	1290	4703	2.26	883
2003	5.58	1500	2702	25.31	1500	3241	4.51	1500	4038	3.58	1306	4717	2.99	1117
2014	9.99	1500	2709	11.47	1500	3255	3.49	1277	4062	3.31	1219	4720	2.47	950
2016	5.48	1500	2710	9.68	1500	3257	3.04	1133	4101	3.22	1190	4740	1.20	544
2021	4.80	1500	2714	6.14	1500	3270	2.81	1059	4109	0.66	371	4741	3.97	1430
2039	4.56	1500	2731	5.60	1500	3300	6.62	1500	4110	1.29	573	4751	3.56	1299
2041	5.16	1500	2735	5.71	1500	3303	4.15	1488	4111	3.71	1347	4771N	4.56	1500
2065	3.56	1299	2759	6.52	1500	3307	3.40	1248	4114	3.72	1350	4777	9.93	1500
2070	6.53	1500	2790	2.56	979	3315	5.39	1500	4130	5.24	1500	4825	0.95	464

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.

Effective January 1, 2024

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM
4828	2.13	842	6204	11.25	1500	7309F	8.95	1500	8031	2.81	1059	8742	0.32	262
4829	1.54	653	6206	3.88	1402	7313F	3.62	1318	8032	2.54	973	8745	4.73	1500
4902	3.01	1123	6213	3.15	1168	7317F	6.19	1500	8033	2.61	995	8748	0.66	371
4923	1.90	768	6214	2.42	934	7327F	16.68	1500	8037	2.65	1008	8754	1.02	486
5020	7.33	1500	6216	7.51	1500	7333M	3.24	1197	8039	2.17	854	8755	0.41	291
5022	11.38	1500	6217	5.09	1500	7335M	3.60	1312	8044	4.12	1478	8799	0.59	349
5037	9.84	1500	6229	5.76	1500	7337M	4.96	1500	8045	1.29	573	8800	2.04	813
5040	14.47	1500	6233	3.15	1168	7350F	9.02	1500	8046	3.79	1373	8803	0.07	182
5057	8.01	1500	6235	7.94	1500	7360	5.76	1500	8047	1.24	557	8805M	0.16	211
5059	20.00	1500	6236	8.51	1500	7370	6.41	1500	8058	3.08	1146	8810	0.13	202
5102	7.81	1500	6237	2.26	883	7380	10.29	1500	8072	0.93	458	8814M	0.16	211
5146	6.83	1500	6251D	6.13	1500	7382	4.65	1500	8102	2.70	1024	8815M	0.23	234
5160	3.56	1299	6252D	4.01	1443	7390	17.81	1500	8103	4.89	1500	8820	0.18	218
5183	4.85	1500	6306	6.88	1500	7394M	4.89	1500	8106	5.89	1500	8824	3.78	1370
5188	4.56	1500	6319	4.39	1500	7395M	5.42	1500	8107	4.22	1500	8825	-	-
5190	3.76	1363	6325	4.37	1500	7398M	7.48	1500	8111	3.31	1219	8826	2.70	1024
5191	1.34	589	6400	7.72	1500	7402	0.14	205	8116	3.88	1402	8829	-	-
5192	4.71	1500	6503	2.97	1110	7403	4.08	1466	8203	9.63	1500	8831	1.36	595
5213	11.56	1500	6504	3.92	1414	7405N	1.61	950	8204	5.96	1500	8832	0.50	320
5215	9.28	1500	6702M*	5.58	1500	7420	8.40	1500	8209	5.03	1500	8833	1.07	502
5221	6.94	1500	6703M*	8.57	1500	7421	0.82	422	8215	5.16	1500	8835	2.45	944
5222	9.93	1500	6704M*	6.21	1500	7422	1.59	669	8227	6.22	1500	8842	3.38	1242
5223	8.32	1500	6801F	6.55	1500	7425	2.47	950	8232	7.36	1500	8855	0.16	211
5348	6.76	1500	6811	6.18	1500	7431N	1.07	685	8233	4.99	1500	8856	0.52	326
5402	9.59	1500	6824F	9.40	1500	7445N	0.86	-	8235	5.80	1500	8864	2.34	909
5403	9.44	1500	6826F	4.37	1500	7453N	0.57	-	8263	8.14	1500	8868	0.45	304
5437	7.40	1500	6834	3.76	1363	7502	2.33	906	8264	7.30	1500	8869	1.06	499
5443	5.11	1500	6836	3.88	1402	7515	1.63	682	8265	8.09	1500	8871	0.07	182
5445	7.37	1500	6843F	8.90	1500	7520	3.01	1123	8279	7.70	1500	8901	0.20	224
5462	9.03	1500	6845F	4.78	1500	7538	3.53	1290	8288	10.67	1500	9012	1.20	544
5472	7.51	1500	6854	6.14	1500	7539	1.79	733	8291	5.73	1500	9014	3.63	1322
5473	11.86	1500	6872F	8.31	1500	7540	3.87	1398	8292	5.12	1500	9015	3.90	1408
5474	8.60	1500	6874F	12.01	1500	7580	3.53	1290	8293	12.30	1500	9016	2.70	1024
5478	5.88	1500	6882	4.42	1500	7590	6.16	1500	8304	7.86	1500	9019	3.78	1370
5479	13.01	1500	6884	5.96	1500	7600	8.02	1500	8350	10.83	1500	9033	4.46	1500
5480	8.75	1500	7016M	3.87	1398	7605	3.28	1210	8380	3.28	1210	9040	4.39	1500
5491	2.99	1117	7024M	4.30	1500	7607	0.14	205	8381	2.27	886	9044	1.74	717
5506	8.15	1500	7038M	6.21	1500	7610	0.39	285	8385	3.96	1427	9052	2.76	1043
5507	7.15	1500	7046M	6.55	1500	7705	5.96	1500	8392	2.74	1037	9058	1.92	774
5508	-	-	7047M	5.92	1500	7710	5.96	1500	8393	2.97	1110	9060	1.70	704
5509	8.05	1500	7050M	9.54	1500	7711	37.82	1500	8500	7.89	1500	9061	1.58	666
5535	8.83	1500	7090M	6.91	1500	7720	4.21	1500	8601	0.34	269	9063	0.98	474
5537	5.31	1500	7097	-	-	7723	2.06	819	8602	1.65	688	9077F	6.53	1500
5551	21.46	1500	7098M	7.29	1500	7731*	4.31	6750	8603	0.11	195	9082	1.27	566
5604	2.81	1059	7099M	10.06	1500	7855	4.60	1500	8606	2.22	870	9083	1.29	573
5606	1.59	669	7133	4.53	1500	8001	2.74	1037	8709F	8.66	1500	9084	1.74	717
5610	6.87	1500	7151M	5.50	1500	8002	2.38	922	8719	3.94	1421	9088a	a	a
5645	19.17	1500	7152M	8.43	1500	8006	2.83	1066	8720	1.63	682	9089	1.15	528
5703	14.56	1500	7153M	6.12	1500	8008	1.25	560	8721	0.32	262	9093	1.70	704
5705	28.46	1500	7219	10.13	1500	8010	2.27	886	8723	0.11	195	9101	4.46	1500
5951	0.63	362	7222	9.90	1500	8013	0.48	314	8725	2.88	1082	9102	3.67	1334
6003	11.32	1500	7225	10.42	1500	8015	1.09	509	8726F	1.97	790	9154	1.90	768
6005	9.55	1500	7230	9.72	1500	8017	2.11	835	8734M	0.43	298	9156	2.34	909
6018	4.10	1472	7231	12.58	1500	8018	5.01	1500	8737M	0.39	285	9170	17.31	1500
6045	7.80	1500	7232	11.29	1500	8021	3.72	1350	8738M	0.61	355	9178	6.71	1500

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.

WORKERS COMPENSATION AND EMPLOYERS LIABILITY

Effective January 1, 2024

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM	CLASS CODE	RATE	MIN PREM
9179	17.15	1500												
9180	6.64	1500												
9182	3.38	1242												
9186	15.77	1500												
9220	6.18	1500												
9402	5.14	1500												
9403	11.21	1500												
9410	4.94	1500												
9501	4.40	1500												
9505	4.49	1500												
9516	3.65	1328												
9519	5.21	1500												
9521	4.31	1500												
9522	2.95	1104												
9534	6.42	1500												
9554	9.53	1500												
9586	0.70	384												
9600	3.37	1238												
9620	1.86	755												

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.

Effective January 1, 2024

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

FOOTNOTES

- a Rate for each individual risk must be obtained by NCCI Customer Service or the Rating Organization having jurisdiction.
- A Minimum Premium \$100 per ginning location for policy minimum premium computation.
- D Rate 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 Rate provides for coverage under the United States Longshore and Harbor Workers Compensation Act and its extensions.
- M Risks are subject to Admiralty Law or Federal Employers Liability Act (FELA). However, the published rate is for risks that voluntarily purchase standard workers compensation and employers liability coverage. The listed codes of 6702, 6703, 6704, 7151, 7152, 7153, 8734, 8737, 8738, 8805, 8814, and 8815 under the Federal Employers' Liability Act (FELA) for employees of interstate railroads are not applicable in the residual market.
- N This code is part of a ratable / non-ratable group shown below. The statistical non-ratable code and corresponding rate 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**

- 6702 Rate 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 rate and elr each x 1.215.
- 6703 Rate 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 rate and elr each x 1.863.
- 6704 Rate 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 rate and elr each x 1.35.
- 7731 Rate per Service Response.

Effective January 1, 2024

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

MISCELLANEOUS VALUES

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

Employee operated vehicle.....	\$122,900
Leased or rented vehicle.....	\$81,900

Catastrophe (other than Certified Acts of Terrorism) - (Assigned Risk)..... 0.01

Expense Constant applicable for policies with the following classification in accordance with the **Basic Manual** rule:

Per Capita Codes Only.....	\$125
All Other.....	\$160

Loss Sensitive Rating Plan (LSRP) - The factors which are used in the calculation of the LSRP are as follows:

Basic Premium Factor	0.40	Loss Development Factors	
Minimum Premium Factor	0.75	1st Adjustment	0.29
Maximum Premium Factor	1.75	2nd Adjustment	0.19
Loss Conversion Factor	1.204	3rd Adjustment	0.14
Tax Multiplier	1.015	4th Adjustment	0.11

Maximum Minimum Premium..... \$1,500

Maximum Weekly Payroll applicable in accordance with the **Basic Manual** rule, Rule for premium determination of executive officers and the **Basic Manual** notes for Code 9178 -- "Athletic Sports or Park: Noncontact Sports," and Code 9179 -- "Athletic Sports or Park: Contact Sports"..... \$1,600

Maximum Weekly Payroll applicable in accordance with the **Basic Manual** rules, Rule for premium determination of executive officers and Rule for premium determination of members of LLCs..... \$3,200

Minimum Premium Multiplier..... 320

Minimum Weekly Payroll applicable in accordance with the **Basic Manual** rules, Rule for premium determination of executive officers and Rule for premium determination of members of LLCs..... \$1,600

Premium Determination for Partners and Sole Proprietors in accordance with the **Basic Manual** rule, Rule for premium determination for partners or sole proprietors (Annual Payroll)..... \$81,900

Premium Discount Percentages - (See the **Basic Manual** rule, Premium discount.) The following premium discounts are applicable to Standard Premiums:

First	\$10,000	-
Next	\$190,000	5.1%
Next	\$1,550,000	6.5%
Over	\$1,750,000	7.5%

Premium Reduction Percentages - The following percentages are applicable by deductible amount and hazard group for total losses on a per claim basis:

Deductible Amount	Total Losses						
	HAZARD GROUP						
	A	B	C	D	E	F	G
\$1,000	5.1%	3.9%	3.0%	2.7%	1.9%	1.5%	1.3%
\$5,000	12.8%	10.6%	8.8%	7.7%	6.1%	5.0%	4.3%
\$10,000	18.2%	15.7%	13.3%	11.9%	9.7%	8.2%	7.0%

Effective January 1, 2024

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

MISCELLANEOUS VALUES (cont.)

Terrorism (Assigned Risk).....	0.03
United States Longshore and Harbor Workers' Compensation Coverage Percentage applicable only in connection with the Basic Manual rule, Federal coverages.....	50%
(Multiply a Non-F classification rate by a factor of 1.50 to adjust for the difference in state and federal benefits only.)	
Workers Compensation Administration Funds Assessment factors applicable in accordance with the Basic Manual rule, Rule for applying the Connecticut Workers Compensation Administration Fund Assessment factors	
Industrial Classifications and Maritime/FELA (Program I and Program II State Act).....	2.3%
F Classifications and Maritime/FELA (Program II USL Act).....	3.0%

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.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Proposed Rating Values

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
9179	7.62	0.46												
9180	2.59	0.38												
9182	1.38	0.42												
9186	5.13	0.33												
9220	2.30	0.38												
9402	1.57	0.33												
9403	3.47	0.33												
9410	1.96	0.42												
9501	1.52	0.35												
9505	1.69	0.38												
9516	1.34	0.38												
9519	1.72	0.35												
9521	1.44	0.35												
9522	1.21	0.43												
9534	1.79	0.31												
9554	2.92	0.33												
9586	0.29	0.43												
9600	1.32	0.42												
9620	0.63	0.35												

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 -- 2,369	0.14	1,335,446 -- 1,402,617	0.49
2,370 -- 6,673	0.15	1,402,618 -- 1,473,404	0.50
6,674 -- 11,080	0.16	1,473,405 -- 1,548,103	0.51
11,081 -- 15,595	0.17	1,548,104 -- 1,627,050	0.52
15,596 -- 17,171	0.18	1,627,051 -- 1,710,619	0.53
17,172 -- 19,420	0.17	1,710,620 -- 1,799,227	0.54
19,421 -- 22,492	0.16	1,799,228 -- 1,893,346	0.55
22,493 -- 27,117	0.15	1,893,347 -- 1,993,508	0.56
27,118 -- 35,915	0.14	1,993,509 -- 2,100,313	0.57
35,916 -- 82,532	0.13	2,100,314 -- 2,214,446	0.58
82,533 -- 110,906	0.14	2,214,447 -- 2,336,688	0.59
110,907 -- 135,685	0.15	2,336,689 -- 2,467,938	0.60
135,686 -- 159,520	0.16	2,467,939 -- 2,609,229	0.61
159,521 -- 183,164	0.17	2,609,230 -- 2,761,758	0.62
183,165 -- 206,963	0.18	2,761,759 -- 2,926,923	0.63
206,964 -- 231,112	0.19	2,926,924 -- 3,106,364	0.64
231,113 -- 255,744	0.20	3,106,365 -- 3,302,015	0.65
255,745 -- 280,956	0.21	3,302,016 -- 3,516,178	0.66
280,957 -- 306,829	0.22	3,516,179 -- 3,751,609	0.67
306,830 -- 333,433	0.23	3,751,610 -- 4,011,645	0.68
333,434 -- 359,667	0.24	4,011,646 -- 4,300,355	0.69
359,668 -- 385,449	0.25	4,300,356 -- 4,622,762	0.70
385,450 -- 412,042	0.26	4,622,763 -- 4,985,129	0.71
412,043 -- 439,491	0.27	4,985,130 -- 5,395,377	0.72
439,492 -- 467,844	0.28	5,395,378 -- 5,863,669	0.73
467,845 -- 497,152	0.29	5,863,670 -- 6,403,263	0.74
497,153 -- 527,465	0.30	6,403,264 -- 7,031,787	0.75
527,466 -- 558,841	0.31	7,031,788 -- 7,773,199	0.76
558,842 -- 591,340	0.32	7,773,200 -- 8,660,917	0.77
591,341 -- 625,024	0.33	8,660,918 -- 9,742,988	0.78
625,025 -- 659,963	0.34	9,742,989 -- 11,091,088	0.79
659,964 -- 696,232	0.35	11,091,089 -- 12,817,075	0.80
696,233 -- 733,907	0.36	12,817,076 -- 15,105,738	0.81
733,908 -- 773,076	0.37	15,105,739 -- 18,285,816	0.82
773,077 -- 813,828	0.38	18,285,817 -- 23,004,068	0.83
813,829 -- 856,266	0.39	23,004,069 -- 30,732,498	0.84
856,267 -- 900,497	0.40	30,732,499 -- 45,701,154	0.85
900,498 -- 946,637	0.41	45,701,155 -- 87,049,648	0.86
946,638 -- 994,815	0.42	87,049,649 -- 741,627,895	0.87
994,816 -- 1,045,169	0.43	741,627,896 -- AND OVER	0.88
1,045,170 -- 1,097,851	0.44		
1,097,852 -- 1,153,029	0.45		
1,153,030 -- 1,210,883	0.46		
1,210,884 -- 1,271,615	0.47		
1,271,616 -- 1,335,445	0.48		

(a) G	10.95
(b) State Per Claim Accident Limitation	\$147,000
(c) State Multiple Claim Accident Limitation	\$294,000
(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	\$20,000
(h) USL&HW Act -- Expected Loss Factor -- Non-F Classes	1.50
<i>(Multiply a Non-F classification ELR by the USL&HW Act - Expected Loss Factor of 1.50.)</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 -- 395,108	50,370	3,711,011 -- 3,808,752	241,995	7,132,410 -- 7,230,169	433,620
395,109 -- 491,102	55,845	3,808,753 -- 3,906,496	247,470	7,230,170 -- 7,327,930	439,095
491,103 -- 587,663	61,320	3,906,497 -- 4,004,241	252,945	7,327,931 -- 7,425,692	444,570
587,664 -- 684,559	66,795	4,004,242 -- 4,101,987	258,420	7,425,693 -- 7,523,453	450,045
684,560 -- 781,668	72,270	4,101,988 -- 4,199,734	263,895	7,523,454 -- 7,621,215	455,520
781,669 -- 878,921	77,745	4,199,735 -- 4,297,482	269,370	7,621,216 -- 7,718,976	460,995
878,922 -- 976,276	83,220	4,297,483 -- 4,395,230	274,845	7,718,977 -- 7,816,738	466,470
976,277 -- 1,073,704	88,695	4,395,231 -- 4,492,980	280,320	7,816,739 -- 7,914,500	471,945
1,073,705 -- 1,171,189	94,170	4,492,981 -- 4,590,730	285,795	7,914,501 -- 8,012,262	477,420
1,171,190 -- 1,268,717	99,645	4,590,731 -- 4,688,482	291,270	8,012,263 -- 8,110,025	482,895
1,268,718 -- 1,366,279	105,120	4,688,483 -- 4,786,233	296,745	8,110,026 -- 8,207,787	488,370
1,366,280 -- 1,463,868	110,595	4,786,234 -- 4,883,986	302,220	8,207,788 -- 8,305,550	493,845
1,463,869 -- 1,561,480	116,070	4,883,987 -- 4,981,739	307,695	8,305,551 -- 8,403,312	499,320
1,561,481 -- 1,659,109	121,545	4,981,740 -- 5,079,492	313,170	8,403,313 -- 8,501,075	504,795
1,659,110 -- 1,756,754	127,020	5,079,493 -- 5,177,247	318,645	8,501,076 -- 8,598,838	510,270
1,756,755 -- 1,854,412	132,495	5,177,248 -- 5,275,001	324,120	8,598,839 -- 8,696,601	515,745
1,854,413 -- 1,952,081	137,970	5,275,002 -- 5,372,756	329,595	8,696,602 -- 8,794,364	521,220
1,952,082 -- 2,049,759	143,445	5,372,757 -- 5,470,512	335,070	8,794,365 -- 8,892,128	526,695
2,049,760 -- 2,147,446	148,920	5,470,513 -- 5,568,268	340,545	8,892,129 -- 8,989,891	532,170
2,147,447 -- 2,245,139	154,395	5,568,269 -- 5,666,024	346,020	8,989,892 -- 9,087,654	537,645
2,245,140 -- 2,342,839	159,870	5,666,025 -- 5,763,781	351,495	9,087,655 -- 9,185,418	543,120
2,342,840 -- 2,440,544	165,345	5,763,782 -- 5,861,538	356,970	9,185,419 -- 9,283,182	548,595
2,440,545 -- 2,538,254	170,820	5,861,539 -- 5,959,296	362,445	9,283,183 -- 9,380,945	554,070
2,538,255 -- 2,635,968	176,295	5,959,297 -- 6,057,054	367,920	9,380,946 -- 9,478,709	559,545
2,635,969 -- 2,733,686	181,770	6,057,055 -- 6,154,812	373,395	9,478,710 -- 9,576,473	565,020
2,733,687 -- 2,831,407	187,245	6,154,813 -- 6,252,571	378,870	9,576,474 -- 9,673,230	570,495
2,831,408 -- 2,929,132	192,720	6,252,572 -- 6,350,329	384,345		
2,929,133 -- 3,026,859	198,195	6,350,330 -- 6,448,088	389,820		
3,026,860 -- 3,124,589	203,670	6,448,089 -- 6,545,848	395,295		
3,124,590 -- 3,222,321	209,145	6,545,849 -- 6,643,607	400,770		
3,222,322 -- 3,320,055	214,620	6,643,608 -- 6,741,367	406,245		
3,320,056 -- 3,417,791	220,095	6,741,368 -- 6,839,127	411,720		
3,417,792 -- 3,515,529	225,570	6,839,128 -- 6,936,887	417,195		
3,515,530 -- 3,613,269	231,045	6,936,888 -- 7,034,648	422,670		
3,613,270 -- 3,711,010	236,520	7,034,649 -- 7,132,409	428,145		

For Expected Losses greater than \$9,673,230, the Ballast Value can be calculated using the following formula (rounded to the nearest 1):

$$\text{Ballast} = (0.056)(\text{Expected Losses}) + 2876.4(\text{Expected Losses})(10.95) / (\text{Expected Losses} + (600)(10.95))$$

G = 10.95

REFER TO UPDATE PAGE FOR ALL SUBSEQUENT REVISIONS.

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC

CONNECTICUT—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 (\$)
CT	<u>7/1/24 and after</u>	13,500	6,750
	<u>7/1/23 - 6/30/24</u>	13,500	6,750
	<u>7/1/22 - 6/30/23</u>	12,500	6,250

NOTE: This exhibit revises the Connecticut 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.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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
- Retrospective Pure Premium Development Factors

Effective January 1, 2024

1. Average Cost per Case by Hazard Group

A	B	C	D	E	F	G
9,812	13,098	17,838	21,174	30,106	37,633	48,155

Average Cost per Case including ALAE by Hazard Group

A	B	C	D	E	F	G
10,948	14,601	19,867	23,573	33,454	41,785	53,454

2.

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

Per Accident Limitation	Hazard Groups						
	A	B	C	D	E	F	G
\$10,000	0.628	0.657	0.684	0.699	0.724	0.741	0.754
\$15,000	0.582	0.613	0.644	0.661	0.691	0.712	0.728
\$20,000	0.544	0.576	0.611	0.630	0.663	0.687	0.706
\$25,000	0.512	0.545	0.582	0.602	0.639	0.665	0.686
\$30,000	0.484	0.518	0.557	0.578	0.617	0.645	0.668
\$35,000	0.461	0.495	0.534	0.556	0.597	0.627	0.652
\$40,000	0.439	0.474	0.514	0.537	0.579	0.610	0.636
\$50,000	0.404	0.438	0.480	0.502	0.547	0.580	0.609
\$75,000	0.340	0.373	0.415	0.438	0.486	0.521	0.553
\$100,000	0.295	0.327	0.369	0.392	0.442	0.477	0.510
\$125,000	0.262	0.293	0.334	0.356	0.407	0.442	0.476
\$150,000	0.236	0.266	0.306	0.328	0.379	0.414	0.448
\$175,000	0.215	0.244	0.284	0.305	0.355	0.390	0.424
\$200,000	0.198	0.226	0.264	0.285	0.335	0.370	0.403
\$225,000	0.183	0.210	0.248	0.268	0.318	0.352	0.385
\$250,000	0.171	0.197	0.234	0.253	0.303	0.336	0.369
\$275,000	0.160	0.185	0.221	0.240	0.289	0.322	0.355
\$300,000	0.150	0.175	0.210	0.228	0.277	0.310	0.342
\$325,000	0.142	0.166	0.200	0.218	0.266	0.298	0.330
\$350,000	0.134	0.158	0.191	0.208	0.256	0.288	0.319
\$375,000	0.127	0.150	0.183	0.200	0.247	0.278	0.309
\$400,000	0.121	0.143	0.176	0.192	0.239	0.270	0.300
\$425,000	0.116	0.137	0.169	0.185	0.232	0.262	0.291
\$450,000	0.111	0.132	0.163	0.178	0.224	0.254	0.283
\$475,000	0.106	0.127	0.157	0.172	0.218	0.247	0.276
\$500,000	0.102	0.122	0.152	0.167	0.212	0.241	0.269
\$600,000	0.088	0.106	0.134	0.148	0.191	0.218	0.245
\$700,000	0.077	0.095	0.121	0.133	0.175	0.200	0.225
\$800,000	0.069	0.085	0.110	0.121	0.161	0.186	0.209
\$900,000	0.062	0.078	0.101	0.112	0.150	0.173	0.196
\$1,000,000	0.057	0.071	0.093	0.103	0.140	0.163	0.184
\$2,000,000	0.031	0.040	0.055	0.062	0.089	0.105	0.119
\$3,000,000	0.021	0.028	0.040	0.045	0.067	0.080	0.091
\$4,000,000	0.016	0.022	0.032	0.035	0.054	0.065	0.074
\$5,000,000	0.013	0.018	0.026	0.029	0.045	0.055	0.062
\$6,000,000	0.010	0.015	0.022	0.025	0.039	0.047	0.054
\$7,000,000	0.009	0.012	0.019	0.021	0.034	0.041	0.047
\$8,000,000	0.007	0.011	0.016	0.018	0.030	0.036	0.042
\$9,000,000	0.006	0.009	0.014	0.016	0.026	0.032	0.038
\$10,000,000	0.006	0.008	0.013	0.014	0.023	0.029	0.034

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	0.707	0.738	0.767	0.783	0.809	0.828	0.841
\$15,000	0.658	0.691	0.725	0.743	0.775	0.797	0.814
\$20,000	0.617	0.652	0.690	0.710	0.745	0.771	0.791
\$25,000	0.583	0.619	0.659	0.680	0.719	0.747	0.770
\$30,000	0.553	0.590	0.632	0.654	0.696	0.726	0.751
\$35,000	0.527	0.564	0.607	0.631	0.674	0.706	0.733
\$40,000	0.504	0.542	0.585	0.609	0.655	0.688	0.716
\$50,000	0.465	0.503	0.548	0.572	0.621	0.655	0.687
\$75,000	0.394	0.430	0.476	0.502	0.554	0.591	0.626
\$100,000	0.344	0.380	0.426	0.451	0.505	0.543	0.579
\$125,000	0.308	0.342	0.387	0.412	0.466	0.505	0.542
\$150,000	0.279	0.312	0.356	0.380	0.435	0.474	0.511
\$175,000	0.255	0.287	0.331	0.354	0.409	0.447	0.484
\$200,000	0.236	0.267	0.309	0.332	0.387	0.425	0.462
\$225,000	0.219	0.249	0.291	0.313	0.367	0.405	0.441
\$250,000	0.205	0.234	0.275	0.296	0.350	0.387	0.424
\$275,000	0.192	0.221	0.261	0.282	0.335	0.372	0.408
\$300,000	0.181	0.209	0.248	0.268	0.322	0.358	0.393
\$325,000	0.172	0.198	0.237	0.257	0.310	0.345	0.380
\$350,000	0.163	0.189	0.227	0.246	0.299	0.334	0.368
\$375,000	0.155	0.181	0.217	0.236	0.288	0.323	0.357
\$400,000	0.148	0.173	0.209	0.228	0.279	0.313	0.346
\$425,000	0.141	0.166	0.201	0.219	0.270	0.304	0.337
\$450,000	0.135	0.159	0.194	0.212	0.262	0.296	0.328
\$475,000	0.130	0.153	0.188	0.205	0.255	0.288	0.320
\$500,000	0.125	0.148	0.182	0.199	0.248	0.280	0.312
\$600,000	0.108	0.129	0.161	0.177	0.224	0.255	0.285
\$700,000	0.096	0.115	0.145	0.159	0.205	0.234	0.263
\$800,000	0.085	0.104	0.132	0.146	0.190	0.218	0.244
\$900,000	0.077	0.095	0.122	0.134	0.177	0.203	0.229
\$1,000,000	0.071	0.087	0.113	0.124	0.166	0.191	0.216
\$2,000,000	0.038	0.049	0.066	0.074	0.105	0.123	0.141
\$3,000,000	0.025	0.034	0.048	0.053	0.078	0.093	0.106
\$4,000,000	0.019	0.026	0.037	0.042	0.063	0.075	0.086
\$5,000,000	0.015	0.021	0.030	0.034	0.052	0.063	0.072
\$6,000,000	0.012	0.017	0.025	0.029	0.045	0.054	0.062
\$7,000,000	0.010	0.014	0.022	0.025	0.039	0.047	0.055
\$8,000,000	0.009	0.012	0.019	0.021	0.034	0.042	0.048
\$9,000,000	0.007	0.011	0.017	0.019	0.030	0.037	0.043
\$10,000,000	0.007	0.009	0.015	0.017	0.027	0.034	0.039

3.

Retrospective Pure Premium Development Factors

With Loss Limit			Without Loss Limit			4th & Subsequent Adjustment
1st Adj.	2nd Adj.	3rd Adj.	1st Adj.	2nd Adj.	3rd Adj.	
0.09	0.06	0.05	0.33	0.22	0.16	0.00



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Part 3 Supporting Exhibits

- Exhibit I – Determination of the Indicated Loss Cost Level Change
- Exhibit II – Workers Compensation Loss Adjustment Expense Provision
- Appendix A – Factors Underlying the Proposed Loss Cost Level Change
- Appendix B – Calculations Underlying the Loss Cost Change by Classification
- Appendix C – Memoranda for Laws and Assessments
- Appendix D – Determination of Assigned Risk Rates



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Exhibit I – Determination of the Indicated Loss Cost Level Change

NCCI analyzed the emerging experience of Connecticut 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, the use of paid plus case data for estimating the ultimate indemnity losses, and a combination of both paid and paid plus case data for estimating the ultimate medical losses, were selected as most appropriate to best reflect the conditions likely to prevail in the proposed effective period. This is consistent with prior filings made in Connecticut.

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.

The policy year loss ratios are generally consistent in this time period even when comparing both the pre- and post- pandemic impacted years. The experience in the most recent policy year, Policy Year 2021, is generally consistent with Calendar-Accident Years 2021 and 2022, which indicates improving experience based on the most recent data.

<u>Policy Year</u>	<u>Loss Ratio</u>	<u>Calendar-Accident Year</u>	<u>Loss Ratio</u>
2017	0.989	2018	0.957
2018	0.918	2019	0.981
2019	0.944	2020	0.888
2020	0.934	2021	0.910
2021	0.866	2022	0.852

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



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Exhibit I – Determination of the Indicated Loss Cost Level Change

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 Connecticut loss ratio experience for Policy Years 2020 and 2021 show improvement compared to the recent history. While some of the improvement in experience can be attributed to the pandemic, the loss experience remains favorable in the most recent Policy Year 2021 and Calendar-Accident Year 2022 loss ratio projections, which are further removed from the peak of the pandemic. A reduction in volume of large loss activity is contributing to the improved experience observed in Policy Year 2021.

The Connecticut economy shows strong wage growth and consistent employment levels. Employment in the majority of the Bureau of Labor Statistics (BLS) “Supersector” industry groupings have either returned to or exceeded pre-pandemic employment levels (source: BLS CES) although the future economic outlook for the Connecticut labor market points to some challenges ahead. (Source: Moody’s Analytics).

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 reflected the conditions likely to prevail in the proposed effective period. This method is consistent with prior filings in Connecticut.

Determination of the Indicated Change

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

1. Standard earned premium at the Designated Statistical Reporting (DSR) level is developed to an ultimate basis, on-leveled to the current approved 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 an ultimate report, and adjusted (via on-level factors) to the current benefit level.
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 anticipated changes in the amount of indemnity and medical benefits as compared with anticipated changes in the amount of workers’ wages between (i) the years in filing’s experience period and (ii) the period during which the proposed loss costs will be in effect.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Exhibit I – Determination of the Indicated Loss Cost Level Change

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 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 adjustment expense is applied to determine the indicated overall average loss cost level change.

The detailed calculations can be found on the following pages.



CONNECTICUT

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)	\$485,390,545
(2) Premium On-level Factor (Appendix A-I)	0.672
(3) Pure Premium Available for Benefit Costs = (1) x (2)	\$326,182,446

Indemnity Benefit Cost:

(4) Limited Indemnity Losses Developed to Ultimate (Appendix A-II)	\$183,407,263
(5) Indemnity Loss On-level Factor (Appendix A-I)	1.000
(6) Adjusted Limited Indemnity Losses = (4) x (5)	\$183,407,263
(7) Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.562
(8) Factor to Reflect Indemnity Trend (Appendix A-III)	0.899
(9) Projected Limited Indemnity Cost Ratio = (7) x (8)	0.505
(10) Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis (Appendix A-II)	1.031
(11) Projected Indemnity Cost Ratio = (9) x (10)	0.521
(12) Factor to Reflect Proposed Changes in Indemnity Benefits (Appendix C)	1.000
(13) Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.521

Medical Benefit Cost:

(14) Limited Medical Losses Developed to Ultimate (Appendix A-II)	\$129,318,028
(15) Medical Loss On-level Factor (Appendix A-I)	1.001
(16) Adjusted Limited Medical Losses = (14) x (15)	\$129,447,346
(17) Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.397
(18) Factor to Reflect Medical Trend (Appendix A-III)	0.831
(19) Projected Limited Medical Cost Ratio = (17) x (18)	0.330
(20) Factor to Adjust Medical Cost Ratio to an Unlimited Basis (Appendix A-II)	1.031
(21) Projected Medical Cost Ratio = (19) x (20)	0.340
(22) Factor to Reflect Proposed Changes in Medical Benefits (Appendix C)	1.014
(23) Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.345

Total Benefit Cost:

(24) Indicated Change Based on Experience, Trend and Benefits = (13) + (23)	0.866
---	-------



CONNECTICUT

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)	\$447,254,176
(2) Premium On-level Factor (Appendix A-I)	0.661
(3) Pure Premium Available for Benefit Costs = (1) x (2)	\$295,635,010

Indemnity Benefit Cost:

(4) Limited Indemnity Losses Developed to Ultimate (Appendix A-II)	\$181,860,758
(5) Indemnity Loss On-level Factor (Appendix A-I)	1.000
(6) Adjusted Limited Indemnity Losses = (4) x (5)	\$181,860,758
(7) Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.615
(8) Factor to Reflect Indemnity Trend (Appendix A-III)	0.867
(9) Projected Limited Indemnity Cost Ratio = (7) x (8)	0.533
(10) Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis (Appendix A-II)	1.031
(11) Projected Indemnity Cost Ratio = (9) x (10)	0.550
(12) Factor to Reflect Proposed Changes in Indemnity Benefits (Appendix C)	1.000
(13) Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.550

Medical Benefit Cost:

(14) Limited Medical Losses Developed to Ultimate (Appendix A-II)	\$137,852,863
(15) Medical Loss On-level Factor (Appendix A-I)	1.010
(16) Adjusted Limited Medical Losses = (14) x (15)	\$139,231,392
(17) Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.471
(18) Factor to Reflect Medical Trend (Appendix A-III)	0.781
(19) Projected Limited Medical Cost Ratio = (17) x (18)	0.368
(20) Factor to Adjust Medical Cost Ratio to an Unlimited Basis (Appendix A-II)	1.031
(21) Projected Medical Cost Ratio = (19) x (20)	0.379
(22) Factor to Reflect Proposed Changes in Medical Benefits (Appendix C)	1.014
(23) Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.384

Total Benefit Cost:

(24) Indicated Change Based on Experience, Trend and Benefits = (13) + (23)	0.934
---	-------



CONNECTICUT

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	0.866
(2) Policy Year 2020 Indicated Change Based on Experience, Trend, and Benefits	0.934
(3) Indicated Change Based on Experience, Trend, and Benefits* = (1) x 50.0% + (2) x 50.0%	0.900

* 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	0.900
(2) Effect of the Change in Loss-based Expenses (Exhibit II)	1.002
(3) Indicated Change Modified to Reflect the Change in Loss-based Expenses = (1) x (2)	0.902

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

Industry Group Differentials (Appendix A-IV):

Manufacturing	0.987
Contracting	0.998
Office & Clerical	1.007
Goods & Services	0.987
Miscellaneous	1.039

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	0.902	0.987	0.890	(-11.0%)
Contracting	0.902	0.998	0.900	(-10.0%)
Office & Clerical	0.902	1.007	0.908	(-9.2%)
Goods & Services	0.902	0.987	0.890	(-11.0%)
Miscellaneous	0.902	1.039	0.937	(-6.3%)
Overall	0.902	1.000	0.902	(-9.8%)



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Exhibit II – Workers Compensation Loss Adjustment Expense Provision

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: Defense and Cost Containment Expenses (DCCE) and Adjusting and Other Expenses (AOE).

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 the latest selected countrywide provision. 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 Connecticut-specific paid DCCE and losses reported on the NCCI Call for Policy Year Data:

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

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



CONNECTICUT

EXHIBIT II

Workers Compensation Loss Adjustment Expense Provision

Section A - Proposed Change in Connecticut Loss Adjustment Expense Provision

NCCI proposes a 20.4% loss adjustment expense allowance as a percentage of losses. This represents a 0.2% increase from the currently approved loss adjustment expense provision.

<u>Connecticut Provisions</u>	(1) <u>Current Approved</u>	(2) <u>Proposed</u>
AOE	9.4%	9.4%
DCCE	10.7%	11.0%
Total LAE	20.1%	20.4%

Proposed Change in Connecticut LAE Provision	1.002
= [1.0 + (2)] / [1.0 + (1)] - 1	0.2%

Section B - Selection of AOE Provision

The adjusting and other expense data by accident year shown below is based on countrywide data for private carriers. NCCI's countrywide selection for the AOE provision is 9.4%.

<u>Accident Year</u>	Ultimate AOE <u>Ratio</u>
2018	9.1%
2019	9.6%
2020	10.2%
2021	9.6%
2022	9.3%
Countrywide Selected	9.4%
Connecticut Selected	9.4%



CONNECTICUT

EXHIBIT II

Workers Compensation Loss Adjustment Expense Provision

Section C - Selection of DCCE Provision

<u>Policy Year</u>	(1) Reported Ratio of Paid DCCE to <u>Paid Losses</u>	(2) Age to Ultimate Development <u>Factor</u>	(3) Ultimate DCCE <u>Ratio</u>
2017	10.5%	1.005	10.6%
2018	11.1%	1.006	11.2%
2019	10.6%	0.998	10.6%
2020	10.7%	1.009	10.8%
2021	10.5%	1.096	11.5%
Connecticut Selected			11.0%

(2) Section D

(3) = (1) x (2)

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

<u>Report</u>	(1) <u>DCCE Ratio Development</u>	
	<u>To Next Report</u>	<u>To Ultimate</u>
1st	1.086	1.096
2nd	1.011	1.009
3rd	0.992	0.998
4th	1.001	1.006
5th	0.993	1.005
6th	0.995	1.012
7th	0.997	1.017
8th	0.997	1.020
9th	1.003	1.023
10th	1.003	1.020
11th	0.999	1.017
12th	1.000	1.018
13th	0.999	1.018
14th	1.000	1.019
15th	1.003	1.019
16th	0.999	1.016
17th	1.000	1.017
18th	1.002	1.017
19th		1.015*

(1) Section E

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

*Selection



CONNECTICUT

EXHIBIT II

Workers Compensation Loss Adjustment Expense Provision

Section E - Paid DCCE to Paid Loss Ratio Development Factors

<u>Valuation</u>	<u>1st/2nd</u>	<u>2nd/3rd</u>	<u>3rd/4th</u>	<u>4th/5th</u>	<u>5th/6th</u>	<u>6th/7th</u>
12/31/2020	1.065	0.998	1.005	1.002	0.998	0.994
12/31/2021	1.082	1.022	0.971	0.988	0.994	0.987
12/31/2022	1.110	1.014	1.000	1.014	0.987	1.005
Average	1.086	1.011	0.992	1.001	0.993	0.995

<u>Valuation</u>	<u>7th/8th</u>	<u>8th/9th</u>	<u>9th/10th</u>	<u>10th/11th</u>	<u>11th/12th</u>	<u>12th/13th</u>
12/31/2020	0.999	0.990	1.001	1.000	1.002	1.002
12/31/2021	0.996	1.002	0.996	1.004	1.000	0.999
12/31/2022	0.997	0.998	1.013	1.004	0.996	1.000
Average	0.997	0.997	1.003	1.003	0.999	1.000

<u>Valuation</u>	<u>13th/14th</u>	<u>14th/15th</u>	<u>15th/16th</u>	<u>16th/17th</u>	<u>17th/18th</u>	<u>18th/19th</u>
12/31/2020	1.004	1.000	1.001	0.999	1.000	1.000
12/31/2021	1.000	0.997	1.000	0.999	0.999	1.005
12/31/2022	0.994	1.003	1.009	1.000	1.001	1.002
Average	0.999	1.000	1.003	0.999	1.000	1.002



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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 Connecticut 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 Constant Removal: This factor removes premium collected via the charged expense constant.
- Adjustment for Expense Removal: This factor is applied to remove expenses from the reported assigned risk and voluntary DSR level premium totals—serving to make the separate market premiums more comparable.
- Uncollectible Premium Provision to Gross Premium Factor: This factor is applied to the assigned risk market premium to account for the difference between gross premium as reported and the ultimate premium that is collected.
- 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 approved 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



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Appendix A – Factors Underlying the Proposed Loss Cost Level Change

NCCI reviews changes in each state's average off-balance annually. The historical data review combined with the experience rating parameters included in the latest approved 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 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 includes:

- A targeted off-balance of 0.960 for all intrastate rated employers. A targeted 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. The choice of an intrastate target is premium-neutral on a statewide basis while promoting loss cost adequacy for non-rated employers.
- The average E-mod for interstate rated employers is estimated based on the E-mod experience rating data for all 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 interstate off-balance during the proposed filing period is best approximated by the interstate off-balance observed over the most recent twelve months of E-mod data available at the time of the analysis.



CONNECTICUT

APPENDIX A-I

Determination of Policy Year On-level Factors

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

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
	Rate Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)	Adj. For Expense Constant Removal @	Adj. For Expense Removal	UPP Adj. to Gross Premium Factor	Premium Adjustment Factor (5)x(6)x(7)x(8)	
NR	01/01/21	Base	1.000	1.000	1.000	0.918	0.948	0.715	0.962	0.598
NR	01/01/22	0.918	0.918							
NR	01/01/23	1.000	0.918							
				1.000						

Section B - Factor Adjusting 2021 Policy Year Voluntary Premium to Present Voluntary Level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
	Loss Cost Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)	Adj. For Expense Constant Removal @	Adj. For Expense Removal	UPP Adj. to Gross Premium Factor	Premium Adjustment Factor (5)x(6)x(7)x(8)	
NR	01/01/21	Base	1.000	1.000	1.000	0.833	1.000	0.833	1.000	0.694
NR	01/01/22	0.859	0.859							
NR	01/01/23	0.970	0.833							
				1.000						

Section C - Factor Adjusting 2021 Policy Year Assigned Risk Premium and Voluntary Premium to Present Statewide Level

(1)	Assigned Risk Market Share PY 2021	0.069
(2)	Voluntary Market Share PY 2021	0.931
(3)	Assigned Risk Standard Premium Adjustment Factor (See Sec. A)	0.598
(4)	Voluntary Standard Premium Adjustment Factor (See Sec. B)	0.694
(5)	Premium Adjustment Factor = [(1)x(3)]/1.574+(2)x(4) #	0.672
(6)	Experience Rating Off-balance Adjustment Factor*	1.000
(7)	Final Premium Adjustment Factor = (5)x(6)	0.672

NR New and renewal business.

@ Eliminates premium derived from expense constants.

Current premium index (assigned risk-to-voluntary) = 1.574

* = 1.000 = 0.956 / 0.956 = (Targeted Off-balance) / (Off-balance for Policy Year 2021)



CONNECTICUT

APPENDIX A-I

Determination of Policy Year On-level Factors

Section D - 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)
04/01/20	Base	1.000	0.052	0.052	1.000
04/01/21	1.000	1.000	0.101	0.101	
06/23/21	1.000	1.000	0.038	0.038	
07/15/21	1.000	1.000	0.586	0.586	
04/01/22	1.000	1.000	0.150	0.150	
07/15/22	1.000	1.000	0.073	0.073	
				<u>1.000</u>	

Section E - 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)
04/01/20	Base	1.000	0.052	0.052	1.001
04/01/21	1.012	1.012	0.101	0.102	
06/23/21	1.000	1.012	0.038	0.038	
07/15/21	1.000	1.012	0.586	0.593	
04/01/22	1.001	1.013	0.150	0.152	
07/15/22	0.999	1.012	0.073	0.074	
				<u>1.011</u>	



CONNECTICUT

APPENDIX A-I

Determination of Policy Year On-level Factors

Section F - Factor Adjusting 2020 Policy Year Assigned Risk Premium to Present Assigned Risk Level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Rate Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)	Adj. For Expense Constant Removal @	Adj. For Expense Removal	UPP Adj. to Gross Premium Factor	Premium Adjustment Factor (5)x(6)x(7)x(8)
Date									
NR 01/01/20	Base	1.000	1.000	1.000	0.905	0.948	0.715	0.962	0.590
NR 01/01/21	0.986	0.986							
NR 01/01/22	0.918	0.905							
NR 01/01/23	1.000	0.905							
				1.000					

Section G - Factor Adjusting 2020 Policy Year Voluntary Premium to Present Voluntary Level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Loss Cost Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)	Adj. For Expense Constant Removal @	Adj. For Expense Removal	UPP Adj. to Gross Premium Factor	Premium Adjustment Factor (5)x(6)x(7)x(8)
Date									
NR 01/01/20	Base	1.000	1.000	1.000	0.819	1.000	0.833	1.000	0.682
NR 01/01/21	0.982	0.982							
NR 01/01/22	0.859	0.844							
NR 01/01/23	0.970	0.819							
				1.000					

Section H - Factor Adjusting 2020 Policy Year Assigned Risk Premium and Voluntary Premium to Present Statewide Level

(1) Assigned Risk Market Share PY 2020	0.069
(2) Voluntary Market Share PY 2020	0.931
(3) Assigned Risk Standard Premium Adjustment Factor (See Sec. F)	0.590
(4) Voluntary Standard Premium Adjustment Factor (See Sec. G)	0.682
(5) Premium Adjustment Factor = [(1)x(3)]/1.574+(2)x(4) #	0.661
(6) Experience Rating Off-balance Adjustment Factor*	1.000
(7) Final Premium Adjustment Factor = (5)x(6)	0.661

NR New and renewal business.

@ Eliminates premium derived from expense constants.

Current premium index (assigned risk-to-voluntary) = 1.574

* = 1.000 = 0.956 / 0.956 = (Targeted Off-balance) / (Off-balance for Policy Year 2020)



CONNECTICUT

APPENDIX A-I

Determination of Policy Year On-level Factors

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

Date	(1) Benefit Level Change	(2) Cumulative Index	(3) Weight	(4) Product (2)x(3)	(5) Adj. Factor Present Index/ Sum Column (4)
07/15/19	Base	1.000	0.052	0.052	1.000
04/01/20	1.000	1.000	0.725	0.725	
04/01/21	1.000	1.000	0.127	0.127	
06/23/21	1.000	1.000	0.023	0.023	
07/15/21	1.000	1.000	0.073	0.073	
04/01/22	1.000	1.000			
07/15/22	1.000	1.000			
				1.000	

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

Date	(1) Benefit Level Change	(2) Cumulative Index	(3) Weight	(4) Product (2)x(3)	(5) Adj. Factor Present Index/ Sum Column (4)
07/15/19	Base	1.000	0.052	0.052	1.010
04/01/20	1.008	1.008	0.725	0.731	
04/01/21	1.012	1.020	0.127	0.130	
06/23/21	1.000	1.020	0.023	0.023	
07/15/21	1.000	1.020	0.073	0.074	
04/01/22	1.001	1.021			
07/15/22	0.999	1.020			
				1.010	



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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

To limit volatility on the loss cost level indications due to the impact of extraordinary large losses, a limited large loss methodology is utilized. 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 currently approved filing. The base threshold is detrended by policy year to reflect the inflationary impact on claim costs due to wage inflation. The wage index used is based on the Connecticut 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 to the year-specific detrended large loss thresholds.

Limited indemnity and medical losses are used to calculate estimated losses at 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 Connecticut'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 1st report through 5th report. It is assumed that no further development occurs after the 5th 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.



CONNECTICUT

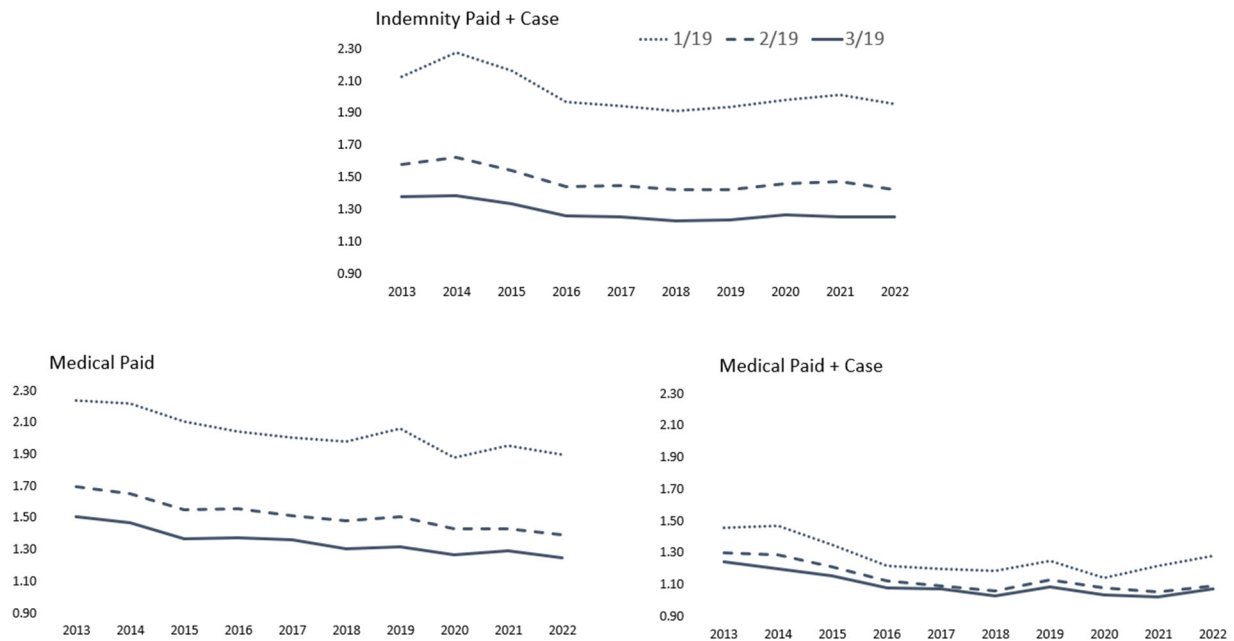
Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Appendix A – Factors Underlying the Proposed Loss Cost Level Change

Loss Development

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

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



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

- A three-year average of historical paid loss development factors through a 19th report for medical losses
- A five-year average of historical paid plus case loss development factors through a 19th report for both indemnity and medical losses

As can be seen in the graphs above, the latest valuation of development factors are generally consistent with those from historical periods for both medical paid development and indemnity paid plus case with a slight increase in medical paid plus case development in the latest



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Appendix A – Factors Underlying the Proposed Loss Cost Level Change

valuation. Although there has been more year-to-year fluctuation in medical than indemnity, the medical factors remain moderately stable. Given this consistency in the development averages, there was no change in these selected development averages compared to last year's 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 variability from year to year.

19th-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 19th 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 19th-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.

Paid plus case data is used in the calculation of 19th-to-ultimate loss development factors since it is most reflective of the expected ultimate losses. Since this filing utilizes paid plus case data for indemnity losses, the selected paid plus case tail factor is appropriate. For medical losses, both paid and paid plus case data are utilized, so the selected paid plus case loss development tail factor is converted to a paid basis using paid-to-paid plus case ratios. The medical conversion ratio was selected based on a review of historical conversion ratios and considers the relatively higher medical conversion ratios for the latest valuation of data.



CONNECTICUT

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	\$484,421,702
(2) Factor to Develop Premium to Ultimate	1.002
(3) Standard Earned Premium Developed to Ultimate = (1)x(2)	\$485,390,545
(4) Limited Indemnity Paid+Case Losses	\$89,993,750
(5) Limited Indemnity Paid+Case Development Factor to Ultimate	2.038
(6) Limited Indemnity Paid+Case Losses Developed to Ultimate = (4)x(5)	\$183,407,263
(7) Limited Medical Paid Losses	\$64,981,189
(8) Limited Medical Paid Development Factor to Ultimate	1.999
(9) Limited Medical Paid Losses Developed to Ultimate = (7)x(8)	\$129,897,397
(10) Limited Medical Paid+Case Losses	\$104,495,665
(11) Limited Medical Paid+Case Development Factor to Ultimate	1.232
(12) Limited Medical Paid+Case Losses Developed to Ultimate = (10)x(11)	\$128,738,659
(13) Policy Year 2021 Limited Medical Losses Developed to Ultimate = [(9)+(12)]/2	\$129,318,028

Policy Year 2020

(1) Standard Earned Premium	\$447,254,176
(2) Factor to Develop Premium to Ultimate	1.000
(3) Standard Earned Premium Developed to Ultimate = (1)x(2)	\$447,254,176
(4) Limited Indemnity Paid+Case Losses	\$121,564,678
(5) Limited Indemnity Paid+Case Development Factor to Ultimate	1.496
(6) Limited Indemnity Paid+Case Losses Developed to Ultimate = (4)x(5)	\$181,860,758
(7) Limited Medical Paid Losses	\$92,104,556
(8) Limited Medical Paid Development Factor to Ultimate	1.485
(9) Limited Medical Paid Losses Developed to Ultimate = (7)x(8)	\$136,775,266
(10) Limited Medical Paid+Case Losses	\$126,761,368
(11) Limited Medical Paid+Case Development Factor to Ultimate	1.096
(12) Limited Medical Paid+Case Losses Developed to Ultimate = (10)x(11)	\$138,930,459
(13) Policy Year 2020 Limited Medical Losses Developed to Ultimate = [(9)+(12)]/2	\$137,852,863



CONNECTICUT

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	1.004	2017	0.999	2016	1.000	2015	1.000
2019	0.992	2018	0.999	2017	1.002	2016	1.000
2020	1.010	2019	0.999	2018	1.000	2017	0.999
Average	1.002	Average	0.999	Average	1.001	Average	1.000

Summary of Premium Development Factors

<u>1st/5th</u>	<u>2nd/5th</u>	<u>3rd/5th</u>	<u>4th/5th</u>
1.002	1.000	1.001	1.000



CONNECTICUT

APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section C - Limited Medical Paid Loss Development Factors

Policy Year	<u>1st/2nd</u>	Policy Year	<u>2nd/3rd</u>	Policy Year	<u>3rd/4th</u>	Policy Year	<u>4th/5th</u>
2018	1.312	2017	1.130	2016	1.053	2015	1.027
2019	1.367	2018	1.104	2017	1.083	2016	1.039
2020	1.359	2019	1.119	2018	1.049	2017	1.028
Average	1.346	Average	1.118	Average	1.062	Average	1.031
Policy Year	<u>5th/6th</u>	Policy Year	<u>6th/7th</u>	Policy Year	<u>7th/8th</u>	Policy Year	<u>8th/9th</u>
2014	1.023	2013	1.027	2012	1.017	2011	1.023
2015	1.024	2014	1.025	2013	1.009	2012	1.011
2016	1.047	2015	1.016	2014	1.015	2013	1.011
Average	1.031	Average	1.023	Average	1.014	Average	1.015
Policy Year	<u>9th/10th</u>	Policy Year	<u>10th/11th</u>	Policy Year	<u>11th/12th</u>	Policy Year	<u>12th/13th</u>
2010	1.013	2009	1.008	2008	1.010	2007	1.008
2011	1.012	2010	1.008	2009	1.005	2008	1.013
2012	1.009	2011	1.007	2010	1.011	2009	1.004
Average	1.011	Average	1.008	Average	1.009	Average	1.008
Policy Year	<u>13th/14th</u>	Policy Year	<u>14th/15th</u>	Policy Year	<u>15th/16th</u>	Policy Year	<u>16th/17th</u>
2006	1.005	2005	1.003	2004	1.007	2003	1.007
2007	1.003	2006	1.009	2005	1.006	2004	1.010
2008	1.007	2007	1.004	2006	1.005	2005	1.004
Average	1.005	Average	1.005	Average	1.006	Average	1.007
Policy Year	<u>17th/18th</u>	Policy Year	<u>18th/19th</u>				
2002	1.003	2001	1.005				
2003	1.006	2002	1.002				
2004	1.005	2003	1.004				
Average	1.005	Average	1.004				



CONNECTICUT

APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section D - Limited Indemnity Paid + Case Loss Development Factors

Policy Year	<u>1st/2nd</u>	Policy Year	<u>2nd/3rd</u>	Policy Year	<u>3rd/4th</u>	Policy Year	<u>4th/5th</u>
2016	1.346	2015	1.159	2014	1.064	2013	1.048
2017	1.362	2016	1.150	2015	1.064	2014	1.038
2018	1.359	2017	1.151	2016	1.077	2015	1.042
2019	1.368	2018	1.173	2017	1.061	2016	1.041
2020	1.377	2019	1.135	2018	1.086	2017	1.023
Average	1.362	Average	1.154	Average	1.070	Average	1.038

Policy Year	<u>5th/6th</u>	Policy Year	<u>6th/7th</u>	Policy Year	<u>7th/8th</u>	Policy Year	<u>8th/9th</u>
2012	1.047	2011	1.015	2010	1.007	2009	0.997
2013	1.043	2012	1.015	2011	1.016	2010	1.013
2014	1.018	2013	1.023	2012	1.014	2011	1.019
2015	1.024	2014	1.012	2013	1.017	2012	1.012
2016	1.033	2015	1.020	2014	1.012	2013	1.007
Average	1.033	Average	1.017	Average	1.013	Average	1.010

Policy Year	<u>9th/10th</u>	Policy Year	<u>10th/11th</u>	Policy Year	<u>11th/12th</u>	Policy Year	<u>12th/13th</u>
2008	1.007	2007	1.009	2006	1.005	2005	0.998
2009	1.006	2008	0.998	2007	1.009	2006	1.003
2010	1.007	2009	1.012	2008	1.012	2007	1.008
2011	1.016	2010	1.009	2009	1.010	2008	1.004
2012	1.007	2011	1.010	2010	1.009	2009	1.003
Average	1.009	Average	1.008	Average	1.009	Average	1.003

Policy Year	<u>13th/14th</u>	Policy Year	<u>14th/15th</u>	Policy Year	<u>15th/16th</u>	Policy Year	<u>16th/17th</u>
2004	1.005	2003	1.002	2002	1.005	2001	0.995
2005	1.004	2004	0.998	2003	1.003	2002	1.006
2006	1.003	2005	1.005	2004	0.998	2003	1.001
2007	1.002	2006	1.000	2005	1.000	2004	1.018
2008	1.005	2007	1.007	2006	1.004	2005	1.003
Average	1.004	Average	1.002	Average	1.002	Average	1.005

Policy Year	<u>17th/18th</u>	Policy Year	<u>18th/19th</u>
2000	1.003	1999	1.003
2001	1.002	2000	1.000
2002	1.002	2001	1.002
2003	1.003	2002	1.002
2004	1.006	2003	0.997
Average	1.003	Average	1.001



CONNECTICUT

APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section E - Limited Medical Paid + Case Loss Development Factors

Policy Year	<u>1st/2nd</u>	Policy Year	<u>2nd/3rd</u>	Policy Year	<u>3rd/4th</u>	Policy Year	<u>4th/5th</u>
2016	1.122	2015	1.031	2014	1.005	2013	1.019
2017	1.108	2016	1.041	2015	1.004	2014	1.017
2018	1.055	2017	1.041	2016	1.004	2015	1.003
2019	1.158	2018	1.030	2017	1.002	2016	1.002
2020	1.176	2019	1.014	2018	1.007	2017	1.012
Average	1.124	Average	1.031	Average	1.004	Average	1.011

Policy Year	<u>5th/6th</u>	Policy Year	<u>6th/7th</u>	Policy Year	<u>7th/8th</u>	Policy Year	<u>8th/9th</u>
2012	1.003	2011	1.010	2010	1.004	2009	0.992
2013	1.018	2012	1.000	2011	1.011	2010	1.008
2014	0.996	2013	0.998	2012	1.011	2011	1.002
2015	1.002	2014	1.009	2013	1.004	2012	1.012
2016	1.016	2015	1.007	2014	1.000	2013	1.001
Average	1.007	Average	1.005	Average	1.006	Average	1.003

Policy Year	<u>9th/10th</u>	Policy Year	<u>10th/11th</u>	Policy Year	<u>11th/12th</u>	Policy Year	<u>12th/13th</u>
2008	0.996	2007	0.994	2006	0.998	2005	1.004
2009	1.004	2008	1.008	2007	1.002	2006	1.001
2010	1.006	2009	0.998	2008	1.016	2007	1.006
2011	1.004	2010	0.994	2009	0.999	2008	0.996
2012	0.999	2011	1.008	2010	1.001	2009	1.002
Average	1.002	Average	1.000	Average	1.003	Average	1.002

Policy Year	<u>13th/14th</u>	Policy Year	<u>14th/15th</u>	Policy Year	<u>15th/16th</u>	Policy Year	<u>16th/17th</u>
2004	1.003	2003	1.003	2002	1.004	2001	0.992
2005	0.998	2004	1.002	2003	1.000	2002	1.006
2006	0.998	2005	1.001	2004	0.994	2003	1.002
2007	1.000	2006	0.996	2005	0.997	2004	1.003
2008	1.008	2007	1.000	2006	1.001	2005	1.006
Average	1.001	Average	1.000	Average	0.999	Average	1.002

Policy Year	<u>17th/18th</u>	Policy Year	<u>18th/19th</u>
2000	1.001	1999	0.999
2001	1.002	2000	1.002
2002	0.999	2001	1.004
2003	1.000	2002	1.003
2004	1.007	2003	0.998
Average	1.002	Average	1.001



CONNECTICUT

APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

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

Indemnity Paid+Case Data for Matching Companies

(1) Policy Year	(2) <u>Losses for Policy Year</u> 19th Report	(3) <u>Losses for Policy Year</u> 20th Report	(4) <u>Losses for All Prior Policy Years</u> Previous	(5) <u>Losses for All Prior Policy Years</u> Current	(6) Factor to Adjust Losses for Prior Policy Years	(7) Indicated 19th-to-Ult Development for Policy Year
1993	135,386,411	135,239,482	3,721,136,501	3,736,342,854	1.726	1.064
1994	122,415,525	122,354,079	3,871,203,569	3,886,232,413	1.909	1.064
1995	113,817,954	114,177,802	4,005,788,708	4,017,051,757	2.009	1.052
1996	126,705,721	126,897,455	4,130,518,682	4,139,232,424	1.732	1.041
1997	149,206,465	150,189,849	4,264,033,202	4,278,850,907	1.409	1.077
1998	149,708,274	150,694,029	4,429,040,756	4,442,176,978	1.315	1.073
1999	148,261,652	148,293,152	4,456,195,299	4,471,762,090	1.142	1.092
2000	175,634,276	176,329,901	4,537,247,438	4,550,541,941	0.866	1.091
2001	142,221,703	143,826,707	4,715,870,933	4,722,758,156	0.976	1.061
2002	131,662,945	131,648,253	4,952,261,536	4,960,374,848	0.958	1.064
Selected Indemnity 19th-to-Ultimate Loss Development Factor						1.065

Medical Paid+Case Data for Matching Companies

(8) Policy Year	(9) <u>Losses for Policy Year</u> 19th Report	(10) <u>Losses for Policy Year</u> 20th Report	(11) <u>Losses for All Prior Policy Years</u> Previous	(12) <u>Losses for All Prior Policy Years</u> Current	(13) Factor to Adjust Losses for Prior Policy Years	(14) Indicated 19th-to-Ult Development for Policy Year
1993	96,693,019	97,165,194	1,684,630,196	1,684,047,701	1.160	1.000
1994	91,368,551	91,086,660	1,780,977,194	1,791,033,757	1.266	1.084
1995	83,451,149	83,539,241	1,881,583,695	1,886,914,499	1.403	1.047
1996	111,739,962	111,359,915	1,970,073,399	1,972,788,087	1.039	1.020
1997	95,944,030	96,330,529	2,082,740,916	2,087,168,032	1.222	1.042
1998	103,340,130	103,268,435	2,183,498,561	2,186,775,082	1.110	1.028
1999	109,180,143	108,447,992	2,224,150,900	2,227,967,333	0.976	1.029
2000	121,359,556	121,175,295	2,283,072,251	2,279,852,297	0.819	0.966
2001	103,911,420	104,982,843	2,393,340,503	2,390,795,407	0.934	0.984
2002	103,962,584	103,452,003	2,552,922,306	2,551,229,781	0.880	0.977
Selected Medical 19th-to-Ultimate Loss Development Factor						1.025

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

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

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.



CONNECTICUT

APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

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

Policy Year	Medical Paid-to-Paid + Case Ratio 19th Report
1999	0.965
2000	0.961
2001	0.966
2002	0.959
2003	0.966
Selected	0.970

	Indemnity	Medical
(1) Paid+Case 19th-to-Ultimate Loss Development Factor (Section F)	1.065	1.025
(2) Factor to Adjust 19th-to-Ultimate Development Factor to a Limited Basis	0.574	0.574
(3) Limited Paid+Case 19th-to-Ultimate Loss Development Factor = [(1) - 1] x (2) + 1	1.037	1.014
(4) Limited Paid-to-Paid+Case Ratio	N/A	0.970
(5) Limited Paid 19th-to-Ultimate Loss Development Factor = (3) / (4)	N/A	1.045

Section H - Summary of Limited Paid Loss Development Factors

Report	(1) Medical Paid Loss Development to Next Report	(2) to Ultimate
1st	1.346	1.999
2nd	1.118	1.485
3rd	1.062	1.328
4th	1.031	1.250
5th	1.031	1.212
6th	1.023	1.176
7th	1.014	1.150
8th	1.015	1.134
9th	1.011	1.117
10th	1.008	1.105
11th	1.009	1.096
12th	1.008	1.086
13th	1.005	1.077
14th	1.005	1.072
15th	1.006	1.067
16th	1.007	1.061
17th	1.005	1.054
18th	1.004	1.049
19th		1.045

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



CONNECTICUT

APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section I - 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	1.362	2.038	1st	1.124	1.232
2nd	1.154	1.496	2nd	1.031	1.096
3rd	1.070	1.296	3rd	1.004	1.063
4th	1.038	1.211	4th	1.011	1.059
5th	1.033	1.167	5th	1.007	1.047
6th	1.017	1.130	6th	1.005	1.040
7th	1.013	1.111	7th	1.006	1.035
8th	1.010	1.097	8th	1.003	1.029
9th	1.009	1.086	9th	1.002	1.026
10th	1.008	1.076	10th	1.000	1.024
11th	1.009	1.067	11th	1.003	1.024
12th	1.003	1.057	12th	1.002	1.021
13th	1.004	1.054	13th	1.001	1.019
14th	1.002	1.050	14th	1.000	1.018
15th	1.002	1.048	15th	0.999	1.018
16th	1.005	1.046	16th	1.002	1.019
17th	1.003	1.041	17th	1.002	1.017
18th	1.001	1.038	18th	1.001	1.015
19th		1.037	19th		1.014

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



CONNECTICUT

APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

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

(1) Threshold at the Midpoint of the Loss Cost Effective Period*	6,049,163
(2) Statewide Excess Ratio for (1)	0.030
(3) Market Share for Carriers Missing from Large Loss and Catastrophe Call	0.000
(4) Factor to Adjust Limited Losses to an Unlimited Basis = $1.0 / \{1.0 - [(2) \times (1.0 - (3))]\}$	1.031

Section K - Policy Year Large Loss Limits

Experience Year	Policy Year Detrended Limit
2021	5,312,793
2020	5,017,763
2019	4,766,572
2018	4,576,944
2017	4,477,461
2016	4,421,334
2015	4,390,801
2014	4,326,357
2013	4,224,356
2012	4,175,527
2011	4,129,302
2010	4,033,615
2009	3,910,721
2008	3,894,140
2007	3,913,164
2006	3,784,609
2005	3,605,729
2004	3,463,212
2003	3,304,420
2002	3,169,901
2001	3,141,063
2000	3,088,267
1999	2,926,927

* December 2, 2024 is the midpoint of the effective period for which the revised loss costs are being proposed.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Appendix A – Factors Underlying the Proposed Loss Cost Level Change

Appendix A-III Trend Factors

The proposed loss costs and assigned risk rates 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 Connecticut 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 Connecticut. 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 Connecticut. 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 include 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 Connecticut distribution of policy writings by month and assume a uniform probability of loss over the coverage period.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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 fifteen 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 COVID-19 pandemic may have permanently altered aspects of the workplace and economy in Connecticut. 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. However, based on this year's review, it is expected that the impact of the pandemic in Connecticut, from both an economic and workers compensation perspective, was limited. The employment levels decreased in early 2020 but Connecticut employment levels have since recovered. 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. 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-2020 peak but still just below 4% in Connecticut. As wages rise, premiums automatically increase along with the associated workers compensation indemnity benefits. Wage inflation changes are expected to outpace medical inflation changes 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.

The indicated exponential loss ratio trend fits for both indemnity and medical over periods ranging from 5 to 15 years are displayed on the following pages along with the exponential trend fits for the underlying frequency and severity components. Additionally, alternate loss ratio exponential fits are shown which exclude the latest policy year. These figures reflect today's loss cost and wage levels and are based on paid plus case data for indemnity losses, and an average of paid and paid plus case data for medical losses. Note that frequency and severity trends were reviewed but not selected.

Lost-time claim frequency has generally declined over the entire history displayed, although small increases in claim frequency were observed in the two most recent policy years. These two recent increases, as well as the larger than typical decrease seen from Policy Year 2018 to Policy Year 2019 may be driven, to some extent, by the impact of the COVID-19 pandemic.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Appendix A – Factors Underlying the Proposed Loss Cost Level Change

After adjusting to a common wage level, both the indemnity and medical average cost per case figures decreased significantly in the latest year. Looking over a longer-term history, the indemnity average cost per case appears relatively flat while the medical average cost per case has exhibited more variability in recent years with a downward trend since 2013. Together, claim frequency and severity trends suggest improving workers compensation experience.

The range of indicated exponential loss ratio fits for indemnity, with all fits based on 5 to 15 years, ranges between -3.4% to -5.3%. While annual changes to indemnity loss ratios prior to Policy Year 2016 show more pronounced declines, more recent changes indicate relatively less significant declines. Based on this year's analysis, along with recent legislative changes that may put upward pressure on indemnity costs (e.g., Senate Bill 913), NCCI selected to maintain the annual indemnity loss ratio trend of -3.5% in this filing.

The observed year-over-year changes for medical average cost per case figures have been more variable relative to those for indemnity. The range of indicated exponential loss ratio fits for medical, with all fits based on 5 to 15 years, range between -5.5% to -9.8%, with a significant decline in the medical average cost per case for Policy Years 2020 and 2021 impacting the loss ratio fits for all years. By giving some weight to the short-term fits, there is recognition of the declining trend in medical loss ratios while not being overly responsive to large changes in the average medical cost per case. Adoption of a Medicare based fee schedule for hospital inpatient, hospital outpatient and ambulatory surgical center services that became effective April 1, 2015 appear to impact the medical severity and medical loss ratio data, which was considered when selecting the medical loss ratio trend (i.e., less reliance on longer-term fits). Based on this year's analysis, in this filing NCCI selected to decrease the annual medical loss ratio trend from -5.0% to -6.0%.

Note that the claim frequency and average cost per case values are adjusted to the wage level of the most recent experience year to remove the effects of inflation.



CONNECTICUT

APPENDIX A-III

Policy Year Trend Factors

Section A - Calculation of Annual Loss Ratio Trend Factors

(1) Selected Annual Loss Ratio Trends: Indemnity Medical
-3.5% **-6.0%**

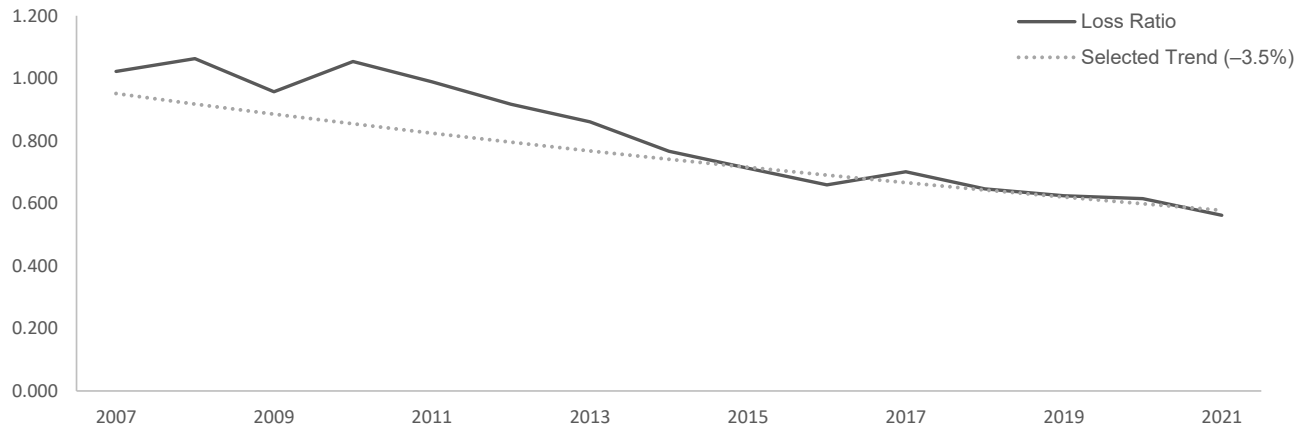
(2) Length of Trend Period from Midpoint of Policy Year to Midpoint of Effective Period:

Trend Length: PY 2021 PY 2020
3.001 4.001

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

Indemnity: PY 2021 PY 2020
0.899 0.867
 Medical: 0.831 0.781

Section B - Indemnity Loss Ratio Trend Data



Policy Year	Indemnity Loss Ratio [^]	Annual Percent Change	# of Years in Fit	Exponential Fits	Alternate Exponential Fits*
2007	1.022				
2008	1.063	4.0%			
2009	0.957	-10.0%			
2010	1.054	10.1%			
2011	0.989	-6.2%	15	-4.7%	
2012	0.917	-7.3%	14	-4.9%	-4.7%
2013	0.861	-6.1%	13	-5.0%	-5.0%
2014	0.767	-10.9%	12	-5.3%	-5.0%
2015	0.712	-7.2%	11	-5.1%	-5.4%
2016	0.659	-7.4%	10	-4.7%	-5.2%
2017	0.701	6.4%	9	-4.3%	-4.8%
2018	0.646	-7.8%	8	-3.7%	-4.2%
2019	0.624	-3.4%	7	-3.4%	-3.3%
2020	0.615	-1.4%	6	-3.4%	-2.8%
2021	0.562	-8.6%	5	-4.8%	-2.5%

[^]Based on paid+case losses

*Exponential Fits excluding the latest Policy Year

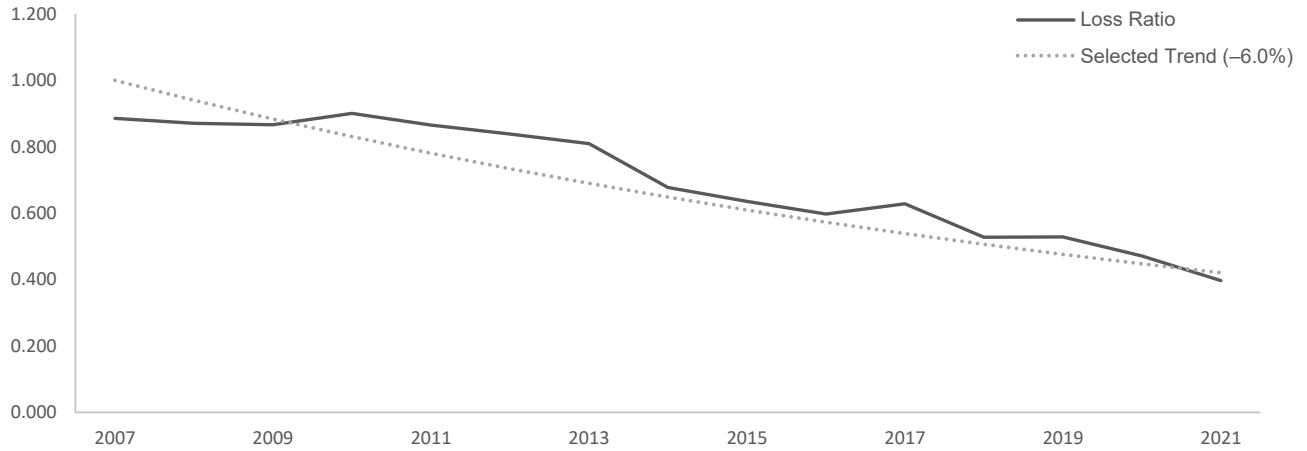


CONNECTICUT

APPENDIX A-III

Policy Year Trend Factors

Section C - Medical Loss Ratio Trend Data



Policy Year	Medical Loss Ratio [^]	Annual Percent Change	# of Years in Fit	Exponential Fits	Alternate Exponential Fits*
2007	0.885				
2008	0.870	-1.7%			
2009	0.866	-0.5%			
2010	0.900	3.9%			
2011	0.865	-3.9%	15	-5.5%	
2012	0.838	-3.1%	14	-5.9%	-5.0%
2013	0.809	-3.5%	13	-6.3%	-5.4%
2014	0.677	-16.3%	12	-6.8%	-5.9%
2015	0.635	-6.2%	11	-7.0%	-6.4%
2016	0.597	-6.0%	10	-7.2%	-6.5%
2017	0.628	5.2%	9	-7.1%	-6.6%
2018	0.527	-16.1%	8	-6.6%	-6.4%
2019	0.528	0.2%	7	-7.1%	-5.5%
2020	0.471	-10.8%	6	-8.0%	-5.7%
2021	0.397	-15.7%	5	-9.8%	-6.3%

[^]Based on an average of paid and paid+case losses

*Exponential Fits excluding the latest Policy Year

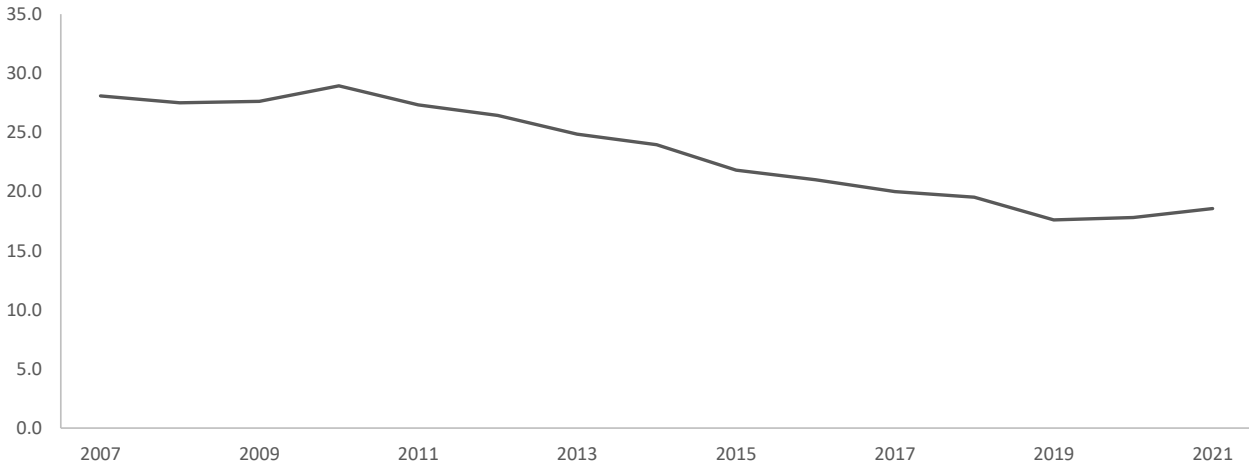


CONNECTICUT

APPENDIX A-III

Policy Year Trend Factors

Section D - Frequency Trend Data



Policy Year	Claim Frequency [^]	Annual Percent Change	# of Years in Fit	Exponential Fits
2007	28.082	-		
2008	27.498	-2.1%		
2009	27.624	0.5%		
2010	28.939	4.8%		
2011	27.317	-5.6%	15	-3.8%
2012	26.428	-3.3%	14	-4.0%
2013	24.847	-6.0%	13	-4.3%
2014	23.958	-3.6%	12	-4.6%
2015	21.797	-9.0%	11	-4.5%
2016	20.993	-3.7%	10	-4.4%
2017	19.986	-4.8%	9	-4.2%
2018	19.521	-2.3%	8	-3.9%
2019	17.605	-9.8%	7	-3.3%
2020	17.797	1.1%	6	-3.0%
2021	18.554	4.3%	5	-2.4%

[^]Per million of on-leveled, wage-adjusted premium

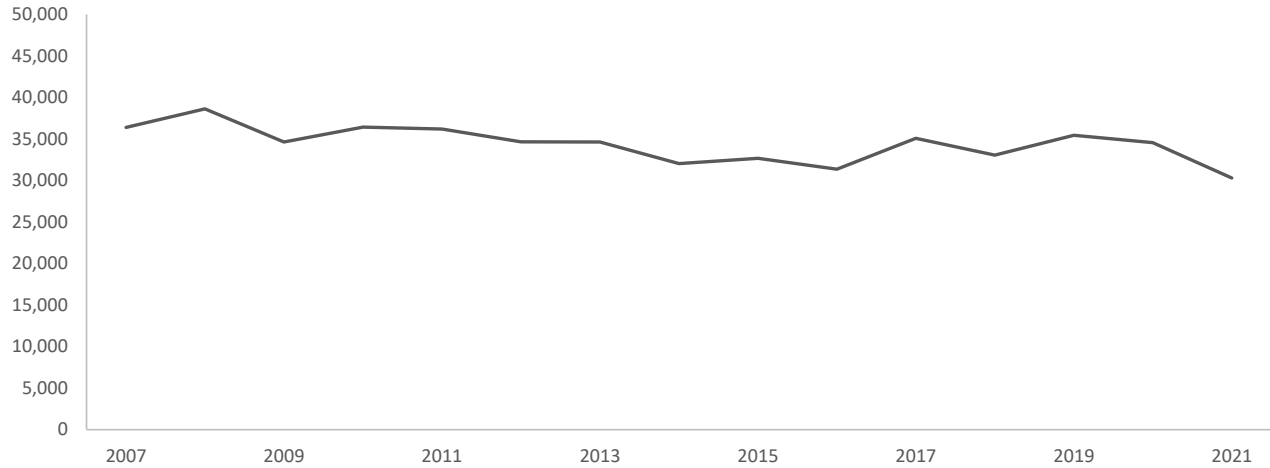


CONNECTICUT

APPENDIX A-III

Policy Year Trend Factors

Section E - Indemnity Severity Trend Data



Policy Year	Indemnity Severity [^]	Annual Percent Change	# of Years in Fit	Exponential Fits
2007	36,392	-		
2008	38,631	6.2%		
2009	34,629	-10.4%		
2010	36,431	5.2%		
2011	36,195	-0.6%	15	-0.9%
2012	34,648	-4.3%	14	-0.9%
2013	34,644	0.0%	13	-0.7%
2014	32,038	-7.5%	12	-0.8%
2015	32,671	2.0%	11	-0.6%
2016	31,369	-4.0%	10	-0.3%
2017	35,082	11.8%	9	-0.2%
2018	33,050	-5.8%	8	0.2%
2019	35,451	7.3%	7	-0.1%
2020	34,564	-2.5%	6	-0.4%
2021	30,305	-12.3%	5	-2.4%

[^]Adjusted to a common wage level, based on paid+case losses

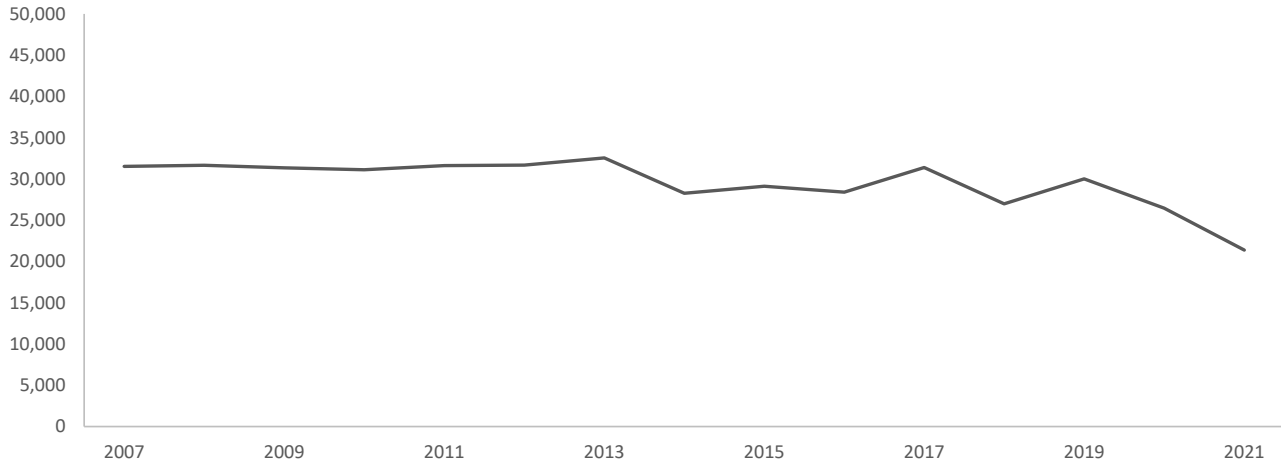


CONNECTICUT

APPENDIX A-III

Policy Year Trend Factors

Section F - Medical Severity Trend Data



Policy Year	Medical Severity [^]	Annual Percent Change	# of Years in Fit	Exponential Fits
2007	31,525	-		
2008	31,659	0.4%		
2009	31,347	-1.0%		
2010	31,120	-0.7%		
2011	31,622	1.6%	15	-1.7%
2012	31,682	0.2%	14	-1.9%
2013	32,559	2.8%	13	-2.1%
2014	28,273	-13.2%	12	-2.3%
2015	29,129	3.0%	11	-2.6%
2016	28,405	-2.5%	10	-2.9%
2017	31,393	10.5%	9	-3.1%
2018	26,985	-14.0%	8	-2.8%
2019	30,009	11.2%	7	-3.9%
2020	26,472	-11.8%	6	-5.1%
2021	21,389	-19.2%	5	-7.6%

[^]Adjusted to a common wage level, based on an average of paid and paid+case losses



CONNECTICUT

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 approved 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	100,635,677	439,291,192	395,563,408	1.133	1.135
Contracting	111,480,598	501,968,488	452,333,424	1.111	1.112
Office & Clerical	65,437,553	298,149,670	268,395,914	1.132	1.133
Goods & Services	220,718,741	1,016,518,783	915,400,944	1.033	1.032
Miscellaneous	106,303,115	472,130,249	425,606,724	1.090	1.089
Statewide	604,575,685	2,728,058,381	2,457,300,413		

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	100,458,345	438,517,110	394,866,380	1.111	1.001
Contracting	111,380,346	501,517,077	451,926,649	1.110	1.000
Office & Clerical	65,379,797	297,886,519	268,159,024	1.111	1.001
Goods & Services	220,932,616	1,017,503,782	916,287,960	1.110	1.000
Miscellaneous	106,400,731	472,563,794	425,997,548	1.109	0.999
Statewide	604,551,835	2,727,988,282	2,457,237,561	1.110	



CONNECTICUT

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	388,493,516	0.983	0.983	8,093
Contracting	449,642,342	0.995	0.995	5,429
Office & Clerical	270,890,325	1.009	1.009	5,522
Goods & Services	903,339,777	0.986	0.986	24,543
Miscellaneous	446,051,746	1.048	1.048	7,721
Statewide	2,458,417,706	1.000		

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	0.82	0.986	0.987
Contracting	12,000	0.67	0.997	0.998
Office & Clerical	12,000	0.68	1.006	1.007
Goods & Services	12,000	1.00	0.986	0.987
Miscellaneous	12,000	0.80	1.038	1.039
Statewide			0.999	1.000

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



CONNECTICUT

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 approved 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 currently approved Connecticut 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 Connecticut 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).



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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 Connecticut 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



CONNECTICUT

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
8/16-7/17	1.195	1.126	1.064	1.027
8/17-7/18	1.257	1.165	1.084	1.033
8/18-7/19	1.369	1.255	1.117	1.047
8/19-7/20	1.658	1.423	1.194	1.062
8/20-7/21	2.664	1.841	1.455	1.110

*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
8/16-7/17	0.770	0.635
8/17-7/18	0.798	0.676
8/18-7/19	0.827	0.719
8/19-7/20	0.857	0.764
8/20-7/21	0.888	0.813

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
8/16-7/17	1.021	1.019	1.021	1.019	1.054
8/17-7/18	1.017	1.012	1.014	1.012	1.044
8/18-7/19	1.010	1.000	1.001	1.000	1.036
8/19-7/20	1.010	1.000	1.000	1.000	1.027
8/20-7/21	1.003	1.000	1.000	1.000	1.016



CONNECTICUT

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)
8/16-7/17	0.939	0.885	0.938	0.939	0.885	0.938	0.883	0.712	0.687
8/17-7/18	1.020	0.945	1.015	1.017	0.943	1.015	0.941	0.765	0.729
8/18-7/19	1.143	1.048	1.132	1.133	1.039	1.132	1.038	0.832	0.780
8/19-7/20	1.435	1.232	1.421	1.421	1.220	1.421	1.220	0.937	0.833
8/20-7/21	2.373	1.640	2.366	2.366	1.635	2.366	1.635	1.202	0.917

* 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	0.116	0.140	0.176	0.193	0.248	0.283	0.317
(2) Excess Factors 1/(1-(1))	1.131	1.163	1.214	1.239	1.330	1.395	1.464

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.



CONNECTICUT

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*	0.983	0.995	1.009	0.986	1.048
(2) Final Differentials**	0.987	0.998	1.007	0.987	1.039
(3) Adjustment (2)/(1)	1.004	1.003	0.998	1.001	0.991

*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)
8/16-7/17	0.901	1.084	1.090	0.994	0.896
8/17-7/18	0.836	1.084	1.094	0.991	0.828
8/18-7/19	0.879	1.084	1.087	0.997	0.876
8/19-7/20	0.883	1.083	1.074	1.008	0.890
8/20-7/21	0.900	1.085	1.073	1.011	0.910

3. Adjustment for Experience Change

A factor of 0.908 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 1.204 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
8/16-7/17	0.983	0.982	0.978	0.981	0.971
8/17-7/18	0.909	0.908	0.903	0.906	0.897
8/18-7/19	0.962	0.961	0.956	0.959	0.949
8/19-7/20	0.977	0.976	0.971	0.974	0.964
8/20-7/21	0.999	0.998	0.993	0.996	0.986



CONNECTICUT

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 0.908 is applied to adjust for the experience change in the proposed loss cost level.

2. Factors to Adjust to the Proposed Trend Level

The pure premiums underlying the current loss costs contain the current trend. The change in trend factors, 1.000 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
April 1, 2023	1.000	1.012
July 15, 2023	1.000	1.002
Combined Benefit Adjustment	1.000	1.014

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	1.201	1.201	1.204	1.204
(2) Loss-based Assessment	1.000	1.000	1.000	1.000
(3) = (1) + (2) – 1.000	1.201	1.201	1.204	1.204
(4) Overall Change (3b)/(3a)			1.002	1.002

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	1.133	1.135	0.998
Contracting	1.111	1.112	0.999
Office & Clerical	1.132	1.133	0.999
Goods & Services	1.033	1.032	1.001
Miscellaneous	1.090	1.089	1.001



CONNECTICUT

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	0.987	1.001	0.988
Contracting	0.998	1.000	0.998
Office & Clerical	1.007	1.001	1.008
Goods & Services	0.987	1.000	0.987
Miscellaneous	1.039	0.999	1.038

*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	0.897	0.878
Contracting	0.907	0.887
Office & Clerical	0.916	0.896
Goods & Services	0.899	0.879
Miscellaneous	0.946	0.925



CONNECTICUT

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 Connecticut conditions in four steps. First, statewide indicated pure premiums are determined for Connecticut. Second, using Connecticut payrolls as weights, corresponding statewide-average pure premiums are computed for each remaining state. Third, the ratios of Connecticut 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 Connecticut 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: \$45,020,624 for indemnity and \$17,141,696 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.



CONNECTICUT

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	1.0043
Contracting	1.0003
Office & Clerical	0.9947
Goods & Services	0.9966
Miscellaneous	0.9755

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	1.135
Contracting	1.112
Office & Clerical	1.133
Goods & Services	1.032
Miscellaneous	1.089



CONNECTICUT

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:

Manufacturing	from 9% above to 31% below
Contracting	from 10% above to 30% below
Office & Clerical	from 11% above to 29% below
Goods & Services	from 9% above to 31% below
Miscellaneous	from 14% above to 26% below

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

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

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

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

List of Classifications Limited by the Upper Swing

3126 4206

List of Classifications Limited by the Lower Swing

8803 8871

4. Connecticut 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 1.001 to offset the credits payable under the CCPAP.

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



CONNECTICUT

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
08/01/16 - 07/31/17	0	0	0	1,800,259	2,509,276	1,034,572	1,114,846	2,267,121	5,229,920
08/01/17 - 07/31/18	0	0	316,628	1,146,396	2,501,017	687,320	2,204,590	1,615,756	6,753,570
08/01/18 - 07/31/19	0	0	0	1,491,967	1,824,185	1,168,203	1,413,495	2,199,203	5,259,956
08/01/19 - 07/31/20	0	0	0	1,907,064	1,100,384	1,767,013	1,711,546	2,828,852	4,006,792
08/01/20 - 07/31/21	0	500,000	0	518,360	1,201,997	914,204	2,199,134	1,568,276	5,182,076

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
08/01/16 - 07/31/17	0.939	0.885	0.938	0.939	0.885	0.938	0.883	0.712	0.687
08/01/17 - 07/31/18	1.020	0.945	1.015	1.017	0.943	1.015	0.941	0.765	0.729
08/01/18 - 07/31/19	1.143	1.048	1.132	1.133	1.039	1.132	1.038	0.832	0.780
08/01/19 - 07/31/20	1.435	1.232	1.421	1.421	1.220	1.421	1.220	0.937	0.833
08/01/20 - 07/31/21	2.373	1.640	2.366	2.366	1.635	2.366	1.635	1.202	0.917

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	1.214

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%
------------------	-----



CONNECTICUT

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
08/01/16 - 07/31/17	0	0	0	1,907,082	2,505,305	1,094,795	1,110,566	2,186,304	4,634,217
08/01/17 - 07/31/18	0	0	362,563	1,315,299	2,660,708	787,035	2,340,380	1,686,734	6,353,683
08/01/18 - 07/31/19	0	0	0	1,907,033	2,138,224	1,491,880	1,655,238	2,477,960	5,266,369
08/01/19 - 07/31/20	0	0	0	3,057,231	1,514,513	2,832,713	2,355,685	3,662,843	4,343,652
08/01/20 - 07/31/21	0	925,088	0	1,383,615	2,217,124	2,440,208	4,056,377	2,577,288	6,312,107

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

Policy Period	INDUSTRY GROUP: Office and Clerical
08/01/16 - 07/31/17	0.978
08/01/17 - 07/31/18	0.903
08/01/18 - 07/31/19	0.956
08/01/19 - 07/31/20	0.971
08/01/20 - 07/31/21	0.993

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
08/01/16 - 07/31/17	25,794,153,059	2,935,836	3,536,322	2,138,205	4,532,264	6,472,158	6,670,469	13,142,627
08/01/17 - 07/31/18	25,751,847,421	2,225,802	4,515,982	1,523,121	5,737,376	6,741,784	7,260,497	14,002,281
08/01/18 - 07/31/19	25,586,850,462	3,249,361	3,626,550	2,368,930	5,034,649	6,875,911	7,403,579	14,279,490
08/01/19 - 07/31/20	24,898,092,784	5,719,136	3,757,962	3,556,621	4,217,686	9,477,098	7,774,307	17,251,405
08/01/20 - 07/31/21	29,554,595,548	3,797,056	7,148,199	2,559,247	6,267,922	10,945,255	8,827,169	19,772,424
Total	131,585,539,274	17,927,191	22,585,015	12,146,124	25,789,897	40,512,206	37,936,021	78,448,227
INDICATED PURE PREMIUM						0.031	0.029	0.06

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	0.036	0.034	0.07
Conversion Factors (App. B-I, Section B)	0.916	0.896	xxx
PURE PREMIUMS PRESENT ON RATE LEVEL (Underlying Pure Premiums) x (Conversion Factor)	0.033	0.030	0.06



CONNECTICUT

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	0.031	0.029	0.06
2. Pure Premium Indicated by National Relativity	0.037	0.034	0.07
3. Pure Premium Present on Rate Level	0.033	0.030	0.06
4. State Credibilities	98%	100%	xxx
5. National Credibilities	1%	0%	xxx
6. Residual Credibilities = 100% - (4) - (5)	1%	0%	xxx
7. Derived by Formula Pure Premiums = (1) x (4) + (2) x (5) + (3) x (6)	0.031	0.029	0.06
8. Test Correction Factor	0.9947	0.9947	xxx
9. Underlying Pure Premiums = (7) x (8) *	0.031	0.029	0.06
10. Ratio of Manual to Standard Premium			1.133
11. Loss Cost = (9) x (10)			0.07
12. Loss Cost Within Swing Limits			0.07
Current Loss Cost x Swing Limits			
a) Lower bound = 0.08 x 0.710 = 0.06			
b) Upper bound = 0.08 x 1.110 = 0.08			
13. Pure Premiums Underlying Proposed Loss Cost* = ((13TOT) / (9TOT)) x (9) , (13TOT) = (12) / (10)	0.031	0.029	0.06
14. Miscellaneous Loadings			0.00
15. Final Loaded Loss Cost			0.07

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



CONNECTICUT

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 \$1,832,000 of payroll, the overall loss cost level change in Connecticut is -15.8%.

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 Connecticut proposed level.
- A final base pure premium is calculated by bringing the primary base pure premium to the proposed Connecticut 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.



CONNECTICUT

APPENDIX B-IV

II. The F-class code countrywide relativities:

Class Code	Countrywide Relativity**
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

6824	6874	7309	7313
7327	7350	8709	8726



CONNECTICUT

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			1.618
3. Countrywide State Act Weight			24%
4. Primary Base Pure Premium = [(1) x (2) x (3)] + [(1) x (1 - (3))]			3.17
5. Countrywide Weights	51%	49%	100%
6. Trend Factors	0.968	0.944	xx
7. Weighted Benefits	1.000	1.003	xx
8. Weighted Loss-Based Expenses	1.204	1.204	xx
9. Secondary Base Pure Premium = (4tot) x (5) x (6) x (7) x (8)	1.884	1.771	3.66
10. Additional Offsets			1.000
11. Final Base Pure Premium = (9) x (10)			3.66



CONNECTICUT

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. Connecticut's Final Base Pure Premium	3.66
2. Countrywide Class Code 6872 Relativity (Section II)	1.268
3. Loss Cost = (1) x (2)	4.64
4. Loss Cost Within Swing Limits	4.64
Current Loss Cost x Swing Limits	
a) Lower bound = $4.93 \times 0.80 = 3.95$	
a) Upper bound = $4.93 \times 1.20 = 5.91$	
5. Miscellaneous Loadings	0.00
6. Final Loaded Loss Cost	4.64



CONNECTICUT

APPENDIX B-IV

Computation of Workers' Compensation Commission Administrative Assessment

I. INDUSTRIAL CLASSIFICATIONS

1.	WC Commission Assessment as a Percentage of Losses (source: CT WCC)	3.11%
2.	Proposed Permissible Loss Ratio (Appendix D, Section A)	72.4%
3.	Proposed Assessment as a Percentage of Premium = (1) x (2)	2.3%

II. "F" CLASSIFICATIONS

4.	2023 USL&HW Assessments on Total Losses (Appendix B-IV)	4.5%
5.	Percent of "F" Class Losses under State Act (Appendix B-IV)	24.0%
6.	Percent of "F" Class Losses under Federal Act = (1 - (5))	76.0%
7.	Assessments as a Percentage of Premium = { [(1) x (5)] + [(4) x (6)] } x (2)	3.0%

Per the Connecticut Insurance Department, we are proposing the following:

I. INDUSTRIAL CLASSIFICATIONS

1.	Proposed Assessment as a Percentage of Premium = (3)	2.3%
----	--	------

II. "F" CLASSIFICATIONS

2.	Assessments as a Percentage of Premium = (7)	3.0%
----	--	------

Note: The Workers' Compensation Commission Administrative Assessment is NOT part of the loss costs or assigned risk rates. The Connecticut Insurance Department requests that NCCI calculate the annual assessment for Industrial Codes and "F" Classifications as a percent of premium.



CONNECTICUT

APPENDIX B-IV

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

1.) Assessment Rate on Indemnity Losses *	8.0%
2.) Assessment Rate on Total Losses #	4.5%

* 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



CONNECTICUT

APPENDIX B-V

Calculation of Factor to Convert Loss Costs to Assigned Risk Rates

A factor of 1.790 [= $1.500 / 1.204 / 0.724 \times 1.040$] is applied to the loss costs in order to convert to assigned risk rates. The proposed assigned risk differential (1.500) is applied. Next, since the loss costs include a provision for loss adjustment expense, that provision (1.204) is removed and assigned risk expenses are loaded through application of the permissible loss ratio (0.724). The uncollectible premium provision (1.040) is also applied.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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.

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

- Annual Updates to the Medical Fee Schedule



CONNECTICUT

APPENDIX C-I

ANALYSIS OF CONNECTICUT MEDICAL FEE SCHEDULE CHANGES EFFECTIVE APRIL 1, 2023 AND JULY 15, 2023

NCCI estimates that the changes to the Connecticut Facility fee schedule, effective April 1, 2023, will result in an impact of +0.5% on overall workers compensation system costs.

NCCI estimates that the changes to the Connecticut Practitioner fee schedule, effective July 15, 2023, will result in an impact of +0.1% on overall workers compensation system costs.

SUMMARY OF CHANGES

The changes to the medical fee schedule published by the Connecticut Workers' Compensation Commission (WCC) are summarized below.

- Update the hospital inpatient fee schedule to be based on 174% of Medicare's 2023 Inpatient Prospective Payment System (IPPS). Prior to April 1, 2023, hospital inpatient services were subject to a maximum reimbursement rate of 174% of the 2022 IPPS.
- Update the hospital outpatient and hospital-based ambulatory surgical center (ASC) fee schedule to be based on 210% of Medicare's 2023 Outpatient Prospective Payment System (OPPS). Prior to April 1, 2023, hospital outpatient and hospital-based ASC services were subject to a maximum reimbursement rate of 210% of the 2022 OPPS.
- Update the non-hospital-based ASC fee schedule to be based on 195% of Medicare's 2022 OPPS. Prior to April 1, 2023, non-hospital-based ASC services were subject to a maximum reimbursement rate of 195% of the 2022 OPPS.
- The quantified changes to the 2023 Connecticut Practitioner Fee Schedule include revised maximum allowable reimbursements (MARs) for physician services.



CONNECTICUT

APPENDIX C-I

ANALYSIS OF CONNECTICUT MEDICAL FEE SCHEDULE CHANGES EFFECTIVE APRIL 1, 2023 AND JULY 15, 2023

ACTUARIAL ANALYSIS

NCCI's methodology to evaluate the impact of medical fee schedule changes includes three major steps:

1. Calculate the percentage change in maximum reimbursements
 - Compare the prior and revised maximum reimbursements by procedure code to determine the percentage change by procedure code. For hospital inpatient services, the prior and revised maximum reimbursements are compared by episode.
 - Calculate the weighted-average percentage change in maximum reimbursements for the fee schedule using observed payments by procedure code as weights. For hospital inpatient services, the observed payments by episode are used as weights. For hospital outpatient services, Connecticut's hospital outpatient fee schedule follows Medicare rules which contain a comprehensive payment policy that packages payment for adjunctive and secondary items, services, and procedures into the primary procedure under certain circumstances. For this analysis, the hospital outpatient experience is aggregated according to the packaging rules, where applicable.
2. Determine the share of costs that are subject to the fee schedule
 - The share is based on a combination of fields, such as procedure code, provider type, and place of service, as reported on the NCCI Medical Data Call, to categorize payments that are subject to the fee schedule.
 - Any potential impact from the share of costs not subject to the fee schedule will be realized in future claim experience and reflected in subsequent NCCI loss cost filings, as appropriate.
3. Estimate the price level change as a result of the revised fee schedule
 - NCCI research by David Colón and Paul Hendrick, "The Impact of Fee Schedule Updates on Physician Payments" (2018), suggests that approximately 80% of the change in maximum reimbursements for physician fee schedules is realized on payments impacted by the change.
 - For facility fee schedule changes, a price realization factor of 80% is assumed.

In this analysis, NCCI relies primarily on two data sources:

- Detailed medical data underlying the calculations in this analysis are based on NCCI's Medical Data Call for Connecticut for Service Year 2021. Reported medical experience for COVID-19 claims as reported in NCCI Call 31 for Large Loss and Catastrophe have been excluded from the data on which this analysis is based.
- The share of benefit costs attributed to medical benefits is based on NCCI's Financial Call data for Connecticut from Policy Years 2019 and 2020 projected to the effective date of the benefit changes.



CONNECTICUT

APPENDIX C-I

ANALYSIS OF CONNECTICUT MEDICAL FEE SCHEDULE CHANGES
EFFECTIVE APRIL 1, 2023 AND JULY 15, 2023

SUMMARY OF IMPACTS

The impacts from the fee schedule changes in Connecticut, effective April 1, 2023, are summarized below.

Type of Service	(A) Impact on Type of Service	(B) Share of Medical Costs	(C) = (A) x (B) Impact on Medical Costs
Hospital Inpatient	+3.2%	13.2%	+0.4%
Hospital Outpatient	+3.9%	12.4%	+0.5%
ASC	+2.5%	13.0%	+0.3%
(D) Combined Impact on Medical Costs = Total of (C)			+1.2%
(E) Medical Costs as a Share of Overall Costs			44%
(F) Combined Impact on Overall Costs = (D) x (E)			+0.5%

The impact of Connecticut’s practitioner fee schedule change, effective July 15, 2023, is summarized below.

	(A)	(B)	(C) = (A) x (B)	(D)	(E) = (C) x (D)
Type of Service	Impact on Type of Service	Share of Medical Costs	Impact on Medical Costs	Medical Costs as a Share of Overall Costs	Impact on Overall Costs
Physician	+0.5%	40.0%	+0.2%	44%	+0.1%

Refer to the appendix for the weighted-average changes in MARs by physician practice category, the share of costs subject to the fee schedule by type of service, and the weighted-average change in MAR by type of service.

ADDITIONAL CONSIDERATIONS

In Connecticut, the reimbursement for ASC services varies depending on the ownership of the facility. Hospital-based ASCs are subject to a maximum reimbursement based on Medicare’s OPPS packaging rules. Non-hospital-based ASCs use Multiple Procedure Payment Reduction, which reduces the payment for second and subsequent procedures by 50%. For the purpose of this analysis, it was assumed that all ASCs are non-hospital based.



CONNECTICUT

APPENDIX C-I

ANALYSIS OF CONNECTICUT MEDICAL FEE SCHEDULE CHANGES EFFECTIVE APRIL 1, 2023 AND JULY 15, 2023

NON-QUANTIFIED CHANGES

For the following changes, any potential impact will be realized in future loss experience and reflected in subsequent NCCI loss cost filings in Connecticut, as appropriate.

- Maximum reimbursements for custom orthotics and prosthetics are also governed by the fee schedule in Connecticut. The share of these payments with a MAR makes up a small portion of medical costs. Therefore, the impact on overall costs due to updating the fee schedule for these services is not anticipated to be material.
- Per Memorandum 2023-02, the MAR for an Employer/Respondent's Examination (RME, previously "IME") was increased from \$750 to \$850 effective June 1, 2023. Since there is no single procedure code assigned for RMEs in the Connecticut WCC medical fee schedule, the cost impact of this change cannot be explicitly quantified. An analysis of relevant procedure codes indicates that the share of payments for IME/RME services make up a small portion of medical costs. Therefore, the impact on overall costs due to updating the MAR for these services is not anticipated to be material.
- Per Memorandum 2023-03, the MARs for Commission Medical Exams and Employer/Respondent Exams do not apply to psychiatrists, psychologists, neuropsychologists, and neuropsychiatrists effective June 10, 2023. Since there is no single procedure code assigned for these services in the Connecticut WCC medical fee schedule, the cost impact of this change cannot be explicitly quantified. An analysis of relevant procedure codes indicates that the share of payments for these services make up a small portion of medical costs. Therefore, the impact on overall costs due to this change is not anticipated to be material.



CONNECTICUT

APPENDIX C-I

ANALYSIS OF CONNECTICUT MEDICAL FEE SCHEDULE CHANGES
EFFECTIVE APRIL 1, 2023 AND JULY 15, 2023

APPENDIX

Weighted-Average Percentage Change in MARs Prior to Price Realization by Physician Practice Category

Physician Practice Category	Share of Physician Costs	Percentage Change in MARs
Anesthesia	3.0%	–
Surgery	29.1%	+1.5%
Radiology	8.2%	-0.2%
Pathology & Laboratory	0.4%	+1.0%
Physical Medicine	29.4%	+0.5%
General Medicine	2.5%	-0.1%
Evaluation & Management	22.0%	+0.4%
Physician Payments with no specific MAR	5.4%	–
Total	100.0%	+0.6%

Share of Costs Subject to the Fee Schedule and Weighted-Average Percentage Change in MARs by Type of Service

Type of Service	Share of Costs Subject to the Fee Schedule	Percentage Change in MARs	Impact after 80% Price Realization
Physician	94.6%	+0.6%	+0.5%
Hospital Inpatient	72.2%	+4.0%	+3.2%
Hospital Outpatient	93.6%	+4.9%	+3.9%
ASC	99.5%	+3.1%	+2.5%



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Appendix D – Determination of Assigned Risk Rates

Overall Proposed Change to Assigned Risk Rate Level

NCCI applies an assigned risk loss cost multiplier (LCM) to the voluntary market loss costs to calculate the assigned risk rates. This factor accounts for differences in the components included in the assigned risk rates versus those in the voluntary market loss costs. The key components of the assigned risk loss cost multiplier are the assigned risk differential, assigned risk market expenses (as reflected in the assigned risk permissible loss ratio (PLR)), and the uncollectible premium provision (UPP). Voluntary market loss-based expenses (LBE) must also be removed in the calculation since the servicing carrier allowance already contemplates these expenses for the assigned risk market. The assigned risk loss cost multiplier formula is as follows:

$$\text{Assigned Risk Loss Cost Multiplier} = (\text{AR Differential}) \div (\text{Voluntary LAE}) \div (\text{PLR}) \times \text{UPP}$$

The proposed changes to assigned risk rates, as well as the detailed calculations, can be found on the following pages.

Assigned Risk Differential

The primary purpose of the loss cost differential is to ensure equity between the assigned risk and voluntary markets. To help ensure a self-funded assigned risk market—one that does not require subsidization by participants in the voluntary market—the adequacy of the loss cost differential is reviewed.

In Connecticut, as is usually the case, the combined experience for employers in the assigned risk market is typically worse than that of employers in the voluntary market. Therefore, during the assigned risk ratemaking process, a surcharge called the assigned risk differential is applied to those in the assigned risk market to recognize this disparity.

To derive the indicated differential, loss ratios are calculated for both the (i) assigned risk market and (ii) voluntary market by individual year as follows:

$$\frac{(\text{total on-leveled losses})}{(\text{total on-leveled, developed standard premium at the voluntary level})}$$

For each individual policy year, the assigned risk loss ratio is divided by the statewide loss ratio to produce loss ratio relativities. These loss ratio relativities are reviewed for ten individual years so that changes in the actual differentials can be observed over a long period of time. When selecting the assigned risk differential, the impact of additional premium that is already expected to be generated due to other assigned risk programs (e.g., removal of premium discounts, Assigned Risk Adjustment Program) is also reflected in the calculation.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Appendix D – Determination of Assigned Risk Rates

Based on this year's review, a small increase to the current assigned risk loss cost differential from 1.491 to 1.500 is being proposed. The data underlying this calculation is shown in Appendix D – Derivation of Assigned Risk Differential.

Assigned Risk Expenses

Provisions for expense items related to the writing of workers compensation insurance not already contemplated in the loss costs must be included in the final assigned risk rates. These include:

- **Servicing Carrier Allowance (SCA):** This is the market-based cost paid to the assigned risk market servicing carriers as a percentage of final net collected premium that is intended to compensate for expenses incurred in handling the assigned risk business. The average SCA is determined through a competitive bid process and typically includes provisions for such items as general (overhead), production, and loss-based expenses.
- **Assigned Risk Administration Expense:** Reflects NCCI Plan Administration Expenses, NWCRA Pool Administration Expenses, and Servicing Carrier Other Expenses. It is selected based on a review of expenses as a percentage of premium over the past ten years.
- **Average Commission:** Based on a weighted average of the most recently available two policy years.
- **Profit and Contingency Provision:** Insurers should have an opportunity to earn a fair rate of return on the capital supporting all of their workers compensation business, including the funds supplied to the assigned risk market. Therefore, assigned risk rate filings should contemplate the inclusion of a fair and reasonable profit and contingency (P&C) provision. A reasonable return helps to ensure equity in the residual market and continued participation in the voluntary market, particularly in light of the long-tail nature of the workers compensation line.

The proposed P&C provision in this year's filing was selected based on the results of NCCI's Internal Rate of Return (IRR) model, which estimates the time series of expected future cash flows including premium, losses, expenses, investment income and taxes, for a representative insurer underwriting workers compensation coverage. In determining the P&C provision, NCCI reviews both a static and a dynamic P&C estimate as indicated by the IRR model. The static estimate takes into account current interest rates, while the dynamic estimate incorporates projections of future interest rate levels. The P&C selection is based on a review of both these estimates, while also considering stability in this filing component. In this filing, NCCI is proposing a decrease to the P&C provision from 1.0% to 0.0%, which considers the notable shift in interest rates from previous years.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Appendix D – Determination of Assigned Risk Rates

Note that the expense components that are based on net premium are converted to a standard premium basis excluding the impact of expense constants. Then the total assigned risk expenses are used to determine the Permissible Loss Ratio (PLR):

$$PLR = 100\% - (\text{provision for Assigned Risk Expenses})$$

The calculation of assigned risk expenses can be found in Appendix D – Expense Components of Assigned Risk Rate.

Uncollectible Premium Provision

The purpose of the uncollectible premium provision is to make available sufficient funds in the rate structure to offset the policy premium ultimately determined to be uncollectible. Based on a review of historical ratios of ultimate gross premium to ultimate collected premium in Connecticut's assigned risk market, NCCI is proposing no change to the uncollectible premium provision factor of 1.040.

The data underlying this provision is shown in Appendix D – Calculation of Ultimate Uncollectible Premium Provision (UPP) Factor.



CONNECTICUT

APPENDIX D

Determination of Assigned Risk Rate Level Change

Section A - Derivation of the Assigned Risk Loss Cost Multiplier

This filing proposes a -10.5% overall average change to the current assigned risk rate level. For all classifications, an assigned risk multiplier is applied to the voluntary loss costs proposed effective January 1, 2024 in order to convert to assigned risk rates.

(1) Current Assigned Risk Loss Cost Multiplier	1.805
(2) Proposed Assigned Risk Loss Cost Differential (See Section B)	1.500
(3) Proposed Voluntary Loss-based Expense Provision (Exhibit II)	20.4%
(4) Indicated Assigned Risk Permissible Loss Ratio (See Section C)	72.4%
(5) Proposed Uncollectible Premium Provision Factor (See Section F)	1.040
(6) Indicated Assigned Risk Loss Cost Multiplier = $\{(2) / [1.0 + (3)] / (4)\} \times (5)$	1.790
(7) Indicated Change in the Assigned Risk Loss Cost Multiplier = $[(6) / (1)] - 1.0$	-0.8%
(8) Proposed Voluntary Loss Cost Level Change (Exhibit I)	-9.8%
(9) Indicated Assigned Risk Rate Level Change = $\{[1.0 + (7)] \times [1.0 + (8)]\} - 1.0$	-10.5%



CONNECTICUT

APPENDIX D

Determination of Assigned Risk Rates

Section B - Derivation of Assigned Risk Differential
Experience Valued as of 12/31/2022

Policy Year	(1) Standard Pure Premium		(3) Unlimited Undeveloped Paid+Case Losses	
	Assigned Risk	Statewide	Assigned Risk	Statewide
2012	8,126,190	238,584,033	20,958,991	393,164,705
2013	10,847,473	241,095,830	48,055,627	382,658,030
2014	11,356,339	248,752,186	24,982,872	329,457,019
2015	11,846,875	262,625,310	22,499,596	325,004,065
2016	10,933,506	266,054,899	17,997,862	306,663,034
2017	11,305,085	270,525,884	16,287,504	335,711,825
2018	11,504,373	284,768,959	20,006,151	292,250,746
2019	11,582,726	290,256,486	24,332,641	283,576,681
2020	11,613,561	295,179,389	32,477,161	257,298,393
2021	12,105,554	326,648,012	8,141,202	194,593,911
	(5) = (3) / (1)	(6) = (4) / (2)	(7) = (5) / (6)	(8) = (7) / Impact of ARAP^
Policy Year	Pure Premium Ratio		Assigned Risk to Statewide Relativity	Indicated Assigned Risk Differential
	Assigned Risk	Statewide		
2012	2.579	1.648	1.565	1.482
2013	4.430	1.587	2.791	2.643
2014	2.200	1.324	1.662	1.574
2015	1.899	1.238	1.534	1.453
2016	1.646	1.153	1.428	1.352
2017	1.441	1.241	1.161	1.099
2018	1.739	1.026	1.695	1.605
2019	2.101	0.977	2.150	2.036
2020	2.796	0.872	3.206	3.036
2021	0.673	0.596	1.129	1.069
			10-year average	1.735
			10-year xhilo	1.656
			Current Assigned Risk Differential	1.491*
			Proposed Assigned Risk Differential	1.500*
			Proposed Change in Assigned Risk Differential	1.006
				+0.6%

^ Impact of the Assigned Risk Adjustment Program (ARAP) = 1.056

* Considers the impact of reduced premium discounts.



CONNECTICUT

APPENDIX D

Determination of Assigned Risk Rates

Section C - Expense Components of Assigned Risk Rate

The assigned risk expense provision including loss-based expenses is derived directly from the servicing carrier allowance, since this is the market-based cost to the assigned risk plan to have the plan serviced. The average commission rate, the profit and contingency provision, a provision for administrative expenses, and all taxes and assessments not included in the servicing carrier allowance must be added to the allowance to derive an average expense provision as a percentage of standard premium excluding the expense constants.

	<u>Expense Provisions Underlying Proposed Rates</u>
(1) Expense Constant	\$160
(2) Weighted-Average of Servicing Carrier Allowance Bids	19.1%
(3) Premium Tax	1.5%
(4) Assigned Risk Administration Expense (See Section E)	4.8%
(5) Premium Discount as a Percentage of Standard Premium Excluding the Expense Constant (See Section D)	1.6%
(6) Expense Constant Premium as a Percentage of Standard Premium Excluding the Expense Constant (See Section D)	5.4%
(7) Servicing Carrier Allowance, Taxes and Administrative Expense Converted to a Standard Premium Excluding Expense Constant Basis = [(2) + (3) + (4)] x [1 - (5) + (6)] + (5) - (6)	22.6%
(8) Average Commission (See Section D)	5.0%
(9) Profit and Contingency Provision (See Section G)	0.0%
(10) Total Expense Provision in Rate = (7) + (8) + (9)	27.6%
(11) Permissible Loss Ratio in Rate = 1 - (10)	72.4%
(12) Current Permissible Loss Ratio in Rate	71.5%
(13) Impact on Rate due to Change in Expenses = (12) / (11) - 1	-1.2%



CONNECTICUT

APPENDIX D

Determination of Assigned Risk Rates

Section D - Derivation of Premium Discount, Expense Constant and Commission as a Percentage of Premium

Premium Distribution by Layer for Assigned Risk Policies for Policy Years 2021 & 2022

	(1)	(2)	(3) ¹	(4) ¹
Portion of Total Standard Premium	Standard Premium Excl Exp Cnst	Standard Premium Excl Exp Cnst Distribution	Commission Scale ²	Premium Discounts
First 1,000	18,709,044	30.6%	8.0%	--
Next 4,000	16,967,127	27.9%	5.0%	--
Next 5,000	6,423,334	10.6%	3.0%	--
Next 90,000	15,403,703	25.3%	3.0%	5.1%
Next 100,000	2,052,782	3.4%	2.0%	5.1%
Next 1,550,000	1,314,145	2.2%	2.0%	6.5%
Over 1,750,000	0	0.0%	2.0%	7.5%
Total	60,870,135	100.0%	5.0%	1.6%

(5) Expense Constant Premium as % of Standard Premium Excluding Expense Constant ³ = 5.4%

¹ Totals represent weighted averages based on column (2).

² Commissions paid in Connecticut are based on standard premium excluding expense constant premium. Source of the commission scale is Connecticut's Residual Market Manual, Producer Fees.

³ Based on assigned risk policy and premium totals for policy years 2021 & 2022 using the dominant state method for the classification of multistate policies.



CONNECTICUT

APPENDIX D

Determination of Assigned Risk Rates

Section E - Derivation of NCCI Plan Administration Expenses, NWCRA Pool Administration Expenses, and Servicing Carrier Other Expenses

	(1)	(2)	(3)
Calendar Year	Net Written Premium ¹	Expenses	Expenses as % of NWP = (2)/(1)
2013	40,119,761	1,625,692	4.1%
2014	41,749,644	1,635,357	3.9%
2015	40,258,766	1,492,000	3.7%
2016	30,795,342	1,314,112	4.3%
2017	26,113,613	1,221,283	4.7%
2018	26,638,105	1,352,311	5.1%
2019	19,291,124	1,248,810	6.5%
2020	17,917,073	1,224,224	6.8%
2021	20,796,265	1,091,213	5.2%
2022	21,398,110	1,115,525	5.2%
		Selected	4.8%

¹ Gross of uncollectible premium.



CONNECTICUT

APPENDIX D

Determination of Assigned Risk Rates

Section F - Calculation of Ultimate Uncollectible Premium Provision (UPP) Factor

Section 1 - Gross Premium as of 12/31/2022 - Traumatic Only (000s)

Policy Year	1st	2nd	3rd	4th	5th	6th	7th	8th	Ultimate Gross
2007								23,695	23,695
2008							18,670	18,679	18,679
2009						15,214	15,211	15,211	15,211
2010					15,745	15,749	15,748	15,747	15,747
2011				17,555	17,560	17,559	17,557	17,528	17,528
2012			28,426	28,286	28,304	28,292	28,288	28,288	28,288
2013		37,209	36,913	36,828	36,818	36,894	36,892	36,891	36,891
2014	43,192	42,990	42,722	42,332	42,269	42,265	42,263	42,254	42,254
2015	41,931	42,113	42,056	42,072	42,081	42,048	42,021		42,021
2016	28,608	28,475	28,483	28,301	28,321	28,388			28,388
2017	28,754	27,418	27,276	27,874	27,241				27,268
2018	24,448	24,172	24,182	24,174					24,198
2019	18,982	17,693	17,759						17,742
2020	19,579	17,863							17,845
2021	19,433								18,597

Policy Year	1 / 2	2 / 3	3 / 4	4 / 5	5 / 6	6 / 7	7 / 8	8 / Ult
2011						1.000	0.998	
2012					1.000	1.000	1.000	
2013				1.000	1.002	1.000	1.000	
2014			0.991	0.999	1.000	1.000	1.000	
2015		0.999	1.000	1.000	0.999	0.999		
2016	0.995	1.000	0.994	1.001	1.002			
2017	0.954	0.995	1.022	0.977				
2018	0.989	1.000	1.000					
2019	0.932	1.004						
2020	0.912							
5-Yr Avg	0.956	1.000	1.001	0.995	1.001	1.000	1.000	
5-Yr Avg x H/L	0.958	1.000	0.998	1.000	1.001	1.000	1.000	
Selected	0.958	1.000	0.998	1.000	1.001	1.000	1.000	1.000
Ultimate	0.957	0.999	0.999	1.001	1.001	1.000	1.000	1.000

Section 2 - Collected Premium as of 12/31/2022 - Traumatic Only (000s)

Policy Year	1st	2nd	3rd	4th	5th	6th	7th	8th	Ultimate Collected	Gross / Collected
2007								22,078	22,078	1.073
2008							17,276	17,286	17,286	1.081
2009						14,783	14,801	14,802	14,802	1.028
2010					14,763	14,893	14,906	14,944	14,944	1.054
2011				16,330	16,349	16,346	16,458	16,488	16,488	1.063
2012			26,788	26,795	26,830	26,843	26,878	26,893	26,893	1.052
2013		35,733	35,494	35,441	35,719	35,789	35,814	35,819	35,819	1.030
2014	42,426	41,051	40,880	40,894	40,899	40,968	40,967	40,958	40,958	1.032
2015	40,827	40,353	40,131	40,217	40,204	40,194	40,184		40,224	1.045
2016	27,567	27,019	26,397	26,496	26,625	26,734			26,788	1.060
2017	27,631	25,759	25,798	26,259	25,691				25,794	1.057
2018	23,855	23,364	23,299	23,295					23,435	1.033
2019	18,657	17,044	17,203						17,341	1.023
2020	19,207	17,241							17,344	1.029
2021	19,045								18,055	1.030

Policy Year	1 / 2	2 / 3	3 / 4	4 / 5	5 / 6	6 / 7	7 / 8	8 / Ult	5-Yr Avg	1034
2011						1.007	1.002		10-Yr Avg	1.039
2012					1.001	1.001	1.001		10-Yr x H/L	1.039
2013				1.008	1.002	1.001	1.000		15-Yr Avg	1.046
2014			1.000	1.000	1.002	1.000	1.000		15-Yr x H/L	1.045
2015		0.995	1.002	1.000	1.000	1.000				
2016	0.980	0.977	1.004	1.005	1.004				Selected UPP Factor	1.040
2017	0.932	1.002	1.018	0.978					Current UPP Factor	1.040
2018	0.979	0.997	1.000							
2019	0.914	1.009								
2020	0.898								Impact of Change in UPP Factor	1.000
5-Yr Avg	0.941	0.996	1.005	0.998	1.002	1.002	1.001			
5-Yr Avg x H/L	0.942	0.998	1.002	1.002	1.002	1.001	1.001			
Selected	0.942	0.998	1.002	1.002	1.002	1.001	1.001	1.000		
Ultimate	0.948	1.006	1.008	1.006	1.004	1.002	1.001	1.000		

Source: Residual Market Data reported to NCCI by Pool Servicing carriers.



CONNECTICUT

APPENDIX D - Determination of Assigned Risk Rates

Section G - Derivation of the Indicated Profit and Contingency Provision

Overview

According to actuarial principles, insurance rates should provide for the cost of capital through an underwriting profit and contingency (P&C) provision, after accounting for investment and other income. NCCI considered Actuarial Standard of Practice #30 *Treatment of Profit and Contingency Provisions and the Cost of Capital in Property/Casualty Insurance Ratemaking* in choosing to employ an Internal Rate of Return (IRR) model to estimate a P&C provision. The cost of capital and investment income assumptions used in the model are estimated using market-based financial methods for investors of securities with a similar risk profile to workers compensation insurance companies. Note that the assumptions used in this IRR model, including the cost of capital and investment income assumptions, may or may not be applicable to any individual insurance company in this state.

The IRR model is based on the principle that the internal rate of return from an investment opportunity equals the investor's cost of capital if the sum of all cash flows from that investment, discounted at the cost of capital, equals zero. In the case of workers compensation insurance, cash flows to the capital providers are comprised of insurance cash flows, investment income, and commitment and release of capital in support of the insurance transaction.

- The insurance cash flows are estimated based on premiums earned less payments for losses and expenses, as included in this rate filing, after recognizing the impact of federal income taxes.
- Investment income on reserves and surplus depends on an after-tax return on investment (RoI), which is estimated using a combination of current financial market data and forecasts.
- The cost of capital used is a weighted average cost of capital (WACC), expressed as a percentage of capital, which takes into account both debt and equity components of a representative insurer's capital structure.

IRR Model Inputs and Results

The model estimates the P&C provision necessary in order for the proposed rates to cover the cost of capital. The P&C provision is estimated using two different assumptions regarding the return on investment and cost of capital:

- The "Static" estimate of the P&C provision assumes that the return on investment and the WACC do not change over time. Static estimates of the return on investment and the WACC are derived using data through the first quarter of 2023.
- The "Dynamic" estimate assumes that the return on investment and WACC vary over time. Dynamic estimates are derived using data through the first quarter of 2023, with forecasts from May of that year. The starting point for the Dynamic estimates is January 1, 2024.

The following table summarizes the inputs and results of the model under these two scenarios.

TABLE 1: IRR MODEL INPUTS AND RESULTS

<u>Inputs:</u>			
(1)	Expenses and Taxes as a Percentage of Net Premium at NCCI Level		30.22%
(1a)	Uncollectible Premium		0.00%
(2)	Reserve-to-Surplus Ratio		1.89
(3)	Cash Flow Patterns		See Table 2
		<u>Static</u>	<u>Dynamic*</u>
(4)	Return on Investments	4.51%	4.61% - 3.91%
(5)	Weighted Average Cost of Capital	9.82%	10.06% - 9.51%
<u>Results</u>			
		<u>Static</u>	<u>Dynamic</u>
(6)	Indicated Profit and Contingency Provision	-3.61%	-2.25%
(7)	Loss Provision [100% - (6) - (1)]	73.39%	72.03%

Table Notes:

It is assumed that no policyholders' dividends are paid and that there are no rate departures (deviations or schedule rating).

(1) Expense provisions and taxes derived from the filing.

(2) Calculated from Best's 2022 Aggregates & Averages, for Commercial Casualty Composite, as the weighted average of Loss, LAE, and Unearned Premium Reserves to Policyholder Surplus, for years 2017 - 2021.

* See Table 3 for details by time period.



CONNECTICUT

APPENDIX D - Determination of Assigned Risk Rates

Section G - Derivation of the Indicated Profit and Contingency Provision

TABLE 2: CASH FLOW PATTERNS (CUMULATIVE)

Time	(1) Policy-Year Collected Premium	(2) Earned Premium	(3) Written Premium	(4) Expenses and Taxes	(5) Paid Losses
0.00	-	-	-	-	-
0.25	22.96%	3.20%	25.62%	21.82%	0.49%
0.50	48.72%	13.10%	53.55%	47.44%	2.01%
0.75	74.69%	29.68%	79.08%	73.40%	4.56%
1.00	100.00%	52.06%	100.00%	98.74%	8.00%
1.25		73.86%		100.00%	14.40%
1.50		88.96%			20.80%
1.75		97.39%			27.20%
2.00		100.00%			33.60%
2.25					38.03%
2.50					42.45%
2.75					46.88%
3.00					51.30%
3.25					54.35%
3.50					57.40%
3.75					60.45%
4.00					63.50%
4.25					65.50%
4.50					67.50%
4.75					69.50%
5.00					71.50%
6.00					76.10%
7.00					79.90%
8.00					82.60%
9.00					84.40%
10.00					86.30%
11.00					87.80%
12.00					88.60%
13.00					89.60%
14.00					90.50%
15.00					90.90%
16.00					91.50%
17.00					91.90%
18.00					92.30%
19.00					93.00%
20.00					93.30%
21.00					93.70%
22.00					94.00%
23.00					94.30%
24.00					94.70%
25.00					95.10%
26.00					95.20%
27.00					95.60%
28.00					95.80%
29.00					96.20%
30.00					96.60%
31.00					96.80%
32.00					97.71%
33.00					98.54%
34.00					99.31%
35.00					100.00%

TABLE 3: DYNAMIC ESTIMATE INPUTS

Time	(1) Return on Investments	(2) Weighted Average Cost of Capital
0.00	-	-
0.25	4.61%	10.06%
0.50	4.59%	10.05%
0.75	4.49%	9.93%
1.00	4.47%	9.85%
1.25	4.41%	9.79%
1.50	4.39%	9.74%
1.75	4.34%	9.70%
2.00	4.32%	9.67%
2.25	4.27%	9.67%
2.50	4.27%	9.72%
2.75	4.03%	9.72%
3.00	4.03%	9.70%
3.25	4.03%	9.71%
3.50	4.03%	9.72%
3.75	4.03%	9.72%
4.00	4.03%	9.73%
4.25	4.03%	9.73%
4.50	4.03%	9.71%
4.75	4.03%	9.71%
5.00	4.02%	9.70%
6.00	4.00%	9.67%
7.00	3.99%	9.62%
8.00	3.95%	9.59%
9.00	3.92%	9.58%
10.00	3.93%	9.57%
11.00	3.94%	9.55%
12.00	3.94%	9.54%
13.00	3.95%	9.54%
14.00	3.95%	9.53%
15.00	3.95%	9.52%
16.00	3.91%	9.52%
17.00	3.92%	9.53%
18.00	3.93%	9.54%
19.00	3.94%	9.55%
20.00	3.93%	9.54%
21.00	3.93%	9.53%
22.00	3.92%	9.53%
23.00	3.92%	9.52%
24.00	3.92%	9.52%
25.00	3.92%	9.51%
26.00	3.91%	9.51%
27.00	3.91%	9.51%
28.00	3.91%	9.51%
29.00	3.91%	9.51%
30.00	3.91%	9.51%
31.00	3.91%	9.51%
32.00	3.91%	9.51%
33.00	3.91%	9.51%
34.00	3.91%	9.51%
35.00	3.91%	9.51%

Table 2 Notes:

Table 2 shows cumulative cash flows. For ease of reading no additional numbers are shown after a column reaches 100% cumulative cash flow.

- (1) Derived from estimates of premium distribution and payment terms by size of policy.
- (2) Based on written premium pattern assuming uniform writings within quarters and standard quarterly earning pattern.
- (3) Based on this jurisdiction's premium writings by quarter.
- (4) Expenses assumed paid as premium is collected; timing of taxes based on NCCI's Tax and Assessment Directory.
- (5) Derived from loss development data underlying this rate filing. Payouts for the first 31 years are based upon the ratio of paid losses to incurred losses from the most recent 31 policy years for which data is available. For the following years, loss payouts are assumed to trail off geometrically, with an adjustment so that the payout will be complete at 35 years.



CONNECTICUT
APPENDIX D - Determination of Assigned Risk Rates
Section G - Derivation of the Indicated Profit and Contingency Provision

Calculation Details

The tables in the following pages show the detailed calculations of the IRR model.

List of Tables

Static Estimate
Table 4: Derivation of Insurance Cash Flows
Table 5: Derivation of Cash Flows to the Capital Providers
Dynamic Estimate
Table 6: Derivation of Insurance Cash Flows
Table 7: Derivation of Cash Flows to the Capital Providers
Appendices
Appendix A: Calculation of Weighted Average Cost of Capital and Return on Investments
Table A.1: Calculation of Weighted Average Cost of Capital
Table A.2: Calculation of Return on Investments
Appendix B: Federal Income Tax Incurred from Insurance Operations
Table B.1: Federal Income Tax Calculation (Static Estimate)
Table B.2: Federal Income Tax Calculation (Dynamic Estimate)
Appendix C: Reserve-to-Surplus Ratio

Note: Although values are displayed to 4 decimal places in the following tables, the calculations themselves are carried to the full precision of the computer.



CONNECTICUT

APPENDIX D - Determination of Assigned Risk Rates

Section G - Derivation of the Indicated Profit and Contingency Provision

Calculation Details - Static Estimate

TABLE 4: DERIVATION OF INSURANCE CASH FLOW (STATIC ESTIMATE)

Time	(1) Collected Premium Factor	(2) Expense and Taxes Factor	(3) Paid Losses Factor	(4) Federal Income Tax Factor	(5) Insurance Cash flow Factor
0.00	-	-	-	-	-
0.25	0.2296	0.0659	0.0036	(0.0009)	0.1609
0.50	0.4872	0.1434	0.0148	(0.0018)	0.3309
0.75	0.7469	0.2218	0.0335	(0.0027)	0.4943
1.00	1.0000	0.2984	0.0587	(0.0036)	0.6465
1.25	1.0000	0.3022	0.1057	(0.0018)	0.5939
1.50	1.0000	0.3022	0.1526	(0.0000)	0.5452
1.75	1.0000	0.3022	0.1996	0.0018	0.4964
2.00	1.0000	0.3022	0.2466	0.0035	0.4477
2.25	1.0000	0.3022	0.2791	0.0030	0.4158
2.50	1.0000	0.3022	0.3115	0.0024	0.3838
2.75	1.0000	0.3022	0.3440	0.0019	0.3519
3.00	1.0000	0.3022	0.3765	0.0013	0.3200
3.25	1.0000	0.3022	0.3989	0.0009	0.2981
3.50	1.0000	0.3022	0.4212	0.0004	0.2762
3.75	1.0000	0.3022	0.4436	(0.0001)	0.2543
4.00	1.0000	0.3022	0.4660	(0.0006)	0.2324
4.25	1.0000	0.3022	0.4807	(0.0010)	0.2181
4.50	1.0000	0.3022	0.4954	(0.0013)	0.2038
4.75	1.0000	0.3022	0.5100	(0.0017)	0.1895
5.00	1.0000	0.3022	0.5247	(0.0021)	0.1752
6.00	1.0000	0.3022	0.5585	(0.0029)	0.1423
7.00	1.0000	0.3022	0.5864	(0.0037)	0.1151
8.00	1.0000	0.3022	0.6062	(0.0044)	0.0961
9.00	1.0000	0.3022	0.6194	(0.0051)	0.0835
10.00	1.0000	0.3022	0.6333	(0.0056)	0.0701
11.00	1.0000	0.3022	0.6443	(0.0060)	0.0595
12.00	1.0000	0.3022	0.6502	(0.0063)	0.0539
13.00	1.0000	0.3022	0.6575	(0.0066)	0.0469
14.00	1.0000	0.3022	0.6641	(0.0069)	0.0406
15.00	1.0000	0.3022	0.6671	(0.0071)	0.0378
16.00	1.0000	0.3022	0.6715	(0.0073)	0.0336
17.00	1.0000	0.3022	0.6744	(0.0074)	0.0308
18.00	1.0000	0.3022	0.6774	(0.0074)	0.0279
19.00	1.0000	0.3022	0.6825	(0.0074)	0.0227
20.00	1.0000	0.3022	0.6847	(0.0074)	0.0205
21.00	1.0000	0.3022	0.6876	(0.0074)	0.0176
22.00	1.0000	0.3022	0.6898	(0.0075)	0.0154
23.00	1.0000	0.3022	0.6920	(0.0075)	0.0132
24.00	1.0000	0.3022	0.6950	(0.0075)	0.0103
25.00	1.0000	0.3022	0.6979	(0.0075)	0.0074
26.00	1.0000	0.3022	0.6986	(0.0075)	0.0066
27.00	1.0000	0.3022	0.7016	(0.0075)	0.0037
28.00	1.0000	0.3022	0.7030	(0.0075)	0.0022
29.00	1.0000	0.3022	0.7060	(0.0075)	(0.0007)
30.00	1.0000	0.3022	0.7089	(0.0075)	(0.0036)
31.00	1.0000	0.3022	0.7104	(0.0075)	(0.0051)
32.00	1.0000	0.3022	0.7171	(0.0075)	(0.0117)
33.00	1.0000	0.3022	0.7232	(0.0075)	(0.0178)
34.00	1.0000	0.3022	0.7288	(0.0076)	(0.0234)
35.00	1.0000	0.3022	0.7339	(0.0076)	(0.0285)

Column Notes:

- (1) is Collected Premium by time period, expressed as a factor, = Table 2 col (1) x [1 - Table 1 col (1a)]
- (2) is Expenses and Taxes by time period, expressed as a factor, = Table 1 row (1) x Table 2 col (4)
- (3) is Paid Losses by time period, expressed as a factor, = Table 1 row (7, Static) x Table 2 col (5)
- (4) per the Tax Cuts and Jobs Act of 2017, federal income taxes are computed as the tax rate (21%) times the adjusted underwriting income calculated per IRS rules. See Appendix B for details.
- (5) is the Total Insurance Cash Flow by time period, expressed as a factor, = (1) - [(2) + (3) + (4)]



CONNECTICUT

APPENDIX D - Determination of Assigned Risk Rates

Section G - Derivation of the Indicated Profit and Contingency Provision

Calculation Details - Static Estimate (continued)

TABLE 5: DERIVATION OF CASH FLOWS TO THE CAPITAL PROVIDERS (STATIC ESTIMATE)

Time	(1) Unearned Premium and Unpaid Loss Reserve Factor	(2) Factor for Surplus Allocated to Reserves	(3) Admitted Agents' Balances	(4) Total Invested Funds Factor	(5) Income from Invested Funds Factor	(6) Capital Provider Equity Factor	(7) Capital Provider Cash Flow Factor	(8) Discounted Capital Provider Cash Flow Factor
0.00	-	-	-	-	-	-	-	-
0.25	0.2441	0.1291	0.0266	0.3466	0.0019	(0.1837)	(0.1837)	(0.1816)
0.50	0.4859	0.2571	0.0483	0.6946	0.0077	(0.3561)	(0.1723)	(0.1664)
0.75	0.6784	0.3589	0.0439	0.9934	0.0171	(0.4820)	(0.1259)	(0.1187)
1.00	0.8027	0.4247	-	1.2275	0.0294	(0.5516)	(0.0696)	(0.0641)
1.25	0.6978	0.3692	-	1.0669	0.0421	(0.4309)	0.1207	0.1086
1.50	0.6106	0.3231	-	0.9337	0.0532	(0.3352)	0.0956	0.0841
1.75	0.5412	0.2864	-	0.8276	0.0630	(0.2681)	0.0671	0.0576
2.00	0.4873	0.2578	-	0.7451	0.0717	(0.2257)	0.0424	0.0356
2.25	0.4548	0.2406	-	0.6955	0.0797	(0.2000)	0.0257	0.0211
2.50	0.4223	0.2235	-	0.6458	0.0872	(0.1748)	0.0252	0.0202
2.75	0.3899	0.2063	-	0.5961	0.0941	(0.1502)	0.0246	0.0193
3.00	0.3574	0.1891	-	0.5465	0.1004	(0.1261)	0.0241	0.0184
3.25	0.3350	0.1773	-	0.5123	0.1063	(0.1079)	0.0182	0.0136
3.50	0.3126	0.1654	-	0.4780	0.1118	(0.0901)	0.0178	0.0130
3.75	0.2902	0.1536	-	0.4438	0.1169	(0.0726)	0.0174	0.0124
4.00	0.2679	0.1417	-	0.4096	0.1216	(0.0555)	0.0171	0.0119
4.25	0.2532	0.1340	-	0.3871	0.1261	(0.0430)	0.0126	0.0085
4.50	0.2385	0.1262	-	0.3647	0.1302	(0.0307)	0.0123	0.0082
4.75	0.2238	0.1184	-	0.3423	0.1341	(0.0186)	0.0121	0.0078
5.00	0.2092	0.1107	-	0.3198	0.1378	(0.0068)	0.0118	0.0075
6.00	0.1754	0.0928	-	0.2682	0.1511	0.0252	0.0320	0.0191
7.00	0.1475	0.0780	-	0.2256	0.1622	0.0518	0.0266	0.0145
8.00	0.1277	0.0676	-	0.1953	0.1717	0.0726	0.0208	0.0103
9.00	0.1145	0.0606	-	0.1751	0.1801	0.0886	0.0160	0.0072
10.00	0.1005	0.0532	-	0.1537	0.1875	0.1039	0.0153	0.0063
11.00	0.0895	0.0474	-	0.1369	0.1941	0.1167	0.0128	0.0048
12.00	0.0837	0.0443	-	0.1279	0.2001	0.1261	0.0094	0.0032
13.00	0.0763	0.0404	-	0.1167	0.2056	0.1358	0.0097	0.0030
14.00	0.0697	0.0369	-	0.1066	0.2106	0.1446	0.0088	0.0025
15.00	0.0668	0.0353	-	0.1021	0.2153	0.1510	0.0065	0.0017
16.00	0.0624	0.0330	-	0.0954	0.2198	0.1580	0.0070	0.0016
17.00	0.0594	0.0315	-	0.0909	0.2240	0.1639	0.0059	0.0012
18.00	0.0565	0.0299	-	0.0864	0.2280	0.1694	0.0056	0.0011
19.00	0.0514	0.0272	-	0.0786	0.2317	0.1759	0.0065	0.0011
20.00	0.0492	0.0260	-	0.0752	0.2352	0.1805	0.0046	0.0007
21.00	0.0462	0.0245	-	0.0707	0.2385	0.1854	0.0049	0.0007
22.00	0.0440	0.0233	-	0.0673	0.2416	0.1897	0.0043	0.0006
23.00	0.0418	0.0221	-	0.0640	0.2446	0.1938	0.0041	0.0005
24.00	0.0389	0.0206	-	0.0595	0.2473	0.1982	0.0043	0.0005
25.00	0.0360	0.0190	-	0.0550	0.2499	0.2023	0.0041	0.0004
26.00	0.0352	0.0186	-	0.0539	0.2524	0.2052	0.0028	0.0003
27.00	0.0323	0.0171	-	0.0494	0.2547	0.2090	0.0039	0.0003
28.00	0.0308	0.0163	-	0.0471	0.2569	0.2120	0.0030	0.0002
29.00	0.0279	0.0148	-	0.0426	0.2589	0.2156	0.0036	0.0002
30.00	0.0250	0.0132	-	0.0382	0.2607	0.2190	0.0034	0.0002
31.00	0.0235	0.0124	-	0.0359	0.2624	0.2214	0.0025	0.0001
32.00	0.0168	0.0089	-	0.0257	0.2638	0.2264	0.0049	0.0003
33.00	0.0107	0.0057	-	0.0163	0.2647	0.2306	0.0042	0.0002
34.00	0.0051	0.0027	-	0.0078	0.2653	0.2341	0.0035	0.0002
35.00	-	-	-	-	0.2655	0.2370	0.0029	0.0001

Column Notes:

- (1) is Unearned Premium Reserve (equal to Written Premium minus Earned Premium, per the cashflow pattern) plus Unpaid Loss Reserve (equal to Incurred minus Paid Losses) by time period, expressed as a factor,
= MAX[Table 4 col (1), Table 2 col (3)] - Table 2 col (2) + Table 1 row (7, Static) x [Table 2 col (2) - Table 2 col (5)]
- (2) is the Surplus derived from Reserves per the Reserve-to-Surplus Ratio by time period, expressed as a factor, = (1) / Table 1 row (2)
- (3) Admitted Agents' Balances arise when premium is written before it's collected, or premium is earned in the prior period before it's collected,
= MAX[Table 4 col (1), Table 2 col (3)] - Table 4 col (1) - MAX[0, Table 2 col (2, previous row) - Table 4 col (1)]
- (4) is Reserves plus Surplus minus Agent Balances by time period, expressed as a factor, = (1) + (2) - (3)
- (5) is derived by applying the Return on Investments [Table 1 row (4, Static)] to the average Invested Funds (4) from the previous and current time periods, plus previous Income from Invested Funds, by time period expressed as a factor.
- (6) is Insurance Cash Flow plus Income from Invested Funds minus Total Invested Funds by time period, expressed as a factor,
= Table 4 col (5) + (5) - (4)
- (7) is the difference between Capital Provider Equity (6) at the current and previous time periods, expressed as a factor.
- (8) is the Capital Provider Cash Flow (7) discounted by the Weighted Average Cost of Capital [Table 1 row (5, Static)], expressed as a factor.



CONNECTICUT

APPENDIX D - Determination of Assigned Risk Rates

Section G - Derivation of the Indicated Profit and Contingency Provision

Calculation Details - Dynamic Estimate

TABLE 6: DERIVATION OF INSURANCE CASH FLOW (DYNAMIC ESTIMATE)

Time	(1) Collected Premium Factor	(2) Expense and Taxes Factor	(3) Paid Losses Factor	(4) Federal Income Tax Factor	(5) Insurance Cash flow Factor
0.00	-	-	-	-	-
0.25	0.2296	0.0659	0.0035	(0.0006)	0.1607
0.50	0.4872	0.1434	0.0145	(0.0012)	0.3305
0.75	0.7469	0.2218	0.0328	(0.0017)	0.4940
1.00	1.0000	0.2984	0.0576	(0.0023)	0.6463
1.25	1.0000	0.3022	0.1037	(0.0002)	0.5943
1.50	1.0000	0.3022	0.1498	0.0019	0.5460
1.75	1.0000	0.3022	0.1959	0.0041	0.4978
2.00	1.0000	0.3022	0.2420	0.0062	0.4496
2.25	1.0000	0.3022	0.2739	0.0056	0.4183
2.50	1.0000	0.3022	0.3058	0.0051	0.3869
2.75	1.0000	0.3022	0.3377	0.0046	0.3556
3.00	1.0000	0.3022	0.3695	0.0040	0.3242
3.25	1.0000	0.3022	0.3915	0.0035	0.3028
3.50	1.0000	0.3022	0.4135	0.0031	0.2813
3.75	1.0000	0.3022	0.4354	0.0026	0.2598
4.00	1.0000	0.3022	0.4574	0.0021	0.2383
4.25	1.0000	0.3022	0.4718	0.0017	0.2242
4.50	1.0000	0.3022	0.4862	0.0014	0.2102
4.75	1.0000	0.3022	0.5006	0.0010	0.1962
5.00	1.0000	0.3022	0.5150	0.0007	0.1821
6.00	1.0000	0.3022	0.5482	(0.0002)	0.1498
7.00	1.0000	0.3022	0.5755	(0.0009)	0.1232
8.00	1.0000	0.3022	0.5950	(0.0017)	0.1045
9.00	1.0000	0.3022	0.6080	(0.0023)	0.0921
10.00	1.0000	0.3022	0.6216	(0.0028)	0.0790
11.00	1.0000	0.3022	0.6324	(0.0032)	0.0686
12.00	1.0000	0.3022	0.6382	(0.0035)	0.0631
13.00	1.0000	0.3022	0.6454	(0.0038)	0.0562
14.00	1.0000	0.3022	0.6519	(0.0041)	0.0500
15.00	1.0000	0.3022	0.6548	(0.0043)	0.0473
16.00	1.0000	0.3022	0.6591	(0.0045)	0.0432
17.00	1.0000	0.3022	0.6620	(0.0046)	0.0404
18.00	1.0000	0.3022	0.6649	(0.0046)	0.0375
19.00	1.0000	0.3022	0.6699	(0.0046)	0.0325
20.00	1.0000	0.3022	0.6721	(0.0046)	0.0303
21.00	1.0000	0.3022	0.6749	(0.0046)	0.0275
22.00	1.0000	0.3022	0.6771	(0.0046)	0.0253
23.00	1.0000	0.3022	0.6793	(0.0046)	0.0232
24.00	1.0000	0.3022	0.6821	(0.0046)	0.0203
25.00	1.0000	0.3022	0.6850	(0.0046)	0.0174
26.00	1.0000	0.3022	0.6857	(0.0046)	0.0167
27.00	1.0000	0.3022	0.6886	(0.0046)	0.0138
28.00	1.0000	0.3022	0.6901	(0.0046)	0.0124
29.00	1.0000	0.3022	0.6929	(0.0047)	0.0095
30.00	1.0000	0.3022	0.6958	(0.0047)	0.0066
31.00	1.0000	0.3022	0.6973	(0.0047)	0.0052
32.00	1.0000	0.3022	0.7038	(0.0047)	(0.0014)
33.00	1.0000	0.3022	0.7098	(0.0047)	(0.0073)
34.00	1.0000	0.3022	0.7153	(0.0047)	(0.0128)
35.00	1.0000	0.3022	0.7203	(0.0047)	(0.0178)

Column Notes:

- (1) is Collected Premium by time period, expressed as a factor, = Table 2 col (1) x [1 - Table 1 col (1a)]
- (2) is Expenses and Taxes by time period, expressed as a factor, = Table 1 row (1) x Table 2 col (4)
- (3) is Paid Losses by time period, expressed as a factor, = Table 1 row (7, Dynamic) x Table 2 col (5)
- (4) per the Tax Cuts and Jobs Act of 2017, federal income taxes are computed as the tax rate (21%) times the adjusted underwriting income calculated per IRS rules. See Appendix B for details.
- (5) is the Total Insurance Cash Flow by time period, expressed as a factor, = (1) - [(2) + (3) + (4)]



CONNECTICUT

APPENDIX D - Determination of Assigned Risk Rates

Section G - Derivation of the Indicated Profit and Contingency Provision

Calculation Details - Dynamic Estimate (continued)

TABLE 7: DERIVATION OF CASH FLOWS TO THE CAPITAL PROVIDERS (DYNAMIC ESTIMATE)

Time	(1) Unearned Premium and Unpaid Loss Reserve Factor	(2) Factor for Surplus Allocated to Reserves	(3) Admitted Agents' Balances	(4) Total Invested Funds Factor	(5) Income from Invested Funds Factor	(6) Capital Provider Equity Factor	(7) Capital Provider Cash Flow Factor	(8) Cumulative Discount Factor	(9) Discounted Capital Provider Cash Flow Factor
0.00	-	-	-	-	-	-	-	-	-
0.25	0.2437	0.1289	0.0266	0.3460	0.0020	(0.1834)	(0.1834)	0.9881	(0.1812)
0.50	0.4844	0.2563	0.0483	0.6923	0.0078	(0.3540)	(0.1707)	0.9647	(0.1646)
0.75	0.6749	0.3571	0.0439	0.9882	0.0171	(0.4771)	(0.1231)	0.9422	(0.1159)
1.00	0.7968	0.4216	-	1.2183	0.0292	(0.5428)	(0.0657)	0.9203	(0.0605)
1.25	0.6897	0.3649	-	1.0546	0.0415	(0.4188)	0.1240	0.8991	0.1115
1.50	0.6014	0.3182	-	0.9195	0.0522	(0.3213)	0.0975	0.8784	0.0857
1.75	0.5317	0.2813	-	0.8130	0.0614	(0.2538)	0.0675	0.8583	0.0580
2.00	0.4783	0.2531	-	0.7314	0.0697	(0.2121)	0.0417	0.8387	0.0349
2.25	0.4464	0.2362	-	0.6826	0.0771	(0.1873)	0.0248	0.8196	0.0204
2.50	0.4145	0.2193	-	0.6339	0.0840	(0.1630)	0.0243	0.8008	0.0195
2.75	0.3827	0.2025	-	0.5851	0.0901	(0.1395)	0.0235	0.7825	0.0184
3.00	0.3508	0.1856	-	0.5364	0.0956	(0.1165)	0.0230	0.7645	0.0176
3.25	0.3288	0.1740	-	0.5028	0.1008	(0.0993)	0.0173	0.7470	0.0129
3.50	0.3069	0.1624	-	0.4692	0.1056	(0.0823)	0.0169	0.7299	0.0124
3.75	0.2849	0.1507	-	0.4356	0.1101	(0.0657)	0.0166	0.7132	0.0118
4.00	0.2629	0.1391	-	0.4020	0.1143	(0.0495)	0.0163	0.6968	0.0113
4.25	0.2485	0.1315	-	0.3800	0.1181	(0.0376)	0.0119	0.6808	0.0081
4.50	0.2341	0.1239	-	0.3580	0.1218	(0.0260)	0.0116	0.6652	0.0077
4.75	0.2197	0.1162	-	0.3359	0.1252	(0.0145)	0.0114	0.6500	0.0074
5.00	0.2053	0.1086	-	0.3139	0.1285	(0.0033)	0.0112	0.6351	0.0071
6.00	0.1722	0.0911	-	0.2632	0.1400	0.0266	0.0299	0.5995	0.0179
7.00	0.1448	0.0766	-	0.2214	0.1497	0.0514	0.0249	0.5469	0.0136
8.00	0.1253	0.0663	-	0.1917	0.1578	0.0707	0.0192	0.4990	0.0096
9.00	0.1124	0.0595	-	0.1718	0.1650	0.0853	0.0146	0.4554	0.0067
10.00	0.0987	0.0522	-	0.1509	0.1713	0.0994	0.0141	0.4157	0.0059
11.00	0.0879	0.0465	-	0.1344	0.1769	0.1111	0.0117	0.3794	0.0045
12.00	0.0821	0.0434	-	0.1256	0.1821	0.1196	0.0085	0.3464	0.0029
13.00	0.0749	0.0396	-	0.1146	0.1868	0.1285	0.0088	0.3162	0.0028
14.00	0.0684	0.0362	-	0.1046	0.1911	0.1365	0.0080	0.2887	0.0023
15.00	0.0655	0.0347	-	0.1002	0.1952	0.1422	0.0058	0.2636	0.0015
16.00	0.0612	0.0324	-	0.0936	0.1990	0.1485	0.0063	0.2407	0.0015
17.00	0.0583	0.0309	-	0.0892	0.2025	0.1537	0.0052	0.2197	0.0011
18.00	0.0555	0.0293	-	0.0848	0.2060	0.1587	0.0050	0.2006	0.0010
19.00	0.0504	0.0267	-	0.0771	0.2091	0.1645	0.0059	0.1831	0.0011
20.00	0.0483	0.0255	-	0.0738	0.2121	0.1687	0.0041	0.1672	0.0007
21.00	0.0454	0.0240	-	0.0694	0.2149	0.1730	0.0043	0.1526	0.0007
22.00	0.0432	0.0229	-	0.0661	0.2176	0.1768	0.0038	0.1393	0.0005
23.00	0.0411	0.0217	-	0.0628	0.2201	0.1805	0.0037	0.1272	0.0005
24.00	0.0382	0.0202	-	0.0584	0.2225	0.1844	0.0039	0.1162	0.0005
25.00	0.0353	0.0187	-	0.0540	0.2247	0.1881	0.0037	0.1061	0.0004
26.00	0.0346	0.0183	-	0.0529	0.2268	0.1906	0.0025	0.0969	0.0002
27.00	0.0317	0.0168	-	0.0485	0.2288	0.1941	0.0035	0.0885	0.0003
28.00	0.0303	0.0160	-	0.0463	0.2306	0.1967	0.0026	0.0808	0.0002
29.00	0.0274	0.0145	-	0.0419	0.2323	0.2000	0.0033	0.0738	0.0002
30.00	0.0245	0.0130	-	0.0374	0.2339	0.2031	0.0031	0.0674	0.0002
31.00	0.0231	0.0122	-	0.0352	0.2353	0.2052	0.0022	0.0615	0.0001
32.00	0.0165	0.0087	-	0.0252	0.2365	0.2099	0.0047	0.0562	0.0003
33.00	0.0105	0.0055	-	0.0160	0.2373	0.2139	0.0040	0.0513	0.0002
34.00	0.0050	0.0026	-	0.0077	0.2377	0.2173	0.0034	0.0468	0.0002
35.00	-	-	-	-	0.2379	0.2201	0.0028	0.0428	0.0001

Column Notes:

- (1) is Unearned Premium Reserve (equal to Written Premium minus Earned Premium, per the cashflow pattern) plus Unpaid Loss Reserve (equal to Incurred minus Paid Losses) by time period, expressed as a factor,
= MAX[Table 4 col (1), Table 2 col (3)] - Table 2 col (2) + Table 1 row (7, Dynamic) x [Table 2 col (2) - Table 2 col (5)]
- (2) is the Surplus derived from Reserves per the Reserve-to-Surplus Ratio by time period, expressed as a factor, = (1) / Table 1 row (2)
- (3) Admitted Agents' Balances arise when premium is written before it's collected, or premium is earned in the prior period before it's collected,
= MAX[Table 6 col (1), Table 2 col (3)] - Table 6 col (1) - MAX[0, Table 2 col (2, previous row) - Table 6 col (1)]
- (4) is Reserves plus Surplus minus Agent Balances by time period, expressed as a factor, = (1) + (2) - (3)
- (5) is derived by applying the Return on Investments [Table 3 col (1)] to the average Invested Funds (4) from the previous and current time periods, plus previous Income from Invested Funds, by time period expressed as a factor.
- (6) is Insurance Cash Flow plus Income from Invested Funds minus Total Invested Funds by time period, expressed as a factor,
= Table 6 col (5) + (5) - (4)
- (7) is the difference between Capital Provider Equity (6) at the current and previous time periods, expressed as a factor
- (8) is derived from the respective Weighted Average Cost of Capital [Table 3 col (2)] for each time period, expressed as a factor
- (9) is the Capital Provider Cash Flow (7) discounted by the Cumulative Discount Factor (8), expressed as a factor



CONNECTICUT

APPENDIX D - Determination of Assigned Risk Rates

Section G - Derivation of the Indicated Profit and Contingency Provision

APPENDIX A: CALCULATION OF WEIGHTED AVERAGE COST OF CAPITAL AND RETURN ON INVESTMENTS

The calculation of the Weighted Average Cost of Capital (WACC) is shown in Table A.1, and the calculation of the Return on Investments (RoI) is shown in Table A.2. The calculation for the Static estimate is shown in each. Calculations of the WACC and RoI under the Dynamic estimate for time periods 1, 2, and 5 are also provided for illustrative purposes. Note that the IRR model under the Dynamic estimate includes estimates of the WACC and RoI on a quarterly basis for the first five years and annually thereafter.

TABLE A.1: CALCULATION OF WEIGHTED AVERAGE COST OF CAPITAL

	Static	IRR Model Time (yrs)		
		1.00	2.00	5.00
(1) 5 year US T-note Yield	3.80%	3.81%	3.59%	3.61%
(2) US Equity Market Risk Premium	7.92%			
(3) Beta for Property/Casualty (P/C) Insurers	0.89			
(4) Equity Cost of Capital for P/C Insurers	10.85%	10.85%	10.64%	10.66%
(5) Share of Equity Capital for P/C Insurers	85%			
(6) Debt Cost of Capital for P/C Insurers	4.00%	4.15%	4.15%	4.26%
(7) Weighted Average Cost of Capital (WACC)	9.82%	9.85%	9.67%	9.70%

Column Notes:

- (1) Forward estimates of US Treasury yields are from Moody's forecasts and apply only to the Dynamic estimate of the WACC. Time periods provided are illustrative; the full model includes estimates on a quarterly basis for the first five years and annually thereafter.
- (3) & (5) P/C beta and share of equity capital are estimated from historical data for a collection of insurers with publicly traded equity and debt.
- (4) = (1) + (2) x (3)
- (6) P/C debt cost of capital is the sum of the 10-year US T-note yield plus the historical corporate spread, net of income tax.
- (7) = (4) x (5) + (6) x [1 - (5)]



CONNECTICUT
APPENDIX D - Determination of Assigned Risk Rates
Section G - Derivation of the Indicated Profit and Contingency Provision

APPENDIX A: CALCULATION OF WEIGHTED AVERAGE COST OF CAPITAL AND RETURN ON INVESTMENTS (CONTINUED)

TABLE A.2 CALCULATION OF RETURN ON INVESTMENTS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Security Description	Investment Portfolio	Yield Curve, Maturity and Spread	Roll-over Period	Income Tax Rate	Post-tax Return			
					IRR Model Time (yrs)			
					Static	1.00	2.00	5.00
Bonds, of which	72.9%							
Government Direct Obligations	7.0%							
< 1yr	2.5%	6 mo US T-bill	0.50 yrs	21.00%	3.94%	3.22%	2.48%	2.06%
1 – 5 yrs	2.8%	2.5 yr US T-note	2.50 yrs	21.00%	3.33%	3.28%	3.28%	2.58%
5 – 10 yrs	1.1%	7.5 yr US T-note	7.50 yrs	21.00%	2.94%	3.16%	3.16%	3.16%
10 – 20 yrs	0.2%	15 yr US T-note	15.00 yrs	21.00%	2.98%	3.26%	3.26%	3.26%
> 20 yrs	0.3%	20 yr US T-note	20.00 yrs	21.00%	3.08%	3.42%	3.42%	3.42%
Collateralized Securities	7.6%							
< 1yr	1.2%	6 mo US T-bill + 50 basis points	0.50 yrs	21.00%	4.33%	3.62%	2.87%	2.46%
1 – 5 yrs	3.1%	2.5 yr US T-note + 50 basis points	2.50 yrs	21.00%	3.72%	3.67%	3.67%	2.98%
5 – 10 yrs	2.1%	7.5 yr US T-note + 50 basis points	7.50 yrs	21.00%	3.34%	3.55%	3.55%	3.55%
10 – 20 yrs	0.9%	15 yr US T-note + 50 basis points	15.00 yrs	21.00%	3.38%	3.65%	3.65%	3.65%
> 20 yrs	0.2%	20 yr US T-note + 50 basis points	20.00 yrs	21.00%	3.48%	3.81%	3.81%	3.81%
Tax-exempt Bonds	18.2%							
< 1yr	1.4%	6 mo US T-bill + Tax-exempt spread	0.50 yrs	5.25%	4.83%	3.97%	3.08%	2.58%
1 – 5 yrs	5.6%	2.5 yr US T-note + Tax-exempt spread	2.50 yrs	5.25%	4.15%	4.09%	4.09%	3.26%
5 – 10 yrs	4.5%	7.5 yr US T-note + Tax-exempt spread	7.50 yrs	5.25%	3.70%	3.96%	3.96%	3.96%
10 – 20 yrs	5.3%	15 yr US T-note + Tax-exempt spread	15.00 yrs	5.25%	3.86%	4.19%	4.19%	4.19%
> 20 yrs	1.5%	20 yr US T-note + Tax-exempt spread	20.00 yrs	5.25%	4.07%	4.47%	4.47%	4.47%
Industrial and Hybrid Securities (unaffiliated)	39.8%							
< 1yr	4.6%	6 mo US T-bill + Corp spread	0.50 yrs	21.00%	4.43%	3.71%	2.97%	2.55%
1 – 5 yrs	17.6%	2.5 yr US T-note + Corp spread	2.50 yrs	21.00%	4.05%	4.01%	4.01%	3.30%
5 – 10 yrs	13.6%	7.5 yr US T-note + Corp spread	7.50 yrs	21.00%	4.00%	4.21%	4.21%	4.21%
10 – 20 yrs	2.4%	15 yr US T-note + Corp spread	15.00 yrs	21.00%	4.16%	4.43%	4.43%	4.43%
> 20 yrs	1.7%	20 yr US T-note + Corp spread	20.00 yrs	21.00%	4.28%	4.59%	4.59%	4.59%
Industrial and Hybrid Securities (affiliated)	0.3%							
< 1yr	0.1%	6 mo US T-bill + Corp spread	0.50 yrs	5.25%	5.31%	4.45%	3.56%	3.06%
1 – 5 yrs	0.2%	2.5 yr US T-note + Corp spread	2.50 yrs	5.25%	4.86%	4.80%	4.80%	3.96%
5 – 10 yrs	0.0%	7.5 yr US T-note + Corp spread	7.50 yrs	5.25%	4.79%	5.05%	5.05%	5.05%
10 – 20 yrs	0.0%	15 yr US T-note + Corp spread	15.00 yrs	5.25%	4.99%	5.31%	5.31%	5.31%
> 20 yrs	0.0%	20 yr US T-note + Corp spread	20.00 yrs	5.25%	5.13%	5.51%	5.51%	5.51%
Stocks, of which	11.9%							
Preferred Stock	0.5%	5 year US T-note + 396 basis points	0.25 yrs	13.13%	6.74%	6.75%	6.56%	6.58%
Common Stock	11.4%	5 year US T-note + 792 basis points	0.25 yrs	18.40%	9.57%	9.57%	9.40%	9.41%
Mortgage Loans	2.6%							
Real Estate	0.5%							
Cash & Short-Term Investment	5.0%	3 month US T-bill	0.25 yrs	21.00%	3.84%	2.99%	2.22%	1.94%
All Other Assets*	7.1%							
Post-Tax Return on Invested Funds, pre-Expense:					4.69%	4.64%	4.49%	4.20%
Investment Expense**:					-0.17%	-0.17%	-0.17%	-0.17%
Post-Tax Return on Invested Funds:					4.51%	4.47%	4.32%	4.02%

Table Notes:

- (1) Government Direct Obligations include US Government Issuer Obligations and Non-US Government Issuer Obligations.
Collateralized Securities include Mortgage Backed, Loan Backed, or Structured Securities.
Tax-exempt Bonds include Issuer Obligations of US States, Territories, and Possessions, US Political Subdivisions of States, Territories, and Possessions, and US Special Revenue and Special Assessment Obligations.
Industrial and Hybrid Securities (unaffiliated) include Industrial and Miscellaneous and Hybrid Securities.
Industrial and Hybrid Securities (affiliated) include Parents, Subsidiaries, and Affiliates.
- (2) Bond and total portfolio distributions are 3-year averages for 2019-2021, calculated from annual editions of Best's Aggregates & Averages (Property-Casualty), Assets for Commercial Casualty Composite, page number varies by edition, Column 3, Net Admitted Assets.
For each year 2019-2021, the maturity distribution pertains to all bonds owned as of December 31 at book/adjusted carrying value for Commercial Casualty Composite, Schedule D, Part 1A, Section 2.
- (3) Spread to US treasury yields are either constant or varying by maturity (tax-exempt or corporate) as applicable.
The tax-exempt spread is a term structure of average historical spreads in forward rates at different maturities between US municipal bonds and US Treasuries.
Data on historical yields to US municipal bonds are from Bloomberg.
The corporate spread is a term structure of average historical spreads in forward rates at different maturities between US corporate bonds and US Treasuries.
Historical data on yields to US corporate bonds are from the US Department of Treasury.
- (4) Applies only to the Dynamic estimate of the return on invested funds.
The roll-over period is the time interval at which the estimated yield is updated for the given security in the investment portfolio.
For bonds, the roll-over period is the bond's term to maturity. Forward yields for common and preferred stocks are updated quarterly.
- (5) It is assumed that investment returns, except dividends and tax exempt municipal bond income, are taxed at 21%.
It is assumed that 50% of dividends received are tax exempt. In accordance with the "pro-ration" provision, it is assumed that 25% of otherwise exempt municipal bond income and dividends are taxed at 21%. For common stock, the portion of income attributable to capital appreciation is assumed to equal 66.9% while the income portion is 33.1%. The percentages are obtained from Kroll, LLC
SBBi Summary Statistics of Annual Returns: large cap stocks, arithmetic mean.
- (6) Static estimates of US Treasury yields are constant maturity yields from the first quarter of 2023.
- (7)-(9) Applies only to the dynamic estimate of the return on invested funds. Forward estimates of US Treasury yields at various maturities are from Moody's.

* Yields to mortgage loans, real estate, and all other assets are not directly estimated, but are assumed to equal the weighted average portfolio yield net of these categories.

** Investment expense calculated from Annual Statement data for the Commercial Casualty Composite by dividing Total Investment Expense by Cash and Invested Assets.

Total investment expense for 2021 is from the Annual Statement, Exhibit of Net Investment Income.

Average cash and invested assets for 2020 and 2021 are from Best's Aggregates and Averages (Property-Casualty), Assets for Commercial Casualty Composite.



CONNECTICUT

APPENDIX D - Determination of Assigned Risk Rates

Section G - Derivation of the Indicated Profit and Contingency Provision

APPENDIX B: FEDERAL INCOME TAX INCURRED FROM INSURANCE OPERATIONS

Federal taxes on underwriting income, based on the Tax Cuts and Jobs Act of 2017, are calculated in the following tables on an annual basis. Columns (1) through (5) are the same under both the Static and Dynamic Estimates; the paid losses factors (col (6)) vary by Estimate. Note that investment taxes are accounted for in Appendix A. Annual tax is prorated when quarterly amounts are required.

TABLE B.1: FEDERAL INCOME TAX CALCULATION (STATIC ESTIMATE)

Time	(1) Written Premium Factor	(2) Unearned Premium Factor	(3) Expense and Taxes Factor	(4) Premium Balances Charged Off Factor	(5) Discount Factor	(6) Paid Losses Factor	(7) AY1 Paid Losses Factor	(8) AY2 Paid Losses Factor	(9) Discounted AY1 Unpaid Losses Factor	(10) Discounted AY2 Unpaid Losses Factor	(11) Federal Income Tax Factor
0.00	-	-	-	-	-	-	-	-	-	-	-
1.00	1.0000	0.4794	0.2984	-	0.8973	0.0587	0.0587	-	0.2766	-	(0.0036)
2.00	1.0000	-	0.3022	-	0.8836	0.2466	0.1556	0.0910	0.1867	0.2476	0.0035
3.00	1.0000	-	0.3022	-	0.8782	0.3765	0.2046	0.1719	0.1426	0.1723	0.0013
4.00	1.0000	-	0.3022	-	0.8738	0.4660	0.2472	0.2188	0.1046	0.1301	(0.0006)
5.00	1.0000	-	0.3022	-	0.8766	0.5247	0.2699	0.2548	0.0850	0.0980	(0.0021)
6.00	1.0000	-	0.3022	-	0.8711	0.5585	0.2839	0.2746	0.0723	0.0810	(0.0029)
7.00	1.0000	-	0.3022	-	0.8766	0.5864	0.2978	0.2885	0.0606	0.0683	(0.0037)
8.00	1.0000	-	0.3022	-	0.8905	0.6062	0.3057	0.3005	0.0545	0.0583	(0.0044)
9.00	1.0000	-	0.3022	-	0.9036	0.6194	0.3117	0.3077	0.0499	0.0527	(0.0051)
10.00	1.0000	-	0.3022	-	0.9121	0.6333	0.3192	0.3142	0.0436	0.0477	(0.0056)
11.00	1.0000	-	0.3022	-	0.9239	0.6443	0.3237	0.3207	0.0400	0.0422	(0.0060)
12.00	1.0000	-	0.3022	-	0.9360	0.6502	0.3258	0.3244	0.0385	0.0393	(0.0063)
13.00	1.0000	-	0.3022	-	0.9482	0.6575	0.3302	0.3273	0.0348	0.0371	(0.0066)
14.00	1.0000	-	0.3022	-	0.9606	0.6641	0.3330	0.3312	0.0326	0.0339	(0.0069)
15.00	1.0000	-	0.3022	-	0.9732	0.6671	0.3338	0.3333	0.0322	0.0323	(0.0071)
16.00	1.0000	-	0.3022	-	0.9859	0.6715	0.3367	0.3348	0.0298	0.0313	(0.0073)
17.00	1.0000	-	0.3022	-	0.9868	0.6744	0.3375	0.3370	0.0291	0.0296	(0.0074)
18.00	1.0000	-	0.3022	-	0.9868	0.6774	0.3393	0.3381	0.0273	0.0285	(0.0074)
19.00	1.0000	-	0.3022	-	0.9868	0.6825	0.3422	0.3403	0.0244	0.0263	(0.0074)
20.00	1.0000	-	0.3022	-	0.9868	0.6847	0.3424	0.3423	0.0242	0.0243	(0.0074)
21.00	1.0000	-	0.3022	-	0.9868	0.6876	0.3445	0.3431	0.0221	0.0235	(0.0074)
22.00	1.0000	-	0.3022	-	0.9868	0.6898	0.3451	0.3447	0.0215	0.0219	(0.0075)
23.00	1.0000	-	0.3022	-	0.9868	0.6920	0.3465	0.3456	0.0202	0.0211	(0.0075)
24.00	1.0000	-	0.3022	-	0.9868	0.6950	0.3480	0.3470	0.0187	0.0197	(0.0075)
25.00	1.0000	-	0.3022	-	0.9868	0.6979	0.3494	0.3485	0.0173	0.0182	(0.0075)
26.00	1.0000	-	0.3022	-	0.9868	0.6986	0.3493	0.3494	0.0174	0.0173	(0.0075)
27.00	1.0000	-	0.3022	-	0.9868	0.7016	0.3515	0.3500	0.0152	0.0167	(0.0075)
28.00	1.0000	-	0.3022	-	0.9868	0.7030	0.3515	0.3515	0.0152	0.0152	(0.0075)
29.00	1.0000	-	0.3022	-	0.9868	0.7060	0.3537	0.3522	0.0130	0.0145	(0.0075)
30.00	1.0000	-	0.3022	-	0.9868	0.7089	0.3548	0.3541	0.0120	0.0127	(0.0075)
31.00	1.0000	-	0.3022	-	0.9868	0.7104	0.3554	0.3550	0.0114	0.0118	(0.0075)
32.00	1.0000	-	0.3022	-	0.9868	0.7171	0.3601	0.3570	0.0067	0.0098	(0.0075)
33.00	1.0000	-	0.3022	-	0.9868	0.7232	0.3623	0.3609	0.0045	0.0060	(0.0075)
34.00	1.0000	-	0.3022	-	0.9868	0.7288	0.3654	0.3634	0.0015	0.0035	(0.0076)
35.00	1.0000	-	0.3022	-	0.9868	0.7339	0.3669	0.3669	-	-	(0.0076)

Column Notes:

- (1) is Written Premium by time period, expressed as a factor, = Table 2 col (3)
- (2) is Written Premium minus Earned Premium by time period, expressed as a factor, = Table 2 col (3) - Table 2 col (2)
- (3) is Expenses and Taxes by time period, expressed as a factor, = Table 1 row (1) x Table 2 col (4)
- (4) is Premium Balances Charged Off by time period, expressed as a factor, = Table 1 col (1a) x Table 2 col (1)
- (5) is from Internal Revenue Bulletin, 2023-03, Rev. Proc. 2023-10, dated January 17, 2023
- (6) is Paid Losses by time period, expressed as a factor, = Table 1 row (7, Static) x Table 2 col (5)
- (7) and (8) split the payments between the accident year coincident with the policy year ("AY1"), and the following accident year ("AY2"). Assuming that the payout pattern is linear between integer times, and that the average accident date for AY2 is two-thirds of a year later than the average accident date for AY1, columns (7) and (8) are determined by solving these two equations simultaneously:

$$\text{Col (7) + Col (8) = Col (6)}$$

$$\text{Col (8) = (2/3) * Col (7, previous row) + (1/3) * Col (7)}$$
 with Col (7, Time 1) = Col (6, Time 1) and Col (7, Time 35) = Col (8, Time 35)
- (9) is the discounted difference between AY1 Losses that will ultimately be paid, and the amount already paid,

$$= [\text{col (7, Time 35) - (7)}] \times (5)$$
- (10) is the discounted difference between AY2 Losses that will ultimately be paid, and the amount already paid,

$$= [\text{col (8, Time 35) - (8)}] \times \text{col (5, previous row)}$$
- (11) Per IRS rules, federal income tax equals the tax rate (21%) times the adjusted underwriting income

$$= 21\% * \{ (1) - 0.8 * (2) - [(3) + (4) + (6) + (9) + (10)] \}$$



CONNECTICUT

APPENDIX D - Determination of Assigned Risk Rates

Section G - Derivation of the Indicated Profit and Contingency Provision

APPENDIX B: FEDERAL INCOME TAX INCURRED FROM INSURANCE OPERATIONS (CONTINUED)

TABLE B.2: FEDERAL INCOME TAX CALCULATION (DYNAMIC ESTIMATE)

Time	(1) Written Premium Factor	(2) Unearned Premium Factor	(3) Expense and Taxes Factor	(4) Premium Balances Charged Off Factor	(5) Discount Factor	(6) Paid Losses Factor	(7) AY1 Paid Losses Factor	(8) AY2 Paid Losses Factor	(9) Discounted AY1 Unpaid Losses Factor	(10) Discounted AY2 Unpaid Losses Factor	(11) Federal Income Tax Factor
0.00	-	-	-	-	-	-	-	-	-	-	-
1.00	1.0000	0.4794	0.2984	-	0.8973	0.0576	0.0576	-	0.2715	-	(0.0023)
2.00	1.0000	-	0.3022	-	0.8836	0.2420	0.1527	0.0893	0.1833	0.2430	0.0062
3.00	1.0000	-	0.3022	-	0.8782	0.3695	0.2008	0.1687	0.1400	0.1691	0.0040
4.00	1.0000	-	0.3022	-	0.8738	0.4574	0.2427	0.2147	0.1027	0.1277	0.0021
5.00	1.0000	-	0.3022	-	0.8766	0.5150	0.2649	0.2501	0.0835	0.0962	0.0007
6.00	1.0000	-	0.3022	-	0.8711	0.5482	0.2787	0.2695	0.0710	0.0795	(0.0002)
7.00	1.0000	-	0.3022	-	0.8766	0.5755	0.2923	0.2832	0.0595	0.0670	(0.0009)
8.00	1.0000	-	0.3022	-	0.8905	0.5950	0.3001	0.2949	0.0535	0.0572	(0.0017)
9.00	1.0000	-	0.3022	-	0.9036	0.6080	0.3059	0.3020	0.0490	0.0518	(0.0023)
10.00	1.0000	-	0.3022	-	0.9121	0.6216	0.3133	0.3084	0.0428	0.0468	(0.0028)
11.00	1.0000	-	0.3022	-	0.9239	0.6324	0.3177	0.3147	0.0392	0.0414	(0.0032)
12.00	1.0000	-	0.3022	-	0.9360	0.6382	0.3198	0.3184	0.0378	0.0386	(0.0035)
13.00	1.0000	-	0.3022	-	0.9482	0.6454	0.3242	0.3213	0.0341	0.0364	(0.0038)
14.00	1.0000	-	0.3022	-	0.9606	0.6519	0.3268	0.3251	0.0320	0.0333	(0.0041)
15.00	1.0000	-	0.3022	-	0.9732	0.6548	0.3277	0.3271	0.0316	0.0317	(0.0043)
16.00	1.0000	-	0.3022	-	0.9859	0.6591	0.3305	0.3286	0.0293	0.0307	(0.0045)
17.00	1.0000	-	0.3022	-	0.9868	0.6620	0.3312	0.3307	0.0285	0.0290	(0.0046)
18.00	1.0000	-	0.3022	-	0.9868	0.6649	0.3330	0.3318	0.0268	0.0280	(0.0046)
19.00	1.0000	-	0.3022	-	0.9868	0.6699	0.3359	0.3340	0.0239	0.0258	(0.0046)
20.00	1.0000	-	0.3022	-	0.9868	0.6721	0.3361	0.3360	0.0238	0.0239	(0.0046)
21.00	1.0000	-	0.3022	-	0.9868	0.6749	0.3382	0.3368	0.0217	0.0231	(0.0046)
22.00	1.0000	-	0.3022	-	0.9868	0.6771	0.3387	0.3384	0.0211	0.0215	(0.0046)
23.00	1.0000	-	0.3022	-	0.9868	0.6793	0.3401	0.3392	0.0198	0.0207	(0.0046)
24.00	1.0000	-	0.3022	-	0.9868	0.6821	0.3416	0.3406	0.0183	0.0193	(0.0046)
25.00	1.0000	-	0.3022	-	0.9868	0.6850	0.3430	0.3420	0.0170	0.0179	(0.0046)
26.00	1.0000	-	0.3022	-	0.9868	0.6857	0.3428	0.3429	0.0171	0.0170	(0.0046)
27.00	1.0000	-	0.3022	-	0.9868	0.6886	0.3451	0.3436	0.0149	0.0164	(0.0046)
28.00	1.0000	-	0.3022	-	0.9868	0.6901	0.3450	0.3450	0.0149	0.0149	(0.0046)
29.00	1.0000	-	0.3022	-	0.9868	0.6929	0.3472	0.3457	0.0128	0.0142	(0.0047)
30.00	1.0000	-	0.3022	-	0.9868	0.6958	0.3483	0.3476	0.0117	0.0124	(0.0047)
31.00	1.0000	-	0.3022	-	0.9868	0.6973	0.3488	0.3485	0.0112	0.0116	(0.0047)
32.00	1.0000	-	0.3022	-	0.9868	0.7038	0.3535	0.3504	0.0066	0.0097	(0.0047)
33.00	1.0000	-	0.3022	-	0.9868	0.7098	0.3556	0.3542	0.0045	0.0059	(0.0047)
34.00	1.0000	-	0.3022	-	0.9868	0.7153	0.3587	0.3567	0.0015	0.0035	(0.0047)
35.00	1.0000	-	0.3022	-	0.9868	0.7203	0.3602	0.3602	-	-	(0.0047)

Column Notes:

- (1) is Written Premium by time period, expressed as a factor, = Table 2 col (3)
- (2) is Written Premium minus Earned Premium by time period, expressed as a factor, = Table 2 col (3) - Table 2 col (2)
- (3) is Expenses and Taxes by time period, expressed as a factor, = Table 1 row (1) x Table 2 col (4)
- (4) is Premium Balances Charged Off by time period, expressed as a factor, = Table 1 col (1a) x Table 2 col (1)
- (5) is from Internal Revenue Bulletin, 2023-03, Rev. Proc. 2023-10, dated January 17, 2023
- (6) is Paid Losses by time period, expressed as a factor, = Table 1 row (8, Dynamic) x Table 2 col (5)
- (7) and (8) split the payments between the accident year coincident with the policy year ("AY1"), and the following accident year ("AY2"). Assuming that the payout pattern is linear between integer times, and that the average accident date for AY2 is two-thirds of a year later than the average accident date for AY1, columns (7) and (8) are determined by solving these two equations simultaneously:

$$\text{Col (7) + Col (8) = Col (6)}$$

$$\text{Col (8) = (2/3) * Col (7, previous row) + (1/3) * Col (7)}$$
 with Col (7, Time 1) = Col (6, Time 1) and Col (7, Time 35) = Col (8, Time 35)
- (9) is the discounted difference between AY1 Losses that will ultimately be paid, and the amount already paid,

$$= [\text{col (7, Time 35) - (7)}] \times (5)$$
- (10) is the discounted difference between AY2 Losses that will ultimately be paid, and the amount already paid,

$$= [\text{col (8, Time 35) - (8)}] \times \text{col (5, previous row)}$$
- (11) Per IRS rules, federal income tax equals the tax rate (21%) times the adjusted underwriting income

$$= 21\% * \{ (1) - 0.8 * (2) - [(3) + (4) + (6) + (9) + (10)] \}$$



CONNECTICUT

APPENDIX D - Determination of Assigned Risk Rates
Section G - Derivation of the Indicated Profit and Contingency Provision

APPENDIX C: RESERVE-TO-SURPLUS RATIO

in 000's

Year End	(1) Unpaid Losses	(2) Unpaid Loss Adjustment Expense	(3) Unearned Premium	(4) Policyholder Surplus	(5) Ratio excl. Unearned Premium {(1)+(2)}/(4)	(6) Ratio incl. Unearned Premium {(1)+(2)+(3)}/(4)
2021	228,459,570	48,775,145	98,954,979	199,495,575	1.39	1.89
2020	213,654,262	47,148,359	91,285,583	184,607,060	1.41	1.91
2019	201,634,477	45,253,873	88,025,958	177,424,154	1.39	1.89
2018	198,071,343	43,050,172	84,424,740	169,657,802	1.42	1.92
2017	194,692,095	42,696,647	77,537,150	171,664,964	1.38	1.83
2017 - 2021	1,036,511,747	226,924,196	440,228,410	902,849,555	1.40	1.89

Selected Ratio including Unearned Premium: 1.89

Source: Columns (1) - (4) for the latest year are taken from Liabilities, Surplus and Other Funds in Best's 2022 Aggregates & Averages, for Commercial Casualty Composite.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Part 4 Additional Information

- Definitions
- NCCI Affiliate List
- Key Contacts



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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.



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate 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.



CONNECTICUT

Voluntary Loss Costs and Assigned Risk Rate Filing – January 1, 2024

NCCI Affiliate List

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
ACCREDITED SURETY & CASUALTY COMPANY INC
ACE AMERICAN INSURANCE COMPANY
ACE FIRE UNDERWRITERS INSURANCE COMPANY
ACE PROPERTY & CASUALTY INSURANCE COMPANY
ACIG INS CO
ADMIRAL INDEMNITY COMPANY
AIG ASSURANCE COMPANY
AIG PROPERTY CASUALTY COMPANY
AIU INSURANCE CO (NATIONAL UNION FIRE OF PITTS PA)
ALL AMERICA 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 CASUALTY COMPANY OF READING P A
AMERICAN COMPENSATION INS CO
AMERICAN ECONOMY INS CO
AMERICAN FAMILY HOME INS CO
AMERICAN FIRE AND CASUALTY CO
AMERICAN GUARANTEE AND LIABILITY INS CO
AMERICAN HOME ASSUR CO-NATIONAL UNION FIRE OF PIT
AMERICAN LIBERTY INSURANCE CO
AMERICAN MODERN HOME INS CO
AMERICAN STATES INS CO A SAFECO COMPANY
AMERICAN ZURICH INS CO
AMERISURE INS CO
AMERISURE MUTUAL INS CO
AMFED ADVANTAGE INSURANCE COMPANY
AMFED CASUALTY INS CO
AMFED NATIONAL INSURANCE COMPANY
AMGUARD INS CO
AMTRUST INSURANCE CO
ANSUR AMERICA
ARBELLA INDEMNITY INS CO
ARBELLA PROTECTION INS CO
ARCH INDEMNITY INSURANCE COMPANY
ARCH INSURANCE COMPANY
ARCH PROPERTY CASUALTY INS CO
ARGONAUT GREAT CENTRAL INS CO
ARGONAUT INS CO
ASCOT INSURANCE COMPANY
ASSOCIATED EMPLOYERS INS CO
ASSOCIATED INDUSTRIES OF MASS MUTUAL INS CO
ATLANTIC CHARTER INS CO
ATLANTIC SPECIALTY INS CO (INTACT)
BANKERS STANDARD INS CO
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
BLACKBOARD INSURANCE COMPANY
BROTHERHOOD MUTUAL INS CO
CALIFORNIA INSURANCE COMPANY
CAROLINA CASUALTY INS CO
CEDAR INSURANCE COMPANY
CENTRAL MUTUAL 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.
CINCINNATI CASUALTY COMPANY
CINCINNATI INDEMNITY COMPANY
CINCINNATI INS CO
CITIZENS INS CO OF AMERICA
CLEAR SPRING PROPERTY AND CASUALTY COMPANY
CLERMONT INS CO
COLONIAL AMERICAN CASUALTY & SURETY CO
COLONIAL SURETY COMPANY
COMMERCE AND INDUSTRY INS CO
CONTINENTAL CASUALTY CO
CONTINENTAL INDEMNITY CO
CONTINENTAL INS CO
CONTINENTAL WESTERN INSURANCE COMPANY
COREPOINTE INSURANCE COMPANY
COUNTRY MUTUAL INSURANCE CO
CRESTBROOK INS CO
CRUM AND FORSTER INDEMNITY CO
DAKOTA TRUCK UNDERWRITERS
DEPOSITORS INS CO
DISCOVER PROPERTY & CASUALTY INS CO
EASTERN ADVANTAGE ASSURANCE COMPANY
EASTERN ALLIANCE INSURANCE COMPANY
EASTGUARD INS CO
ELECTRIC INS CO
EMC PROPERTY & CASUALTY COMPANY
EMCASCO INS CO
EMPLOYERS ASSURANCE COMPANY
EMPLOYERS COMPENSATION INS CO
EMPLOYERS INS CO OF WAUSAU
EMPLOYERS 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
EXCELSIOR INSURANCE COMPANY
EXECUTIVE RISK INDEMNITY INC
EXECUTIVE RISK SPECIALTY INS CO
FALLS LAKE NATIONAL INSURANCE CO
FARM FAMILY CASUALTY INS CO
FARMERS INSURANCE EXCHANGE
FARMINGTON CASUALTY COMPANY
FEDERAL INSURANCE COMPANY



CONNECTICUT

Voluntary Loss Costs and Assigned Risk Rate Filing – January 1, 2024

NCCI Affiliate List

FEDERATED MUTUAL INS CO
FEDERATED RESERVE INSURANCE CO
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
FRANKENMUTH INS COMPANY
FREEDOM SPECIALTY INSURANCE COMPANY
GENERAL CASUALTY COMPANY OF WISCONSIN
GENERAL INS CO OF AMERICA
GENESIS INS CO
GRANITE STATE INSURANCE COMPANY
GRAPHIC ARTS MUTUAL INS CO
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
GREATER NY MUTUAL INS CO
GREENWICH INS CO
GUIDEONE INSURANCE COMPANY
HANOVER AMERICAN INS CO
HANOVER INS CO
HARLEYSVILLE INSURANCE COMPANY
HARLEYSVILLE PREFERRED INSURANCE CO
HARLEYSVILLE WORCESTER INSURANCE CO
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
HDI GLOBAL INSURANCE COMPANY
ILLINOIS NATIONAL INSURANCE COMPANY
IMPERIUM INSURANCE COMPANY
INCLINE CASUALTY COMPANY
INDEMNITY INS CO OF N AMERICA (INA INS) (CT GEN)
INS CO OF GREATER NY
INS CO OF NORTH AMERICA
INS CO OF THE STATE PA
INS CO OF THE WEST
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
LION INSURANCE COMPANY
LM INS CORP
MA BAY INS CO
MAG MUTUAL INS CO
MAIN STREET AMERICA ASSURANCE CO
MANUFACTURERS ALLIANCE INS CO
MARKEL INSURANCE CO
ME EMPLOYERS MUTUAL INS CO
MEMIC CASUALTY COMPANY
MEMIC INDEMNITY CO
MERIDIAN SECURITY INSURANCE COMPANY
MID CENTURY INS CO
MIDDLESEX INS CO
MIDVALE INDEMNITY COMPANY
MIDWEST EMPLOYERS CASUALTY CO
MIDWESTERN INDEMNITY CO
MILBANK INSURANCE COMPANY
MILFORD CASUALTY INSURANCE CO
MITSUI SUMITOMO INS CO OF AMERICA
MITSUI SUMITOMO INS USA INC
MOTORISTS COMMERCIAL MUTUAL INSURANCE COMPANY
NATIONAL AMERICAN INS CO
NATIONAL CASUALTY CO
NATIONAL FIRE INS CO OF HARTFORD
NATIONAL INTERSTATE INS CO
NATIONAL LIABILITY & FIRE INSURANCE CO
NATIONAL SPECIALTY INS CO
NATIONAL SURETY CORP
NATIONAL 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 JERSEY CASUALTY INS CO
NEW JERSEY INDEMNITY INS CO
NEW JERSEY MANUFACTURERS INS CO
NEW JERSEY RE-INSURANCE CO
NEW YORK MARINE AND GENERAL INSURANCE CO
NEXT INSURANCE US COMPANY
NGM INSURANCE COMPANY
NORGUARD INS CO
NORMANDY INSURANCE COMPANY
NORTH POINTE INS CO
NORTH RIVER INS CO
NOVA CASUALTY COMPANY
NUTMEG INS CO
OAK RIVER INSURANCE COMPANY
OBI AMERICA INSURANCE COMPANY
OBI NATIONAL INSURANCE COMPANY
OH CASUALTY INS CO
OHIO SECURITY INS CO



CONNECTICUT

Voluntary Loss Costs and Assigned Risk Rate Filing – January 1, 2024

NCCI Affiliate List

OLD DOMINION INS CO
OLD REPUBLIC GENERAL INSURANCE CORPORATION
OLD REPUBLIC INS CO
OMAHA NATIONAL INS CO
PA MANUFACTURERS ASSN INS CO
PA MANUFACTURERS INDEMNITY CO
PACIFIC EMPLOYERS INS CO
PACIFIC INDEMNITY CO
PACIFIC INS CO LTD
PATRIOT GENERAL INS CO
PATRONS MUTUAL INS CO OF CT
PEERLESS INDEMNITY INS CO
PEERLESS INSURANCE COMPANY
PENN MILLERS INS CO
PENNSYLVANIA INSURANCE COMPANY
PETROLEUM CASUALTY CO
PHARMACISTS MUTUAL INS CO
PHOENIX INS CO
PIE INSURANCE COMPANY
PINNACLE NATIONAL INSURANCE COMPANY
PLAZA INSURANCE CO
PRAETORIAN INSURANCE COMPANY
PREFERRED EMPLOYERS INS CO
PREFERRED PROFESSIONAL INSURANCE COMPANY
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 FRANKLIN INS CO
REPUBLIC INDEMNITY CO OF CA
REPUBLIC INDEMNITY COMPANY OF AMERICA
REPUBLIC UNDERWRITERS INSURANCE CO
RIVERPORT INSURANCE COMPANY
RLI INSURANCE COMPANY
ROCKWOOD CASUALTY INS CO
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
SECURITY NATIONAL INS CO (AMTRUST GROUP)
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
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
STONINGTON INS CO
STRATHMORE INS CO
SUNZ INSURANCE COMPANY
SWISS RE CORPORATE SOLUTIONS AMERICA INS CORP
SWISS RE CORPORATE SOLUTIONS ELITE INS CORP
SWISS RE CORPORATE SOLUTIONS PREMIER INS CORP
THE 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 INS 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
TRIUMPH CASUALTY COMPANY
TRUCK INSURANCE EXCHANGE
TRUMBULL INS CO
TWIN CITY FIRE INS CO
UNION INS CO OF PROVIDENCE
UNION INSURANCE COMPANY
UNITED STATES FIDELITY AND GUARANTY CO
UNITED WI INS CO
US FIRE INS CO
UTICA MUTUAL INS CO
UTICA NATIONAL ASSURANCE CO
UTICA NATIONAL INS CO OF TX
UTICA NATIONAL INSURANCE COMPANY OF OH
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



CONNECTICUT

Voluntary Loss Costs and Assigned Risk Rate Filing – January 1, 2024

NCCI Affiliate List

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
WESTPORT INSURANCE CORPORATION
WORK FIRST CASUALTY CO
XL INS CO OF NY INC
XL INSURANCE AMERICA INC
XL SPECIALTY INS CO
ZENITH INS CO
ZURICH AMERICAN INS CO
ZURICH AMERICAN INS CO OF IL



CONNECTICUT

Voluntary Loss Cost and Assigned Risk Rate Filing – January 1, 2024

Key Contacts

Justin Moulton, CPCU, WCP, ARC, AIAF, ARe
Senior State Relations Executive
Regulatory Division
National Council on Compensation Insurance, Inc. (NCCI)
901 Peninsula Corporate Circle
Boca Raton, Florida 33487-1362
Phone (561) 893-3828

Robert Moss, ACAS, MAAA
Actuary I
Actuarial and Economic Services Division
National Council on Compensation Insurance, Inc. (NCCI)
901 Peninsula Corporate Circle
Boca Raton, Florida 33487-1362
Phone (561) 893-3794

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

First Name_Last Name@NCCI.com