



Iowa

Advisory Rates,
Assigned Risk Rates,
and Rating Values Filing

Proposed Effective January 1, 2021



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Regulatory Division

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August 3, 2020

Honorable Doug Ommen
Insurance Commissioner
Iowa Insurance Division
601 Locus St., 4th Floor
Des Moines, IA 50309-3738

**Re: Iowa Advisory Rates, Assigned Risk Rates, and Rating Values Filing
Proposed Effective January 1, 2021**

Dear Commissioner Ommen:

In accordance with the applicable statutes and regulations of the state of Iowa, we are filing for your consideration and approval prospective rates and rating values for the Iowa voluntary and assigned risk markets to become effective January 1, 2021 for new and renewal policies.

This filing proposes an overall average increase of 0.3% to the voluntary and assigned risk rate levels. The advisory prospective rates of the voluntary market are used as a basis for the rates in the assigned risk market.

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

The following are of special note as a result of item filings approved in Iowa:

- Although considered, since the combined impact and direction of all direct and indirect COVID-19 related forces is unknown, no explicit adjustment has been made in this year's analysis at an overall or individual classification code level.
- As a result of Item B-1397, effective January 1, 2008, a single combined rate is still calculated for Class Codes 7710 and 7711 via a payroll-weighted average of the separately indicated rates for these two Class Codes.
- As a result of Item B-1437, effective January 1, 2020:
 - Class Codes 2286 and 2220 are combined to reflect the final year of a two-year transition program, and Class Code 2286 is discontinued.
 - Class Codes 2670 and 2688 are combined to reflect the final year of a two-year transition program, and Class Code 2670 is discontinued.
- As a result of Item B-1439, effective January 1, 2021:
 - Class Codes 2683 and 2501 are combined to reflect the first year of a two-year transition program. In the second year of the transition, Class Code 2683 will be discontinued.

- Class Codes 3240 and 3257 are combined to reflect the first year of a two-year transition program. In the second year of the transition, Class Code 3240 will be discontinued.

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 nonaffiliate, and is not intended to indicate whether the company is currently writing business or is even licensed to write business in this state.

As always, if you should have any questions or need additional information, please do not hesitate to contact Dan Benzshawel at (561) 893-3093 or me at (561) 893-3784.

Sincerely,



Dan Nelson
State Relations Executive



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Actuarial Certification

I, Dan Benzshawel, am a Director and Actuary for the National Council on Compensation Insurance, Inc. I am a Fellow 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, appearing to read "Dan Benzshawel".

Dan Benzshawel, FCAS, MAAA
Director and Actuary
Actuarial and Economic Services



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Workers Compensation Rate Filing – January 1, 2021

Disclosures

Purpose of the Report

The purpose of this report is to provide the proposed voluntary and assigned risk rates for workers compensation policies in Iowa, proposed to be effective January 1, 2021. The intended users of this report are:

- The Iowa Insurance Division
- Affiliated carriers, for their reference in determining workers compensation rates

Scope

The prospective advisory rates for the voluntary market 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.).

Although considered, since the combined impact and direction of all direct and indirect COVID-19 related forces is unknown, no explicit adjustment has been made in this year's analysis at an overall or individual classification code level.

Each insurance company offering workers compensation insurance in Iowa may:

- a) adopt the advisory rates which include provisions for expenses based on NCCI's compilation of industry expense data, or
- b) deviate from the advisory rates.

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.).

Data Sources and Dates

The overall average advisory rate level change is based on a review of Financial Call Data, which is an aggregation of workers compensation data annually reported to NCCI. In this filing, Financial Call Data submissions received after June 4, 2020 were not considered for inclusion in the analysis.



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The overall average advisory rate level change in this filing is based on premium and loss experience evaluated as of December 31, 2019. Therefore, this data does not reflect any potential direct or indirect effects of the COVID-19 pandemic.

Advisory rate 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. The Unit Statistical Plan Data used in this filing includes policies with expiration dates through February 2019. Therefore, the individual classification code experience does not reflect potential direct or indirect effects of the COVID-19 pandemic. In this filing, Unit Statistical Data submissions received after June 19, 2020 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.

This filing was prepared as of June 24, 2020. Therefore, events that occurred after this date that may have a material impact on workers compensation costs in this jurisdiction have not been considered in the analysis.

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

Data for all carriers writing at least one-tenth of one percent of the Iowa workers compensation written premium volume have been included in the experience period on which this filing is based.

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

Risks and Uncertainty

This filing includes assumptions and projections concerning the future. As with any prospective analysis, there exists estimation uncertainty in these assumptions and projections. Areas of this



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analysis subject to estimation uncertainty that could have a material impact on the final results include the following:

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

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

The premium and loss experience on which this filing is based does not reflect potential direct or indirect effects of the COVID-19 pandemic. At this time, the course of the pandemic remains unclear and represents a significant source of uncertainty with respect to estimating workers compensation system costs for the proposed loss cost effective period.

The direct effect of compensable claims resulting from COVID-19 infections may put upward pressure on workers compensation costs, as could certain indirect effects. For example, there is potential for the weakened labor market to lengthen return-to-work times or adverse loss development to occur if the pandemic serves to increase the time to medical treatment for injured workers. However, it is possible that other various effects may put downward pressure on workers compensation costs—such as increased telecommuting, decreased exposure to motor vehicle accidents, and an increased use of telehealth for injured workers. Additional COVID-19-related considerations, such as future economic conditions and their corresponding impact on the labor market, contribute additional uncertainty when estimating future costs.

The ongoing COVID-19 pandemic creates additional uncertainty regarding the makeup and loss experience of the residual market. Employers who obtain policies in the residual market due to potential COVID-19 exposure may differ from the types of employers in the historical residual market data analyzed in this filing.

After considering direct and indirect pandemic-related factors, it is reasonable to believe they will give rise to component changes that may, to some extent, have offsetting impacts on workers compensation system costs. Although considered, since the combined impact and direction of all direct and indirect COVID-19-related forces is unknown, no explicit adjustment for the pandemic has been made in this year's analysis at an overall or individual classification code level



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Executive Summary

Based on its review of the most recently available data, NCCI has proposed an overall average workers compensation voluntary and assigned risk rate level change of +0.3% to become effective January 1, 2021.

Key Components	Percentage Change
Experience, Trend and Benefit Change	– 3.0%
Production and General Expense Change	+ 0.3%
Taxes & Fee Change	+ 0.1%
Loss-based Expense Change	+ 0.9%
<u>Profit & Contingency Change</u>	<u>+ 2.1%</u>
Proposed Change in Overall Voluntary Rate Level	+ 0.3%
<u>Assigned Risk Differential Change</u>	<u>0.0%</u>
Proposed Change in Overall Assigned Risk Rate Level	+ 0.3%

Key Observations:

- The filing is based on premium and loss experience for policy years 2017 and 2018 (the “Experience Period.”) The financial data experience period evaluated as of December 31, 2019—which is prior to the COVID-19 pandemic—indicates more favorable loss development when compared with the loss data evaluated as of December 31, 2018.
- This data does not reflect any effects of the COVID-19 pandemic.
- Iowa’s claim frequency shows a long-term pattern of decline.
- After adjusting to a common wage level, indemnity and medical average cost per case figures continue to show a long-term upward trend.

Proposed Changes in Voluntary Rate Level by Industry Group:

<u>Industry Group</u>	<u>Average Change</u>	<u>Maximum Increase</u>	<u>Maximum Decrease</u>
Manufacturing	–1.4%	+24%	–26%
Contracting	–3.1%	+22%	–28%
Office and Clerical	+0.8%	+26%	–24%
Goods and Services	+1.1%	+26%	–24%
Miscellaneous	+4.9%	+30%	–20%

Additional Notable Change(s) Proposed in the Filing:

- Proposed Change to the Countrywide Adjusting and Other Expense (AOE) Provision



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Overview of Methodology

Aggregate Ratemaking

NCCI's approach to determining the proposed overall average advisory rate 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 an Iowa 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 rate effective period
- Ultimate, trended, limited losses are adjusted to an unlimited basis with an excess ratio
- Proposed benefit level and expense changes are applied to the projected cost ratios

The indicated average advisory rate 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 rate level is indicated.

Class Ratemaking

Once the proposed overall average advisory rate level change has been determined, NCCI separately determines rates per \$100 of payroll for each workers compensation job classification (class); the advisory rates and year-over-year changes vary by class. Three sets of pure premiums are combined as part of each class code's advisory rate 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")

Assigned Risk Rates

The proposed assigned risk rates are then determined for each job classification as the product of the classification's advisory voluntary rate and an assigned risk differential.

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.



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Summary of Selections

The following is a summary of selections underlying the voluntary and assigned risk rates proposed to be effective January 1, 2021, along with the selections underlying the filing effective January 1, 2020.

Voluntary and Assigned Risk Rates	Currently Approved January 1, 2020	Proposed Effective January 1, 2021
Experience Period	Policy Years 2016 and 2017	Policy Years 2017 and 2018
Premium Development	3-year average	3-year average
Basis of Loss Experience	Average of Paid and Paid+Case losses	Average of Paid and Paid+Case losses
Paid Loss Development	3-year average	3-year average
Paid+Case Loss Development	5-year average	5-year average
Tail Factors	Selected	Selected
Indemnity Annual Loss Ratio Trend Factor	0.980	0.970
Medical Annual Loss Ratio Trend Factor	0.990	0.990
Loss Adjustment Expense Provision	15.8%	16.9%
Base Threshold for Limiting Losses	\$8,219,242	\$7,481,806
Large Loss Excess Ratio	2.7%	3.1%
Production and General Expenses	23.6%	23.8%
Premium Taxes and Assessments	2.3%	2.4%
Profit and Contingencies Provision	-0.5%	1.0%
Maximum Minimum Premium*	\$1,000	\$1,000
Assigned Risk Differential	1.300	1.300
Classification Swing Limits (applied by Industry Group)	+/-25%	+/-25%

*MMP varies for Farming and Agricultural class codes



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Selections Underlying the Proposed Changes

Experience and Development

NCCI analyzed the emerging experience of Iowa workers compensation policies in recent years. The primary focus of our analysis was on premiums and losses from policy years 2017 and 2018 evaluated as of December 31, 2019. The most recently available full policy year is 2018 since the last policy had an effective date of December 31, 2018 and did not expire until December 31, 2019. During this year's analysis, after reviewing various possible experience periods, the use of the two most recently available full policy years of data was selected as most appropriate in terms of providing balance between stability and responsiveness.

NCCI performs analysis on different subsets of data including (i) paid losses and (ii) the sum of paid losses plus case reserves. For use in this filing, NCCI utilized loss development factors based on each of these two loss aggregations. This is consistent with NCCI filings made in the past several years in Iowa. Loss development factors are needed since paid losses and case reserve estimates on a given claim change over time until the claim is finally closed. The loss development factors are based on how paid losses and case reserve estimates changed over time for claims from older years. The specific development link ratio selections underlying this filing are shown below:

- A three-year average of historical premium development factors
- A three-year average of historical paid loss development factors through a 19th report
- A five-year average of historical paid plus case loss development factors through a 19th report
- Loss development tail factors from a 19th report to ultimate were selected based on a review of the 10 most recently available factors

The ultimate impact that the COVID-19 pandemic will have on loss development factors is unknown. Although considered, since the combined impact and direction of all direct and indirect COVID-19-related forces is unknown, no explicit adjustment for the pandemic has been made in this year's analysis.

Trend

This filing relies primarily on the experience from policy years 2017 and 2018. However, the proposed voluntary and assigned risk rates are intended for use with policies with effective dates starting on January 1, 2021. It is necessary to use trend factors that forecast how much the future Iowa workers compensation experience will differ from the past. These trend factors measure anticipated changes in the amount of indemnity and medical benefits as compared with anticipated changes in the amount of workers' wages. For example, if benefit costs are expected to grow faster than wages, then a trend factor greater than zero is indicated. Conversely, if wages are expected to grow faster than benefit costs, then a trend factor less than zero is indicated.



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Selections Underlying the Proposed Changes

While historical changes in claim frequency and average cost per case were also reviewed, NCCI applies loss ratio trend factors in the determination of the proposed overall average advisory rate level change.

The COVID-19 pandemic is an extraordinary, unprecedented event. At this time, the overall impact the COVID-19 pandemic may have on trends is indeterminate. It is reasonable to believe COVID-19 will give rise to component changes that may, to some extent, have offsetting impacts on system costs. For example,

- There could be an increase in the number of compensable workers compensation claims arising in occupations with greater potential exposure to the pandemic
- There could be a decrease in workers compensation claims due to the increased number of employees who are teleworking

Short- and long-term COVID-19-related impacts may also differ. For example,

- In the short term, during the COVID-19 pandemic, there may be a reduction in the number of physical therapy sessions attended by injured employees and/or a deferral in the number of workers compensation-related surgeries that are not deemed to be immediately critical
- Over the longer term, an increase in these types of services may be expected as the current burden on medical-related personnel and facilities is lessened
- In economic downturns, workers may forego filing claims for certain injuries to maintain active employment as the economy navigates these uncertain times—leading to temporary downward pressure on claim frequency

Although considered, since the combined impact and direction of all direct and indirect COVID-19-related forces is unknown, no explicit adjustment for the pandemic has been made in this year's trend analysis.

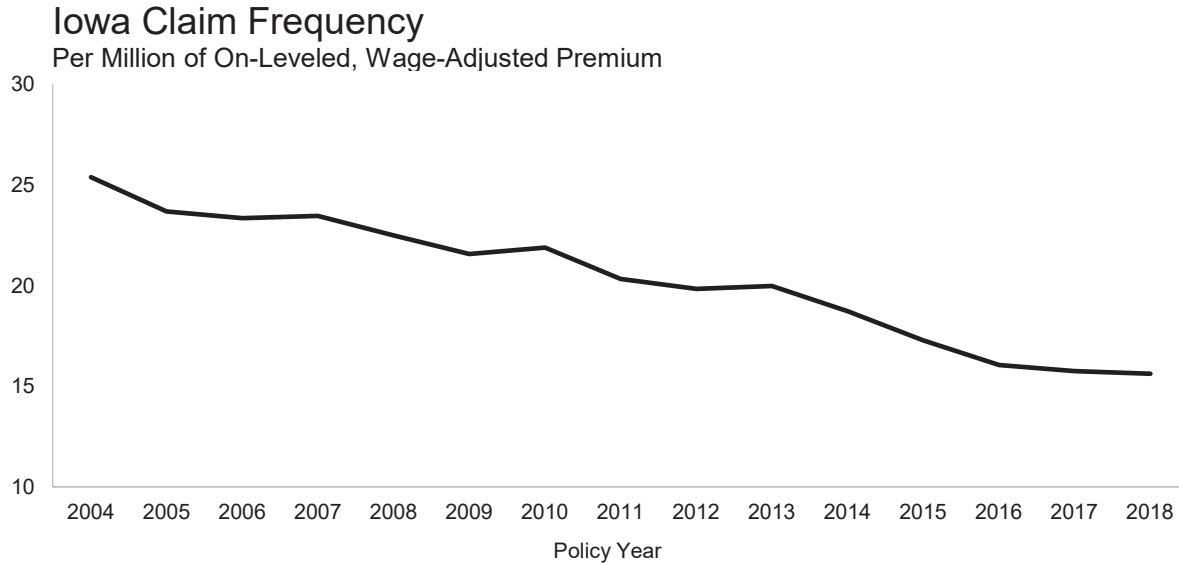


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Selections Underlying the Proposed Changes

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



Iowa's lost-time claim frequency has generally declined for the past several years as shown immediately above. The data in this chart reflects premiums at today's advisory rate level, and a common wage level.



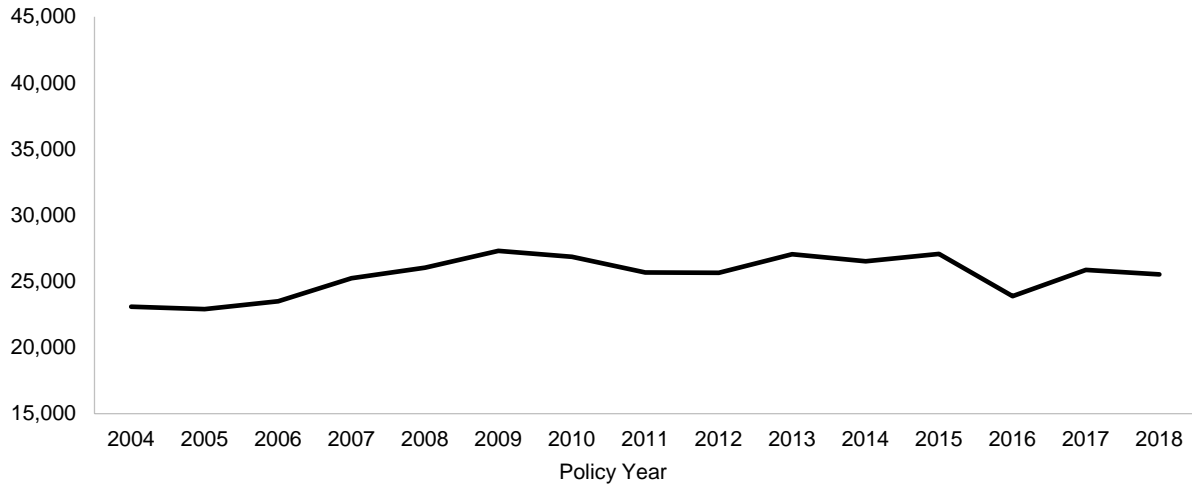
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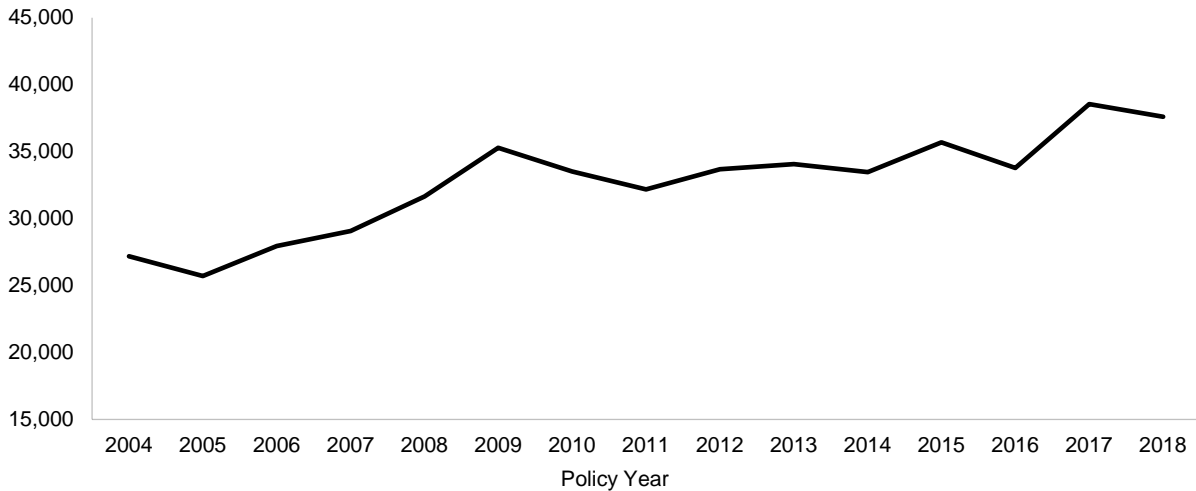
Iowa Indemnity Average Cost Per Case

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



Iowa Medical Average Cost Per Case

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



Iowa's average indemnity costs per case in excess of wage growth have trended slightly upward over time for the period shown. Iowa's average medical costs per case in excess of wage growth have generally trended upward over time for the period shown.

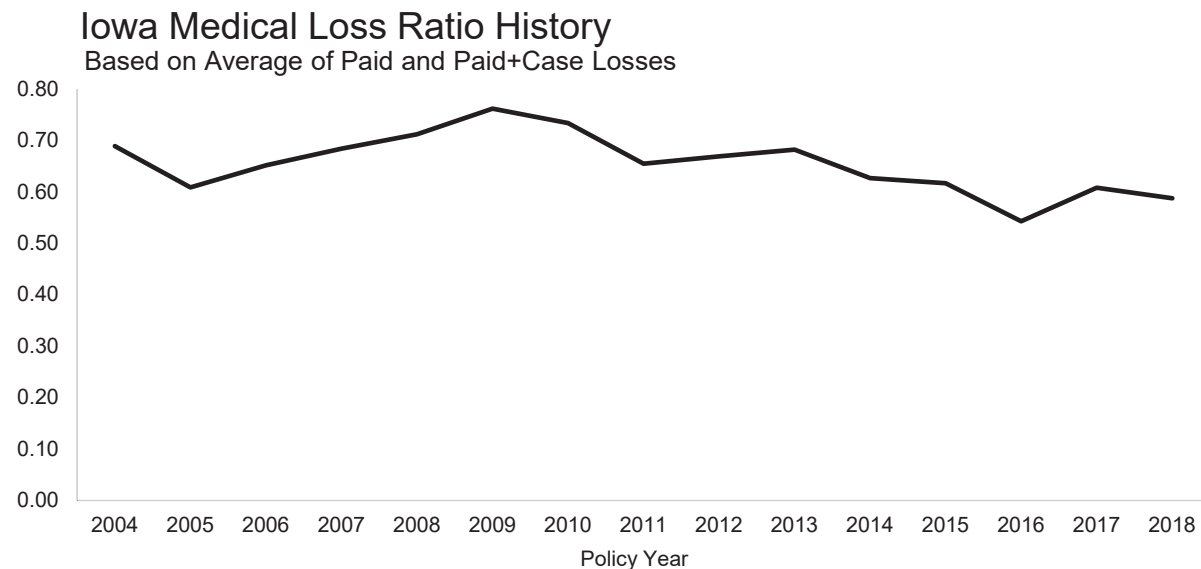
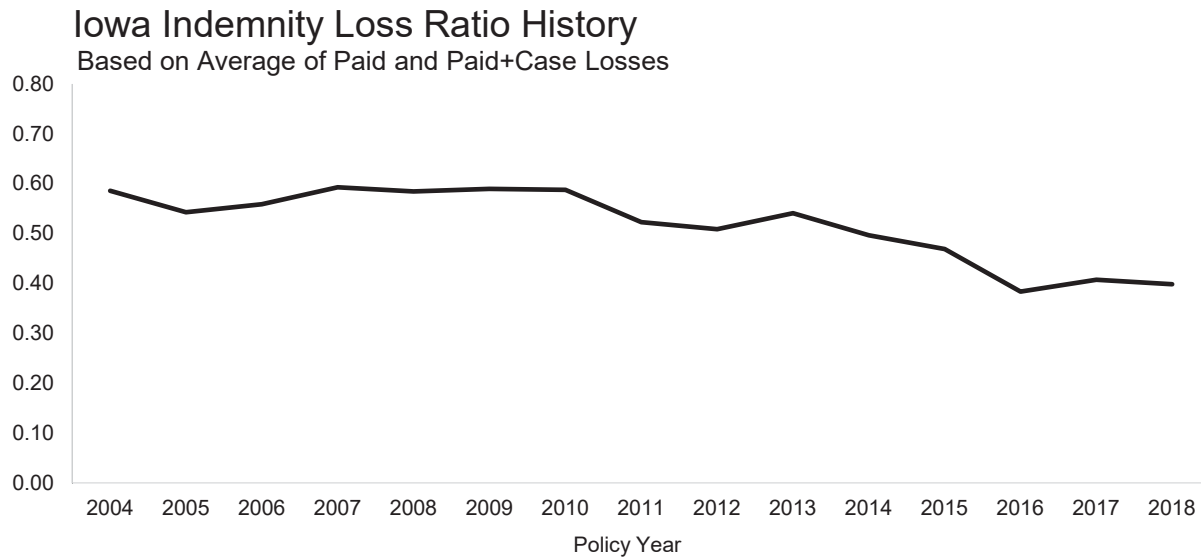


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Selections Underlying the Proposed Changes

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



Based on our analysis this year, we are proposing to decrease the annual indemnity loss ratio trend from -2.0% to -3.0% and maintain the current annual medical loss ratio trend of -1.0% .



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Selections Underlying the Proposed Changes

Expenses

The proposed advisory rates include a provision for workers compensation expenses. The following provides detail on the expense provisions accounted for in the advisory rates.

Loss-Based Expenses

The proposed advisory rates include a provision for loss adjustment expenses (LAE). These are expenses associated with the handling of workers compensation claims. LAE is included in the rates by using a ratio of loss adjustment expense dollars to loss dollars (called the LAE provision). In this filing, NCCI is proposing to increase the current LAE provision from 15.8% to 16.9% of losses. Please see Exhibit II for additional detail.

Production and General Expense

The proposed advisory rates include a provision for production expenses (including commissions) and general expenses.

The current provision in the advisory rates for production expense is 18.5% of premium. This filing proposes to decrease the provision of 18.3%.

The current provision in the advisory rates for general expenses is 5.1% of premium. This filing proposes to increase the provision to 5.5%.

The overall advisory rate change due to the proposed production and general expense provisions is an increase of 0.3%.

Premium Taxes and Assessments

This filing proposes an increase to the current approved provisions for taxes and assessments. The current provision in the rates for taxes and assessments is 2.3% of premium; the proposed provision is 2.4% of premium. The breakdown of the proposed provision is shown below:

Premium Tax	1.0%
Second Injury Fund	1.1%
<u>Miscellaneous</u>	<u>0.3%</u>
Taxes and Assessments	2.4%

Profit and Contingency Provision

By law, Iowa’s advisory rates must be determined such that Iowa’s workers compensation insurers can be expected to earn a return that is adequate, fair and not excessive. Analysis and determination of a profit and contingency provision is necessary to ensure this premise is maintained.



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Selections Underlying the Proposed Changes

Current advisory rates contain a profit and contingency of -0.5%. Based upon the results from its latest internal rate of return model, NCCI is proposing to increase the current profit and contingency provision to 1.0% in this rate filing.

Assigned Risk Market

As previously mentioned, an overall average increase of 0.3% to the current assigned risk rate level is being proposed effective January 1, 2021.

A number of Assigned Risk programs have been instituted in Iowa. These programs help to assure that the assigned risk market is self-funding. This means that the premium collected in the assigned risk market should pay for losses generated by employers in that market. These programs also encourage employers in the assigned risk market to seek coverage in the voluntary market. They are listed below:

Assigned Risk Program	Effective Date
Removal of Assigned Risk Premium Discounts	04/16/1987
Take-out Credit Program	01/01/1992
Assigned Risk Adjustment Program (ARAP)	07/01/1992
Assigned Risk Differential (Increased to 1.30)	01/01/2014

In this filing, there are no changes proposed to the current assigned risk pricing programs.



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Additional Proposed Changes

Proposed Change to the Countrywide Adjusting and Other Expense (AOE) Provision Calculation

Each year, NCCI performs a countrywide analysis to determine an actuarially appropriate AOE provision for inclusion in state loss cost/rate filings. The analysis is based on data from NCCI's Call for Loss Adjustment Expense (Financial Call #19).

As a result of Third-Party Administrator (TPA) agreements, some carriers report losses on Call #19 without associated AOE. Beginning with this filing, for policies associated with TPA agreements where the AOE is not reported to NCCI, the associated losses will be excluded from the AOE analysis so that they do not impact the countrywide ultimate AOE ratios. All other aspects of the current AOE methodology remain unchanged.



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Part 2 Proposed Values

- Proposed Voluntary Market Advisory Rates and Rating Values
- Proposed Assigned Risk Rates and Rating Values
- Proposed Values for Inclusion in the Experience Rating Plan Manual
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Proposed Voluntary Market Advisory Rates and Rating Values

The following pages include proposed voluntary market advisory rates and rating values:

- Voluntary market advisory rates, minimum premiums, expected loss rates, and d-ratios by class code, along with associated footnotes
 - The “X” footnote denoting a state special classification phraseology will no longer be shown on the following pages. Refer to the special classifications section of the **Basic Manual** for any state specific classification phraseology.
- Advisory miscellaneous values, such as:
 - Maximum and minimum weekly payroll applicable for select class codes
 - Premium determination for Partners and Sole Proprietors
 - Catastrophe and Terrorism advisory voluntary rates
 - United States Longshore and Harbor Workers’ Compensation Coverage Percentage

WORKERS COMPENSATION AND EMPLOYERS LIABILITY

IOWA

Effective January 1, 2021

CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO
0005	3.83	581	2.42	0.33	2016	3.90	589	2.56	0.38	2710	10.27	1000	5.18	0.24
0008	3.02	492	1.78	0.30	2021	3.53	548	2.08	0.30	2714	5.14	725	3.37	0.37
0016	5.96	500	3.26	0.27	2039	3.28	521	2.15	0.38	2731	4.88	697	2.67	0.27
0034	5.15	650	3.24	0.33	2041	4.88	697	3.20	0.38	2735	6.37	861	4.17	0.37
0035	2.97	487	1.95	0.37	2065	2.15	397	1.36	0.33	2759	6.94	923	4.54	0.37
0036	3.71	500	2.34	0.33	2070	5.87	806	3.70	0.33	2790	2.00	380	1.31	0.37
0037	4.14	500	2.44	0.30	2081	3.38	532	2.13	0.33	2797	6.92	921	4.36	0.33
0042	6.43	650	3.79	0.30	2089	5.40	754	3.40	0.33	2799	6.41	865	3.79	0.30
0050	7.26	959	4.57	0.33	2095	3.88	587	2.45	0.33	2802	5.37	751	3.17	0.30
0059D	0.43	-	0.10	0.27	2105	4.85	694	3.18	0.38	2835	3.64	560	2.52	0.44
0065D	0.11	-	0.03	0.28	2110	2.72	459	1.78	0.38	2836	3.57	553	2.48	0.44
0066D	0.11	-	0.03	0.27	2111	3.64	560	2.38	0.37	2841	5.53	768	3.62	0.37
0067D	0.11	-	0.03	0.27	2112	4.70	677	3.08	0.38	2881	3.28	521	2.28	0.44
0079	3.54	549	1.93	0.27	2114	3.67	564	2.40	0.37	2883	3.72	569	2.34	0.33
0083	5.12	500	3.23	0.33	2121	1.73	350	1.09	0.33	2913	-	-	2.34	0.33
0106	10.85	1000	5.48	0.24	2130	2.20	402	1.39	0.33	2915	4.17	619	2.46	0.30
0113	4.57	663	2.88	0.33	2131	2.30	413	1.45	0.33	2916	3.80	578	1.92	0.24
0170	3.79	577	2.39	0.33	2143	2.86	475	1.88	0.38	2923	2.46	431	1.61	0.38
0251	3.93	592	2.48	0.33	2157	4.54	659	2.87	0.33	2942	-	-	0.98	0.44
0400	-	-	1.58	0.30	2172	1.99	379	1.18	0.30	2960	5.66	783	3.58	0.33
0401	11.95	A	6.03	0.24	2174	3.73	570	2.45	0.37	3004	2.00	380	1.10	0.27
0771N	0.63	-	-	-	2211	9.02	1000	4.94	0.27	3018	3.01	491	1.65	0.27
0908P	180.00	340	113.43	0.33	2220	2.93	482	1.85	0.33	3022	4.53	658	2.97	0.38
0913P	521.00	681	328.89	0.33	2286	-	-	1.85	0.33	3027	2.73	460	1.50	0.27
0917	4.53	658	2.97	0.38	2288	4.69	676	3.07	0.37	3028	3.22	514	2.03	0.33
1005	7.52	987	3.45	0.24	2300	-	-	2.00	0.33	3030	6.89	918	3.78	0.28
1016	16.03	1000	7.35	0.23	2302	2.07	388	1.30	0.33	3040	6.05	826	3.31	0.27
1164D	3.74	571	1.68	0.23	2305	2.85	474	1.68	0.30	3041	5.66	783	3.57	0.33
1165D	3.99	599	1.99	0.24	2361	2.38	422	1.50	0.33	3042	5.13	724	3.03	0.30
1320	1.84	362	0.93	0.24	2362	2.43	427	1.53	0.33	3064	5.19	731	3.27	0.33
1322	7.94	1000	4.02	0.24	2380	2.36	420	1.49	0.33	3076	4.06	607	2.56	0.33
1430	5.66	783	3.10	0.27	2386	-	-	2.00	0.33	3081D	8.54	1000	4.59	0.27
1438	6.42	866	3.25	0.24	2388	1.89	368	1.24	0.37	3082D	5.07	718	2.75	0.28
1452	2.76	464	1.52	0.28	2402	3.46	541	1.89	0.27	3085D	7.54	989	4.07	0.27
1463	16.43	1000	8.31	0.24	2413	3.17	509	2.00	0.33	3110	5.92	811	3.73	0.33
1472	3.91	590	1.97	0.24	2416	2.49	434	1.57	0.33	3111	2.91	480	1.84	0.33
1624D	4.00	600	2.00	0.24	2417	1.46	321	0.92	0.33	3113	2.17	399	1.37	0.33
1642	2.59	445	1.42	0.27	2501	3.17	509	2.00	0.33	3114	4.14	615	2.61	0.33
1654	4.56	662	2.50	0.28	2503	1.46	321	0.96	0.38	3118	1.97	377	1.29	0.38
1655	-	-	1.42	0.27	2534	-	-	2.00	0.33	3119	1.10	281	0.76	0.44
1699	3.75	573	2.05	0.27	2570	5.13	724	3.36	0.38	3122	2.39	423	1.57	0.37
1701	3.41	535	1.87	0.27	2585	4.41	645	2.90	0.38	3126	2.68	455	1.69	0.33
1710D	4.42	646	2.39	0.28	2586	3.41	535	2.15	0.33	3131	2.21	403	1.40	0.33
1741	-	-	1.87	0.27	2587	2.31	414	1.52	0.38	3132	3.36	530	2.12	0.33
1747	3.40	534	1.86	0.28	2589	3.25	518	2.05	0.33	3145	2.60	446	1.64	0.33
1748	6.58	884	3.60	0.27	2600	4.79	687	3.14	0.38	3146	2.54	439	1.60	0.33
1803D	9.60	1000	4.66	0.24	2623	8.55	1000	5.05	0.30	3169	3.52	547	2.22	0.33
1852	-	-	1.11	0.22	2651	2.60	446	1.71	0.37	3175	-	-	2.22	0.33
1853	-	-	1.87	0.27	2660	3.02	492	1.98	0.37	3179	2.59	445	1.70	0.38
1860	-	-	1.60	0.33	2670	-	-	2.54	0.37	3180	2.67	454	1.75	0.37
1924	3.01	491	1.97	0.38	2683	3.17	509	2.00	0.33	3188	2.60	446	1.71	0.37
1925	6.16	838	3.63	0.30	2688	3.88	587	2.54	0.37	3220	2.20	402	1.39	0.33
2002	3.15	507	2.07	0.38	2701	14.70	1000	8.07	0.28	3223	-	-	1.75	0.37
2003	4.82	690	3.04	0.33	2702	24.72	1000	11.28	0.23	3224	4.16	618	2.73	0.38
2014	5.43	757	2.98	0.27	2709	10.43	1000	5.72	0.27	3227	4.38	642	2.87	0.37

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CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO
3240	3.48	543	2.19	0.33	4036	3.04	494	1.66	0.27	4670	—	—	2.85	0.33
3241	3.46	541	2.18	0.33	4038	2.89	478	2.01	0.44	4683	4.51	656	2.85	0.33
3255	2.91	480	2.02	0.44	4053	—	—	1.93	0.33	4686	2.47	432	1.35	0.27
3257	3.48	543	2.19	0.33	4061	—	—	1.93	0.33	4692	0.74	241	0.49	0.38
3270	3.20	512	2.02	0.33	4062	3.06	497	1.93	0.33	4693	1.50	325	0.95	0.33
3300	5.27	740	3.32	0.33	4101	3.75	573	2.21	0.30	4703	2.07	388	1.31	0.33
3303	2.96	486	1.94	0.37	4109	0.55	221	0.36	0.38	4717	2.00	380	1.39	0.44
3307	3.72	569	2.34	0.33	4110	0.92	261	0.58	0.33	4720	2.70	457	1.70	0.33
3315	4.06	607	2.67	0.38	4111	2.09	390	1.37	0.38	4740	1.47	322	0.81	0.27
3334	2.93	482	1.85	0.33	4113	—	—	1.37	0.38	4741	3.19	511	2.01	0.33
3336	3.30	523	1.81	0.28	4114	3.06	497	1.93	0.33	4751	5.74	791	3.13	0.27
3365	4.92	701	2.69	0.27	4130	3.73	570	2.36	0.33	4771N	3.59	624	1.64	0.23
3372	4.85	694	2.86	0.30	4131	6.22	844	4.08	0.37	4777	3.80	578	1.73	0.23
3373	5.29	742	3.33	0.33	4133	2.65	452	1.74	0.37	4825	1.12	283	0.61	0.27
3383	1.89	368	1.24	0.38	4149	0.92	261	0.64	0.44	4828	2.34	417	1.39	0.30
3385	1.05	276	0.69	0.38	4206	3.46	541	2.19	0.33	4829	1.29	302	0.65	0.24
3400	2.73	460	1.61	0.30	4207	3.25	518	1.78	0.28	4902	3.06	497	2.00	0.37
3507	3.70	567	2.34	0.33	4239	2.75	463	1.51	0.28	4923	1.37	311	0.87	0.33
3515	2.94	483	1.85	0.33	4240	4.11	612	2.69	0.37	5020	6.35	859	3.49	0.28
3548	1.36	310	0.86	0.33	4243	2.47	432	1.56	0.33	5022	9.37	1000	4.74	0.24
3559	5.11	722	3.22	0.33	4244	3.07	498	1.94	0.33	5037	20.29	1000	9.27	0.23
3574	1.44	318	0.94	0.38	4250	2.31	414	1.46	0.33	5040	8.63	1000	3.95	0.23
3581	1.57	333	1.03	0.38	4251	3.17	509	2.00	0.33	5057	5.69	786	2.60	0.23
3612	2.41	425	1.42	0.30	4263	4.03	603	2.54	0.33	5059	21.44	1000	9.78	0.23
3620	4.37	641	2.39	0.28	4273	3.36	530	2.12	0.33	5069	—	—	9.78	0.23
3629	2.57	443	1.68	0.37	4279	2.54	439	1.60	0.33	5102	6.84	912	3.45	0.24
3632	3.44	538	2.03	0.30	4282	—	—	1.60	0.33	5146	4.60	666	2.52	0.28
3634	1.86	365	1.22	0.38	4283	1.84	362	1.16	0.33	5160	4.79	687	2.43	0.24
3635	2.96	486	1.87	0.33	4299	2.15	397	1.41	0.38	5183	2.85	474	1.56	0.28
3638	2.59	445	1.70	0.37	4304	5.63	779	3.32	0.30	5188	3.69	566	2.02	0.28
3642	2.47	432	1.56	0.33	4307	2.21	403	1.54	0.44	5190	2.68	455	1.47	0.28
3643	2.44	428	1.54	0.33	4351	1.16	288	0.73	0.33	5191	0.95	265	0.60	0.33
3647	3.59	555	2.12	0.30	4352	1.88	367	1.23	0.38	5192	3.03	493	1.91	0.33
3648	2.04	384	1.33	0.37	4360	—	—	0.41	0.30	5213	7.58	994	3.83	0.24
3681	1.03	273	0.68	0.37	4361	1.04	274	0.68	0.37	5215	5.86	805	3.47	0.30
3685	1.73	350	1.13	0.37	4410	3.28	521	2.07	0.33	5221	5.06	717	2.77	0.28
3719	1.20	292	0.55	0.23	4420	7.13	944	3.61	0.24	5222	14.23	1000	7.18	0.24
3724	4.74	681	2.39	0.24	4431	1.78	356	1.23	0.44	5223	5.40	754	2.96	0.28
3726	4.40	644	2.01	0.23	4432	1.41	315	0.98	0.44	5348	5.59	775	3.07	0.28
3803	3.01	491	1.90	0.33	4439	—	—	1.42	0.33	5402	5.67	784	3.72	0.38
3807	4.07	608	2.68	0.38	4452	3.49	544	2.20	0.33	5403	10.02	1000	5.06	0.24
3808	4.25	628	2.51	0.30	4459	3.48	543	2.19	0.33	5437	6.11	832	3.35	0.27
3821	6.24	846	3.68	0.30	4470	2.64	450	1.66	0.33	5443	4.19	621	2.65	0.33
3822	4.82	690	2.84	0.30	4484	3.69	566	2.33	0.33	5445	6.37	861	3.22	0.24
3824	5.40	754	3.18	0.30	4493	3.31	524	2.09	0.33	5462	6.71	898	3.68	0.28
3826	1.12	283	0.71	0.33	4511	0.78	246	0.46	0.30	5472	5.96	816	2.72	0.23
3827	2.57	443	1.52	0.30	4557	2.49	434	1.63	0.38	5473	9.22	1000	4.21	0.23
3830	1.47	322	0.87	0.30	4558	2.25	408	1.42	0.33	5474	6.44	868	3.26	0.24
3851	2.62	448	1.72	0.38	4568	2.30	413	1.26	0.27	5478	4.21	623	2.31	0.28
3865	2.36	420	1.64	0.44	4581	1.21	293	0.61	0.24	5479	6.03	823	3.56	0.30
3881	4.96	706	3.13	0.33	4583	4.37	641	2.21	0.24	5480	7.37	971	3.73	0.24
4000	5.66	783	2.86	0.24	4611	1.23	295	0.81	0.37	5491	1.97	377	1.00	0.24
4021	5.56	772	3.05	0.27	4635	3.94	593	1.80	0.23	5506	7.72	1000	3.53	0.23
4024D	9.07	1000	4.92	0.27	4653	1.79	357	1.18	0.38	5507	4.38	642	2.22	0.24
4034	7.97	1000	4.37	0.27	4665	9.62	1000	5.27	0.28	5508	—	—	2.22	0.24

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CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO
5535	5.99	819	3.28	0.27	7050M	8.13	1000	3.55	0.22	7711	45.86	1000	23.19	0.24
5537	4.60	666	2.52	0.27	7090M	6.64	890	3.02	0.22	7720	3.39	533	1.86	0.27
5551	16.53	1000	7.54	0.23	7098M	14.24	1000	6.51	0.23	7855	3.58	554	1.96	0.28
5606	1.37	311	0.69	0.24	7099M	17.43	1000	7.65	0.23	8001	2.57	443	1.69	0.37
5610	4.66	673	2.94	0.33	7133	3.50	545	1.77	0.24	8002	2.63	449	1.66	0.33
5645	9.99	1000	5.04	0.24	7151M	4.25	628	2.15	0.24	8006	2.57	443	1.62	0.33
5703	13.44	1000	7.36	0.27	7152M	5.78	796	2.81	0.24	8008	1.23	295	0.80	0.37
5705	14.42	1000	7.89	0.27	7153M	4.73	680	2.39	0.24	8010	2.13	394	1.40	0.37
5951	0.78	246	0.51	0.37	7219	7.93	1000	4.02	0.24	8013	0.44	208	0.28	0.33
6003	5.78	796	3.18	0.28	7222	7.47	982	4.11	0.28	8015	0.87	256	0.55	0.33
6005	3.95	595	2.17	0.27	7225	8.78	1000	4.82	0.28	8017	1.97	377	1.29	0.37
6017	-	-	3.83	0.24	7228	-	-	4.02	0.24	8018	3.52	547	2.31	0.38
6018	2.54	439	1.40	0.28	7229	-	-	4.02	0.24	8021	2.53	438	1.60	0.33
6045	4.02	602	2.21	0.28	7230	9.71	1000	5.74	0.30	8031	2.78	466	1.75	0.33
6204	9.11	1000	4.60	0.24	7231	8.44	1000	4.99	0.30	8032	2.20	402	1.44	0.37
6206	3.09	500	1.41	0.23	7232	10.48	1000	5.31	0.24	8033	1.49	324	0.94	0.33
6213	1.53	328	0.77	0.24	7309F	14.44	1000	4.38	0.20	8037	1.92	371	1.26	0.37
6214	1.99	379	0.91	0.23	7313F	5.64	780	1.71	0.20	8039	1.67	344	1.09	0.37
6216	5.74	791	2.62	0.23	7317F	10.93	1000	3.31	0.21	8044	2.77	465	1.63	0.30
6217	4.71	678	2.38	0.24	7327F	30.00	1000	9.11	0.20	8045	0.70	237	0.46	0.38
6229	5.55	771	2.80	0.24	7333M	8.50	1000	3.91	0.24	8046	2.53	438	1.59	0.33
6233	3.42	536	1.73	0.24	7335M	9.44	1000	4.33	0.24	8047	1.05	276	0.69	0.38
6235	5.51	766	2.52	0.23	7337M	11.55	1000	5.09	0.24	8058	2.87	476	1.80	0.33
6236	7.29	962	4.01	0.28	7350F	12.63	1000	4.13	0.22	8072	0.64	230	0.42	0.37
6237	1.58	334	0.87	0.28	7360	4.33	636	2.37	0.28	8102	1.80	358	1.18	0.38
6251D	8.47	1000	4.28	0.25	7370	4.80	688	3.03	0.33	8103	2.69	456	1.58	0.30
6252D	3.37	531	1.53	0.23	7380	5.29	742	3.13	0.30	8105	-	-	2.31	0.38
6260	-	-	4.28	0.25	7382	4.71	678	2.97	0.33	8106	6.48	873	3.55	0.27
6306	5.91	810	2.99	0.24	7390	4.44	648	2.80	0.33	8107	3.49	544	1.91	0.28
6319	3.69	566	1.86	0.24	7394M	4.13	614	1.89	0.23	8111	2.37	421	1.49	0.33
6325	4.06	607	2.05	0.24	7395M	4.59	665	2.10	0.23	8116	2.63	449	1.66	0.33
6400	5.77	795	3.40	0.30	7398M	5.62	778	2.47	0.23	8203	8.50	1000	5.37	0.33
6503	2.72	459	1.78	0.38	7402	0.29	192	0.18	0.33	8204	5.68	785	3.11	0.27
6504	3.09	500	2.03	0.38	7403	4.76	684	2.61	0.28	8209	4.65	672	2.93	0.33
6702M*	4.35	639	2.39	0.28	7405N	1.32	383	0.73	0.28	8215	3.62	558	1.99	0.27
6703M*	5.91	810	3.11	0.28	7420	6.95	925	3.19	0.24	8227	3.80	578	1.73	0.23
6704M*	4.83	691	2.65	0.28	7421	0.89	258	0.45	0.24	8232	5.19	731	2.84	0.27
6801F	5.86	805	2.03	0.25	7422	1.84	362	0.84	0.23	8233	2.57	443	1.42	0.28
6811	6.38	862	3.49	0.27	7425	3.05	496	1.40	0.23	8235	4.94	703	3.12	0.33
6824F	9.90	1000	3.25	0.22	7431N	1.01	331	0.46	0.23	8263	6.41	865	3.78	0.30
6826F	8.74	1000	3.00	0.26	7445N	0.71	-	-	-	8264	6.61	887	3.62	0.27
6834	3.59	555	2.12	0.30	7453N	0.54	-	-	-	8265	6.81	909	3.43	0.24
6836	4.79	687	2.62	0.27	7502	2.04	384	1.12	0.28	8279	7.20	952	3.63	0.24
6843F	16.50	1000	5.01	0.20	7515	1.23	295	0.56	0.23	8288	7.18	950	3.92	0.27
6845F	7.96	1000	2.41	0.21	7520	3.53	548	2.23	0.33	8291	4.36	640	2.57	0.30
6854	6.52	877	2.98	0.23	7538	4.22	624	1.93	0.23	8292	4.44	648	2.80	0.33
6872F	14.13	1000	4.28	0.21	7539	2.33	416	1.18	0.24	8293	10.19	1000	5.59	0.27
6874F	24.44	1000	7.39	0.21	7540	2.93	482	1.34	0.23	8304	6.23	845	3.41	0.27
6882	6.29	852	2.87	0.23	7580	2.67	454	1.46	0.27	8350	5.98	818	3.02	0.24
6884	6.87	916	3.15	0.24	7590	3.64	560	2.15	0.30	8380	3.00	490	1.77	0.30
7016M	6.75	903	3.09	0.23	7600	4.07	608	2.23	0.28	8381	2.15	397	1.27	0.30
7024M	7.50	985	3.43	0.23	7605	2.14	395	1.17	0.27	8385	2.54	439	1.39	0.27
7038M	5.98	818	2.72	0.22	7610	0.70	237	0.41	0.30	8392	2.40	424	1.51	0.33
7046M	12.82	1000	5.86	0.23	7705	5.49	764	3.25	0.30	8393	1.85	364	1.17	0.33
7047M	9.18	1000	4.03	0.23	7710	45.86	1000	23.19	0.24	8500	6.64	890	3.64	0.27

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CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO
8601	0.40	204	0.23	0.30	9063	0.96	266	0.63	0.37					
8602	1.86	365	1.10	0.30	9077F	5.63	779	2.13	0.31					
8603	0.11	172	0.07	0.33	9082	1.26	299	0.87	0.44					
8606	2.12	393	1.07	0.24	9083	1.35	309	0.93	0.44					
8709F	7.45	980	2.26	0.21	9084	1.35	309	0.85	0.33					
8719	2.35	419	1.07	0.23	9088a	a	a	a	a					
8720	1.17	289	0.64	0.27	9089	1.42	316	0.93	0.37					
8721	0.41	205	0.23	0.27	9093	1.48	323	0.97	0.37					
8723	0.17	179	0.11	0.33	9101	5.04	714	3.30	0.37					
8725	3.21	513	1.76	0.27	9102	3.81	579	2.40	0.33					
8726F	3.43	537	1.19	0.25	9154	1.89	368	1.19	0.33					
8734M	0.59	225	0.32	0.28	9156	3.67	564	2.16	0.30					
8737M	0.53	218	0.29	0.28	9170	13.11	1000	5.97	0.22					
8738M	0.73	240	0.38	0.28	9178	5.74	791	3.96	0.43					
8742	0.44	208	0.24	0.28	9179	15.02	1000	9.83	0.37					
8745	3.82	580	2.25	0.30	9180	6.54	879	3.57	0.27					
8748	0.70	237	0.41	0.30	9182	2.53	438	1.59	0.33					
8755	0.52	217	0.28	0.27	9186	14.48	1000	7.29	0.24					
8799	0.59	225	0.37	0.33	9220	5.21	733	3.07	0.30					
8800	1.94	373	1.34	0.44	9402	5.29	742	2.90	0.27					
8803	0.08	169	0.04	0.27	9403	10.22	1000	5.17	0.24					
8805M	0.28	191	0.17	0.33	9410	2.60	446	1.64	0.33					
8810	0.21	183	0.13	0.33	9501	4.27	630	2.52	0.30					
8814M	0.26	189	0.16	0.33	9505	4.96	706	2.93	0.30					
8815M	0.35	199	0.21	0.33	9516	3.80	578	2.09	0.28					
8820	0.20	182	0.12	0.30	9519	3.88	587	2.13	0.28					
8824	2.31	414	1.51	0.38	9521	4.24	626	2.32	0.28					
8825	-	-	1.55	0.33	9522	3.52	547	2.22	0.33					
8826	2.46	431	1.55	0.33	9534	3.75	573	1.90	0.24					
8829	-	-	1.51	0.38	9554	9.63	1000	4.86	0.24					
8831	1.42	316	0.89	0.33	9586	0.49	214	0.34	0.44					
8832	0.37	201	0.23	0.33	9600	3.35	529	2.20	0.38					
8833	0.88	257	0.56	0.33	9620	1.32	305	0.78	0.30					
8835	2.41	425	1.52	0.33										
8842	2.91	480	1.83	0.33										
8855	0.15	177	0.10	0.33										
8856	0.76	244	0.48	0.33										
8864	1.79	357	1.13	0.33										
8868	0.55	221	0.36	0.37										
8869	1.25	298	0.82	0.37										
8871	0.08	169	0.05	0.38										
8901	0.21	183	0.13	0.30										
9012	1.62	338	0.95	0.30										
9014	3.52	547	2.22	0.33										
9015	3.36	530	2.12	0.33										
9016	2.84	472	1.79	0.33										
9019	2.99	489	1.64	0.27										
9033	2.20	402	1.39	0.33										
9040	3.36	530	2.20	0.37										
9044	1.44	318	0.94	0.37										
9052	2.17	399	1.43	0.37										
9058	1.76	354	1.22	0.44										
9060	1.72	349	1.12	0.37										
9061	1.41	315	0.98	0.44										
9062	1.39	313	0.96	0.44										

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

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

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FOOTNOTES

- a Rate for each individual risk must be obtained from 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 already includes the specific disease loading shown in the table below. See **Basic Manual** Rule 3-A-7.

Disease			Disease			Disease		
Code No.	Loading	Symbol	Code No.	Loading	Symbol	Code No.	Loading	Symbol
0059D	0.43	S	1165D	0.06	S	3082D	0.06	S
0065D	0.11	S	1624D	0.04	S	3085D	0.12	S
0066D	0.11	S	1710D	0.06	S	4024D	0.06	S
0067D	0.11	S	1803D	0.37	S	6251D	0.06	S
1164D	0.06	S	3081D	0.15	S	6252D	0.03	S

S=Silica

- F Rate provides for coverage under the United States Longshore and Harbor Workers Compensation Act and its extensions. Rate includes a provision for USL&HW Assessment.
- 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. A provision for the USL&HW Assessment is included for those classifications under Program II USL Act.
- N This code is part of a ratable / non-ratable group shown below. The statistical non-ratable code and corresponding 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 code 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 x 1.652 and elr x 1.586.
- 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.

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MISCELLANEOUS VALUES

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

Employee operated vehicle.....	\$72,700
Leased or rented vehicle.....	\$48,500

Catastrophe (other than Certified Acts of Terrorism) - (Voluntary) 0.01

Expense Constant applicable in accordance with **Basic Manual** Rule 3-A-11..... \$160

Maximum Minimum Premium..... \$1,000

Note: Maximum Minimum Premium varies for farming and agricultural class codes

Maximum Weekly Payroll applicable in accordance with **Basic Manual** Rule 2-E -- "Executive Officers" including members of limited liability companies, Rule 2-E-3 for Partners and Sole Proprietors, and **Basic Manual** footnote instructions for Code 9178 -- "Athletic Sports or Park: Non-Contact Sports", and Code 9179 -- "Athletic Sports or Park: Contact Sports" \$3,700

Minimum Premium Multiplier..... 110

Minimum Weekly Payroll applicable in accordance with **Basic Manual** Rule 2-E -- "Executive Officers" and members of limited liability companies and Rule 2-E-3 for Partners and Sole Proprietors \$450

Premium Discount Percentages - (See **Basic Manual** Rule 3-A-19-a.) The following premium discounts are applicable to Standard Premiums:

		Type A	Type B
First	\$10,000	-	-
Next	190,000	9.1%	5.1%
Next	1,550,000	11.3%	6.5%
Over	1,750,000	12.3%	7.5%

Terrorism (Voluntary) 0.01

United States Longshore and Harbor Workers' Compensation Coverage Percentage applicable only in connection with **Basic Manual** Rule 3-A-4..... 32%

(Multiply a Non-F classification rate by a factor of 1.32 to adjust for differences in benefits and loss-based expenses. This factor is the product of the adjustment for differences in benefits (1.25) and the adjustment for differences in loss-based expenses (1.058).)

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.



Iowa

Workers Compensation Rate Filing – January 1, 2021

Proposed Assigned Risk Rates and Rating Values

The following pages include proposed assigned risk rates and rating values:

- Assigned risk rates, minimum premium, expected loss rates, and d-ratios by class code, along with associated footnotes
 - The “X” footnote denoting a state special classification phraseology will no longer be shown on the following pages. Refer to the special classifications section of the **Basic Manual** for any state specific classification phraseology.
- Miscellaneous values, such as:
 - Maximum and minimum weekly payroll applicable for select class codes
 - Premium determination for Partners and Sole Proprietors
 - Catastrophe and Terrorism assigned risk rates
 - United States Longshore and Harbor Workers’ Compensation Coverage Percentage

WORKERS COMPENSATION AND EMPLOYERS LIABILITY

IOWA

Effective January 1, 2021

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO
0005	4.98	650	2.42	0.33	2016	5.07	718	2.56	0.38	2710	13.35	1000	5.18	0.24
0008	3.93	592	1.78	0.30	2021	4.59	665	2.08	0.30	2714	6.68	895	3.37	0.37
0016	7.75	500	3.26	0.27	2039	4.26	629	2.15	0.38	2731	6.34	857	2.67	0.27
0034	6.70	650	3.24	0.33	2041	6.34	857	3.20	0.38	2735	8.28	1000	4.17	0.37
0035	3.86	585	1.95	0.37	2065	2.80	468	1.36	0.33	2759	9.02	1000	4.54	0.37
0036	4.82	500	2.34	0.33	2070	7.63	999	3.70	0.33	2790	2.60	446	1.31	0.37
0037	5.38	500	2.44	0.30	2081	4.39	643	2.13	0.33	2797	9.00	1000	4.36	0.33
0042	8.36	650	3.79	0.30	2089	7.02	932	3.40	0.33	2799	8.33	1000	3.79	0.30
0050	9.44	1000	4.57	0.33	2095	5.04	714	2.45	0.33	2802	6.98	928	3.17	0.30
0059D	0.56	-	0.10	0.27	2105	6.31	854	3.18	0.38	2835	4.73	680	2.52	0.44
0065D	0.14	-	0.03	0.28	2110	3.54	549	1.78	0.38	2836	4.64	670	2.48	0.44
0066D	0.14	-	0.03	0.27	2111	4.73	680	2.38	0.37	2841	7.19	951	3.62	0.37
0067D	0.14	-	0.03	0.27	2112	6.11	832	3.08	0.38	2881	4.26	629	2.28	0.44
0079	4.60	650	1.93	0.27	2114	4.77	685	2.40	0.37	2883	4.84	692	2.34	0.33
0083	6.66	500	3.23	0.33	2121	2.25	408	1.09	0.33	2913	-	-	2.34	0.33
0106	14.11	1000	5.48	0.24	2130	2.86	475	1.39	0.33	2915	5.42	756	2.46	0.30
0113	5.94	813	2.88	0.33	2131	2.99	489	1.45	0.33	2916	4.94	703	1.92	0.24
0170	4.93	702	2.39	0.33	2143	3.72	569	1.88	0.38	2923	3.20	512	1.61	0.38
0251	5.11	722	2.48	0.33	2157	5.90	809	2.87	0.33	2942	-	-	0.98	0.44
0400	-	-	1.58	0.30	2172	2.59	445	1.18	0.30	2960	7.36	970	3.58	0.33
0401	15.54	A	6.03	0.24	2174	4.85	694	2.45	0.37	3004	2.60	446	1.10	0.27
0771N	0.82	-	-	-	2211	11.73	1000	4.94	0.27	3018	3.91	590	1.65	0.27
0908P	234.00	394	113.43	0.33	2220	3.81	579	1.85	0.33	3022	5.89	808	2.97	0.38
0913P	677.00	837	328.89	0.33	2286	-	-	1.85	0.33	3027	3.55	551	1.50	0.27
0917	5.89	808	2.97	0.38	2288	6.10	831	3.07	0.37	3028	4.19	621	2.03	0.33
1005	9.78	1000	3.45	0.24	2300	-	-	2.00	0.33	3030	8.96	1000	3.78	0.28
1016	20.84	1000	7.35	0.23	2302	2.69	456	1.30	0.33	3040	7.87	1000	3.31	0.27
1164D	4.86	695	1.68	0.23	2305	3.71	568	1.68	0.30	3041	7.36	970	3.57	0.33
1165D	5.19	731	1.99	0.24	2361	3.09	500	1.50	0.33	3042	6.67	894	3.03	0.30
1320	2.39	423	0.93	0.24	2362	3.16	508	1.53	0.33	3064	6.75	903	3.27	0.33
1322	10.32	1000	4.02	0.24	2380	3.07	498	1.49	0.33	3076	5.28	741	2.56	0.33
1430	7.36	970	3.10	0.27	2386	-	-	2.00	0.33	3081D	11.11	1000	4.59	0.27
1438	8.35	1000	3.25	0.24	2388	2.46	431	1.24	0.37	3082D	6.59	885	2.75	0.28
1452	3.59	555	1.52	0.28	2402	4.50	655	1.89	0.27	3085D	9.81	1000	4.07	0.27
1463	21.36	1000	8.31	0.24	2413	4.12	613	2.00	0.33	3110	7.70	1000	3.73	0.33
1472	5.08	719	1.97	0.24	2416	3.24	516	1.57	0.33	3111	3.78	576	1.84	0.33
1624D	5.20	732	2.00	0.24	2417	1.90	369	0.92	0.33	3113	2.82	470	1.37	0.33
1642	3.37	531	1.42	0.27	2501	4.12	613	2.00	0.33	3114	5.38	752	2.61	0.33
1654	5.93	812	2.50	0.28	2503	1.90	369	0.96	0.38	3118	2.56	442	1.29	0.38
1655	-	-	1.42	0.27	2534	-	-	2.00	0.33	3119	1.43	317	0.76	0.44
1699	4.88	697	2.05	0.27	2570	6.67	894	3.36	0.38	3122	3.11	502	1.57	0.37
1701	4.43	647	1.87	0.27	2585	5.73	790	2.90	0.38	3126	3.48	543	1.69	0.33
1710D	5.75	793	2.39	0.28	2586	4.43	647	2.15	0.33	3131	2.87	476	1.40	0.33
1741	-	-	1.87	0.27	2587	3.00	490	1.52	0.38	3132	4.37	641	2.12	0.33
1747	4.42	646	1.86	0.28	2589	4.23	625	2.05	0.33	3145	3.38	532	1.64	0.33
1748	8.55	1000	3.60	0.27	2600	6.23	845	3.14	0.38	3146	3.30	523	1.60	0.33
1803D	12.48	1000	4.66	0.24	2623	11.12	1000	5.05	0.30	3169	4.58	664	2.22	0.33
1852	-	-	1.11	0.22	2651	3.38	532	1.71	0.37	3175	-	-	2.22	0.33
1853	-	-	1.87	0.27	2660	3.93	592	1.98	0.37	3179	3.37	531	1.70	0.38
1860	-	-	1.60	0.33	2670	-	-	2.54	0.37	3180	3.47	542	1.75	0.37
1924	3.91	590	1.97	0.38	2683	4.12	613	2.00	0.33	3188	3.38	532	1.71	0.37
1925	8.01	1000	3.63	0.30	2688	5.04	714	2.54	0.37	3220	2.86	475	1.39	0.33
2002	4.10	611	2.07	0.38	2701	19.11	1000	8.07	0.28	3223	-	-	1.75	0.37
2003	6.27	850	3.04	0.33	2702	32.14	1000	11.28	0.23	3224	5.41	755	2.73	0.38
2014	7.06	937	2.98	0.27	2709	13.56	1000	5.72	0.27	3227	5.69	786	2.87	0.37

Refer to the special classification 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

IOWA

Effective January 1, 2021

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO
3240	4.52	657	2.19	0.33	4036	3.95	595	1.66	0.27	4670	-	-	2.85	0.33
3241	4.50	655	2.18	0.33	4038	3.76	574	2.01	0.44	4683	5.86	805	2.85	0.33
3255	3.78	576	2.02	0.44	4053	-	-	1.93	0.33	4686	3.21	513	1.35	0.27
3257	4.52	657	2.19	0.33	4061	-	-	1.93	0.33	4692	0.96	266	0.49	0.38
3270	4.16	618	2.02	0.33	4062	3.98	598	1.93	0.33	4693	1.95	375	0.95	0.33
3300	6.85	914	3.32	0.33	4101	4.88	697	2.21	0.30	4703	2.69	456	1.31	0.33
3303	3.85	584	1.94	0.37	4109	0.72	239	0.36	0.38	4717	2.60	446	1.39	0.44
3307	4.84	692	2.34	0.33	4110	1.20	292	0.58	0.33	4720	3.51	546	1.70	0.33
3315	5.28	741	2.67	0.38	4111	2.72	459	1.37	0.38	4740	1.91	370	0.81	0.27
3334	3.81	579	1.85	0.33	4113	-	-	1.37	0.38	4741	4.15	617	2.01	0.33
3336	4.29	632	1.81	0.28	4114	3.98	598	1.93	0.33	4751	7.46	981	3.13	0.27
3365	6.40	864	2.69	0.27	4130	4.85	694	2.36	0.33	4771N	4.67	764	1.64	0.23
3372	6.31	854	2.86	0.30	4131	8.09	1000	4.08	0.37	4777	4.94	703	1.73	0.23
3373	6.88	917	3.33	0.33	4133	3.45	540	1.74	0.37	4825	1.46	321	0.61	0.27
3383	2.46	431	1.24	0.38	4149	1.20	292	0.64	0.44	4828	3.04	494	1.39	0.30
3385	1.37	311	0.69	0.38	4206	4.50	655	2.19	0.33	4829	1.68	345	0.65	0.24
3400	3.55	551	1.61	0.30	4207	4.23	625	1.78	0.28	4902	3.98	598	2.00	0.37
3507	4.81	689	2.34	0.33	4239	3.58	554	1.51	0.28	4923	1.78	356	0.87	0.33
3515	3.82	580	1.85	0.33	4240	5.34	747	2.69	0.37	5020	8.26	1000	3.49	0.28
3548	1.77	355	0.86	0.33	4243	3.21	513	1.56	0.33	5022	12.18	1000	4.74	0.24
3559	6.64	890	3.22	0.33	4244	3.99	599	1.94	0.33	5037	26.38	1000	9.27	0.23
3574	1.87	366	0.94	0.38	4250	3.00	490	1.46	0.33	5040	11.22	1000	3.95	0.23
3581	2.04	384	1.03	0.38	4251	4.12	613	2.00	0.33	5057	7.40	974	2.60	0.23
3612	3.13	504	1.42	0.30	4263	5.24	736	2.54	0.33	5059	27.87	1000	9.78	0.23
3620	5.68	785	2.39	0.28	4273	4.37	641	2.12	0.33	5069	-	-	9.78	0.23
3629	3.34	527	1.68	0.37	4279	3.30	523	1.60	0.33	5102	8.89	1000	3.45	0.24
3632	4.47	652	2.03	0.30	4282	-	-	1.60	0.33	5146	5.98	818	2.52	0.28
3634	2.42	426	1.22	0.38	4283	2.39	423	1.16	0.33	5160	6.23	845	2.43	0.24
3635	3.85	584	1.87	0.33	4299	2.80	468	1.41	0.38	5183	3.71	568	1.56	0.28
3638	3.37	531	1.70	0.37	4304	7.32	965	3.32	0.30	5188	4.80	688	2.02	0.28
3642	3.21	513	1.56	0.33	4307	2.87	476	1.54	0.44	5190	3.48	543	1.47	0.28
3643	3.17	509	1.54	0.33	4351	1.51	326	0.73	0.33	5191	1.24	296	0.60	0.33
3647	4.67	674	2.12	0.30	4352	2.44	428	1.23	0.38	5192	3.94	593	1.91	0.33
3648	2.65	452	1.33	0.37	4360	-	-	0.41	0.30	5213	9.85	1000	3.83	0.24
3681	1.34	307	0.68	0.37	4361	1.35	309	0.68	0.37	5215	7.62	998	3.47	0.30
3685	2.25	408	1.13	0.37	4410	4.26	629	2.07	0.33	5221	6.58	884	2.77	0.28
3719	1.56	332	0.55	0.23	4420	9.27	1000	3.61	0.24	5222	18.50	1000	7.18	0.24
3724	6.16	838	2.39	0.24	4431	2.31	414	1.23	0.44	5223	7.02	932	2.96	0.28
3726	5.72	789	2.01	0.23	4432	1.83	361	0.98	0.44	5348	7.27	960	3.07	0.28
3803	3.91	590	1.90	0.33	4439	-	-	1.42	0.33	5402	7.37	971	3.72	0.38
3807	5.29	742	2.68	0.38	4452	4.54	659	2.20	0.33	5403	13.03	1000	5.06	0.24
3808	5.53	768	2.51	0.30	4459	4.52	657	2.19	0.33	5437	7.94	1000	3.35	0.27
3821	8.11	1000	3.68	0.30	4470	3.43	537	1.66	0.33	5443	5.45	760	2.65	0.33
3822	6.27	850	2.84	0.30	4484	4.80	688	2.33	0.33	5445	8.28	1000	3.22	0.24
3824	7.02	932	3.18	0.30	4493	4.30	633	2.09	0.33	5462	8.72	1000	3.68	0.28
3826	1.46	321	0.71	0.33	4511	1.01	271	0.46	0.30	5472	7.75	1000	2.72	0.23
3827	3.34	527	1.52	0.30	4557	3.24	516	1.63	0.38	5473	11.99	1000	4.21	0.23
3830	1.91	370	0.87	0.30	4558	2.93	482	1.42	0.33	5474	8.37	1000	3.26	0.24
3851	3.41	535	1.72	0.38	4568	2.99	489	1.26	0.27	5478	5.47	762	2.31	0.28
3865	3.07	498	1.64	0.44	4581	1.57	333	0.61	0.24	5479	7.84	1000	3.56	0.30
3881	6.45	870	3.13	0.33	4583	5.68	785	2.21	0.24	5480	9.58	1000	3.73	0.24
4000	7.36	970	2.86	0.24	4611	1.60	336	0.81	0.37	5491	2.56	442	1.00	0.24
4021	7.23	955	3.05	0.27	4635	5.12	723	1.80	0.23	5506	10.04	1000	3.53	0.23
4024D	11.79	1000	4.92	0.27	4653	2.33	416	1.18	0.38	5507	5.69	786	2.22	0.24
4034	10.36	1000	4.37	0.27	4665	12.51	1000	5.27	0.28	5508	-	-	2.22	0.24

Refer to the special classification 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

IOWA

Effective January 1, 2021

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO
5535	7.79	1000	3.28	0.27	7050M	10.57	1000	3.55	0.22	7711	59.62	1000	23.19	0.24
5537	5.98	818	2.52	0.27	7090M	8.63	1000	3.02	0.22	7720	4.41	645	1.86	0.27
5551	21.49	1000	7.54	0.23	7098M	18.51	1000	6.51	0.23	7855	4.65	672	1.96	0.28
5606	1.78	356	0.69	0.24	7099M	22.66	1000	7.65	0.23	8001	3.34	527	1.69	0.37
5610	6.06	827	2.94	0.33	7133	4.55	661	1.77	0.24	8002	3.42	536	1.66	0.33
5645	12.99	1000	5.04	0.24	7151M	5.53	768	2.15	0.24	8006	3.34	527	1.62	0.33
5703	17.47	1000	7.36	0.27	7152M	7.51	986	2.81	0.24	8008	1.60	336	0.80	0.37
5705	18.75	1000	7.89	0.27	7153M	6.15	837	2.39	0.24	8010	2.77	465	1.40	0.37
5951	1.01	271	0.51	0.37	7219	10.31	1000	4.02	0.24	8013	0.57	223	0.28	0.33
6003	7.51	986	3.18	0.28	7222	9.71	1000	4.11	0.28	8015	1.13	284	0.55	0.33
6005	5.14	725	2.17	0.27	7225	11.41	1000	4.82	0.28	8017	2.56	442	1.29	0.37
6017	-	-	3.83	0.24	7228	-	-	4.02	0.24	8018	4.58	664	2.31	0.38
6018	3.30	523	1.40	0.28	7229	-	-	4.02	0.24	8021	3.29	522	1.60	0.33
6045	5.23	735	2.21	0.28	7230	12.62	1000	5.74	0.30	8031	3.61	557	1.75	0.33
6204	11.84	1000	4.60	0.24	7231	10.97	1000	4.99	0.30	8032	2.86	475	1.44	0.37
6206	4.02	602	1.41	0.23	7232	13.62	1000	5.31	0.24	8033	1.94	373	0.94	0.33
6213	1.99	379	0.77	0.24	7309F	18.77	1000	4.38	0.20	8037	2.50	435	1.26	0.37
6214	2.59	445	0.91	0.23	7313F	7.33	966	1.71	0.20	8039	2.17	399	1.09	0.37
6216	7.46	981	2.62	0.23	7317F	14.21	1000	3.31	0.21	8044	3.60	556	1.63	0.30
6217	6.12	833	2.38	0.24	7327F	39.00	1000	9.11	0.20	8045	0.91	260	0.46	0.38
6229	7.22	954	2.80	0.24	7333M	11.05	1000	3.91	0.24	8046	3.29	522	1.59	0.33
6233	4.45	650	1.73	0.24	7335M	12.27	1000	4.33	0.24	8047	1.37	311	0.69	0.38
6235	7.16	948	2.52	0.23	7337M	15.02	1000	5.09	0.24	8058	3.73	570	1.80	0.33
6236	9.48	1000	4.01	0.28	7350F	16.42	1000	4.13	0.22	8072	0.83	251	0.42	0.37
6237	2.05	386	0.87	0.28	7360	5.63	779	2.37	0.28	8102	2.34	417	1.18	0.38
6251D	11.01	1000	4.28	0.25	7370	6.24	846	3.03	0.33	8103	3.50	545	1.58	0.30
6252D	4.38	642	1.53	0.23	7380	6.88	917	3.13	0.30	8105	-	-	2.31	0.38
6260	-	-	4.28	0.25	7382	6.12	833	2.97	0.33	8106	8.42	1000	3.55	0.27
6306	7.68	1000	2.99	0.24	7390	5.77	795	2.80	0.33	8107	4.54	659	1.91	0.28
6319	4.80	688	1.86	0.24	7394M	5.37	751	1.89	0.23	8111	3.08	499	1.49	0.33
6325	5.28	741	2.05	0.24	7395M	5.97	817	2.10	0.23	8116	3.42	536	1.66	0.33
6400	7.50	985	3.40	0.30	7398M	7.31	964	2.47	0.23	8203	11.05	1000	5.37	0.33
6503	3.54	549	1.78	0.38	7402	0.38	202	0.18	0.33	8204	7.38	972	3.11	0.27
6504	4.02	602	2.03	0.38	7403	6.19	841	2.61	0.28	8209	6.05	826	2.93	0.33
6702M*	5.66	783	2.39	0.28	7405N	1.72	450	0.73	0.28	8215	4.71	678	1.99	0.27
6703M*	7.68	1000	3.11	0.28	7420	9.04	1000	3.19	0.24	8227	4.94	703	1.73	0.23
6704M*	6.28	851	2.65	0.28	7421	1.16	288	0.45	0.24	8232	6.75	903	2.84	0.27
6801F	7.62	998	2.03	0.25	7422	2.39	423	0.84	0.23	8233	3.34	527	1.42	0.28
6811	8.29	1000	3.49	0.27	7425	3.97	597	1.40	0.23	8235	6.42	866	3.12	0.33
6824F	12.87	1000	3.25	0.22	7431N	1.31	381	0.46	0.23	8263	8.33	1000	3.78	0.30
6826F	11.36	1000	3.00	0.26	7445N	0.92	-	-	-	8264	8.59	1000	3.62	0.27
6834	4.67	674	2.12	0.30	7453N	0.70	-	-	-	8265	8.85	1000	3.43	0.24
6836	6.23	845	2.62	0.27	7502	2.65	452	1.12	0.28	8279	9.36	1000	3.63	0.24
6843F	21.45	1000	5.01	0.20	7515	1.60	336	0.56	0.23	8288	9.33	1000	3.92	0.27
6845F	10.35	1000	2.41	0.21	7520	4.59	665	2.23	0.33	8291	5.67	784	2.57	0.30
6854	8.48	1000	2.98	0.23	7538	5.49	764	1.93	0.23	8292	5.77	795	2.80	0.33
6872F	18.37	1000	4.28	0.21	7539	3.03	493	1.18	0.24	8293	13.25	1000	5.59	0.27
6874F	31.77	1000	7.39	0.21	7540	3.81	579	1.34	0.23	8304	8.10	1000	3.41	0.27
6882	8.18	1000	2.87	0.23	7580	3.47	542	1.46	0.27	8350	7.77	1000	3.02	0.24
6884	8.93	1000	3.15	0.24	7590	4.73	680	2.15	0.30	8380	3.90	589	1.77	0.30
7016M	8.78	1000	3.09	0.23	7600	5.29	742	2.23	0.28	8381	2.80	468	1.27	0.30
7024M	9.75	1000	3.43	0.23	7605	2.78	466	1.17	0.27	8385	3.30	523	1.39	0.27
7038M	7.77	1000	2.72	0.22	7610	0.91	260	0.41	0.30	8392	3.12	503	1.51	0.33
7046M	16.67	1000	5.86	0.23	7705	7.14	945	3.25	0.30	8393	2.41	425	1.17	0.33
7047M	11.93	1000	4.03	0.23	7710	59.62	1000	23.19	0.24	8500	8.63	1000	3.64	0.27

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WORKERS COMPENSATION AND EMPLOYERS LIABILITY

IOWA

Effective January 1, 2021

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO
8601	0.52	217	0.23	0.30	9063	1.25	298	0.63	0.37					
8602	2.42	426	1.10	0.30	9077F	7.32	965	2.13	0.31					
8603	0.14	175	0.07	0.33	9082	1.64	340	0.87	0.44					
8606	2.76	464	1.07	0.24	9083	1.76	354	0.93	0.44					
8709F	9.69	1000	2.26	0.21	9084	1.76	354	0.85	0.33					
8719	3.06	497	1.07	0.23	9088a	a	a	a	a					
8720	1.52	327	0.64	0.27	9089	1.85	364	0.93	0.37					
8721	0.53	218	0.23	0.27	9093	1.92	371	0.97	0.37					
8723	0.22	184	0.11	0.33	9101	6.55	881	3.30	0.37					
8725	4.17	619	1.76	0.27	9102	4.95	705	2.40	0.33					
8726F	4.46	651	1.19	0.25	9154	2.46	431	1.19	0.33					
8734M	0.77	245	0.32	0.28	9156	4.77	685	2.16	0.30					
8737M	0.69	236	0.29	0.28	9170	17.04	1000	5.97	0.22					
8738M	0.95	265	0.38	0.28	9178	7.46	981	3.96	0.43					
8742	0.57	223	0.24	0.28	9179	19.53	1000	9.83	0.37					
8745	4.97	707	2.25	0.30	9180	8.50	1000	3.57	0.27					
8748	0.91	260	0.41	0.30	9182	3.29	522	1.59	0.33					
8755	0.68	235	0.28	0.27	9186	18.82	1000	7.29	0.24					
8799	0.77	245	0.37	0.33	9220	6.77	905	3.07	0.30					
8800	2.52	437	1.34	0.44	9402	6.88	917	2.90	0.27					
8803	0.10	171	0.04	0.27	9403	13.29	1000	5.17	0.24					
8805M	0.36	200	0.17	0.33	9410	3.38	532	1.64	0.33					
8810	0.27	190	0.13	0.33	9501	5.55	771	2.52	0.30					
8814M	0.34	197	0.16	0.33	9505	6.45	870	2.93	0.30					
8815M	0.46	211	0.21	0.33	9516	4.94	703	2.09	0.28					
8820	0.26	189	0.12	0.30	9519	5.04	714	2.13	0.28					
8824	3.00	490	1.51	0.38	9521	5.51	766	2.32	0.28					
8825	-	-	1.55	0.33	9522	4.58	664	2.22	0.33					
8826	3.20	512	1.55	0.33	9534	4.88	697	1.90	0.24					
8829	-	-	1.51	0.38	9554	12.52	1000	4.86	0.24					
8831	1.85	364	0.89	0.33	9586	0.64	230	0.34	0.44					
8832	0.48	213	0.23	0.33	9600	4.36	640	2.20	0.38					
8833	1.14	285	0.56	0.33	9620	1.72	349	0.78	0.30					
8835	3.13	504	1.52	0.33										
8842	3.78	576	1.83	0.33										
8855	0.20	182	0.10	0.33										
8856	0.99	269	0.48	0.33										
8864	2.33	416	1.13	0.33										
8868	0.72	239	0.36	0.37										
8869	1.63	339	0.82	0.37										
8871	0.10	171	0.05	0.38										
8901	0.27	190	0.13	0.30										
9012	2.11	392	0.95	0.30										
9014	4.58	664	2.22	0.33										
9015	4.37	641	2.12	0.33										
9016	3.69	566	1.79	0.33										
9019	3.89	588	1.64	0.27										
9033	2.86	475	1.39	0.33										
9040	4.37	641	2.20	0.37										
9044	1.87	366	0.94	0.37										
9052	2.82	470	1.43	0.37										
9058	2.29	412	1.22	0.44										
9060	2.24	406	1.12	0.37										
9061	1.83	361	0.98	0.44										
9062	1.81	359	0.96	0.44										

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

Effective January 1, 2021

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

FOOTNOTES

- a Rate for each individual risk must be obtained from 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 already includes the specific disease loading shown in the table below. See **Basic Manual** Rule 3-A-7.

Disease			Disease			Disease		
Code No.	Loading	Symbol	Code No.	Loading	Symbol	Code No.	Loading	Symbol
0059D	0.56	S	1165D	0.08	S	3082D	0.08	S
0065D	0.14	S	1624D	0.05	S	3085D	0.16	S
0066D	0.14	S	1710D	0.08	S	4024D	0.08	S
0067D	0.14	S	1803D	0.48	S	6251D	0.08	S
1164D	0.08	S	3081D	0.20	S	6252D	0.04	S

S=Silica

- F Rate provides for coverage under the United States Longshore and Harbor Workers Compensation Act and its extensions. Rate includes a provision for USL&HW Assessment.
- 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. A provision for the USL&HW Assessment is included for those classifications under Program II USL Act. For the residual market, coverage under the Federal Employers' Liability Act (FELA) for employees of interstate railroads is not available for codes 6702, 6703, 6704, 7151, 7152, 7153, 8734, 8737, 8738, 8805, 8814, and 8815.
- 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 code 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 x 1.652 and elr x 1.586.
- 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.

Effective January 1, 2021

APPLICABLE TO ASSIGNED RISK POLICIES ONLY

MISCELLANEOUS VALUES

Basis of premium applicable in accordance with <i>Basic Manual</i> footnote instructions for Code 7370 -- "Taxicab Co.":	
Employee operated vehicle.....	\$72,700
Leased or rented vehicle.....	\$48,500
Catastrophe (other than Certified Acts of Terrorism) - (Assigned Risk)	0.01
Expense Constant applicable in accordance with <i>Basic Manual</i> Rule 3-A-11.....	\$160
Maximum Minimum Premium	\$1,000
Note: Maximum Minimum Premium varies for farming and agricultural class codes	
Maximum Weekly Payroll applicable in accordance with <i>Basic Manual</i> Rule 2-E -- "Executive Officers" including members of limited liability companies, Rule 2-E-3 for Partners and Sole Proprietors, and <i>Basic Manual</i> footnote instructions for Code 9178 -- "Athletic Sports or Park: Non-Contact Sports", and Code 9179 -- "Athletic Sports or Park: Contact Sports"	
	\$3,700
Minimum Premium Multiplier	110
Minimum Weekly Payroll applicable in accordance with <i>Basic Manual</i> Rule 2-E -- "Executive Officers" and members of limited liability companies and Rule 2-E-3 for Partners and Sole Proprietors	
	\$450
Terrorism - (Assigned Risk)	0.01
United States Longshore and Harbor Workers' Compensation Coverage Percentage applicable only in connection with <i>Basic Manual</i> Rule 3-A-4.....	32%

(Multiply a Non-F classification rate by a factor of 1.32 to adjust for differences in benefits and loss-based expenses. This factor is the product of the adjustment for differences in benefits (1.25) and the adjustment for differences in loss-based expenses (1.058).)

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.



Iowa

Workers Compensation Rate Filing – January 1, 2021

Proposed Values for Inclusion in the Experience Rating Plan Manual

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

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

Effective January 1, 2021
TABLE OF WEIGHTING VALUES
APPLICABLE TO ALL POLICIES
Experience Rating Program - ERA

Expected Losses			Weighting Values	Expected Losses			Weighting Values
0	--	2,523	0.04	1,422,973	--	1,501,463	0.44
2,524	--	10,201	0.05	1,501,464	--	1,584,498	0.45
10,202	--	18,042	0.06	1,584,499	--	1,672,484	0.46
18,043	--	26,054	0.07	1,672,485	--	1,765,880	0.47
26,055	--	34,240	0.08	1,765,881	--	1,865,201	0.48
34,241	--	57,270	0.09	1,865,202	--	1,971,029	0.49
57,271	--	85,248	0.10	1,971,030	--	2,084,026	0.50
85,249	--	110,135	0.11	2,084,027	--	2,204,949	0.51
110,136	--	134,366	0.12	2,204,950	--	2,334,662	0.52
134,367	--	158,601	0.13	2,334,663	--	2,474,160	0.53
158,602	--	183,134	0.14	2,474,161	--	2,624,594	0.54
183,135	--	208,132	0.15	2,624,595	--	2,787,304	0.55
208,133	--	233,707	0.16	2,787,305	--	2,963,858	0.56
233,708	--	259,945	0.17	2,963,859	--	3,156,101	0.57
259,946	--	286,915	0.18	3,156,102	--	3,366,223	0.58
286,916	--	314,683	0.19	3,366,224	--	3,596,841	0.59
314,684	--	343,308	0.20	3,596,842	--	3,851,108	0.60
343,309	--	372,849	0.21	3,851,109	--	4,132,859	0.61
372,850	--	403,365	0.22	4,132,860	--	4,446,806	0.62
403,366	--	434,917	0.23	4,446,807	--	4,798,804	0.63
434,918	--	467,568	0.24	4,798,805	--	5,196,216	0.64
467,569	--	501,384	0.25	5,196,217	--	5,648,439	0.65
501,385	--	536,436	0.26	5,648,440	--	6,167,655	0.66
536,437	--	572,798	0.27	6,167,656	--	6,769,940	0.67
572,799	--	610,550	0.28	6,769,941	--	7,476,966	0.68
610,551	--	649,778	0.29	7,476,967	--	8,318,659	0.69
649,779	--	690,572	0.30	8,318,660	--	9,337,545	0.70
690,573	--	733,032	0.31	9,337,546	--	10,596,164	0.71
733,033	--	777,266	0.32	10,596,165	--	12,190,409	0.72
777,267	--	823,388	0.33	12,190,410	--	14,275,184	0.73
823,389	--	871,526	0.34	14,275,185	--	17,118,052	0.74
871,527	--	921,816	0.35	17,118,053	--	21,224,408	0.75
921,817	--	974,408	0.36	21,224,409	--	27,677,244	0.76
974,409	--	1,029,465	0.37	27,677,245	--	39,292,334	0.77
1,029,466	--	1,087,166	0.38	39,292,335	--	66,394,187	0.78
1,087,167	--	1,147,708	0.39	66,394,188	--	201,903,391	0.79
1,147,709	--	1,211,308	0.40	201,903,392	AND OVER		0.80
1,211,309	--	1,278,204	0.41				
1,278,205	--	1,348,661	0.42				
1,348,662	--	1,422,972	0.43				

(a) G	12.05
(b) State Per Claim Accident Limitation	\$301,500
(c) State Multiple Claim Accident Limitation	\$603,000
(d) USL&HW Per Claim Accident Limitation	\$665,000
(e) USL&HW Multiple Claim Accident Limitation	\$1,330,000
(f) Employers Liability Accident Limitation	\$55,000
(g) Primary/Excess Loss Split Point	\$18,000
(h) USL&HW Act -- Expected Loss Factor -- Non-F Classes	1.25
<i>(Multiply a Non-F classification ELR by the USL&HW Act - Expected Loss Factor of 1.25.)</i>	

Effective January 1, 2021
TABLE OF BALLAST VALUES
APPLICABLE TO ALL POLICIES
Experience Rating Plan - ERA

Expected Losses	Ballast Values	Expected Losses	Ballast Values	Expected Losses	Ballast Values
0 -- 64,815	30,125	2,079,842 -- 2,140,057	241,000	4,187,981 -- 4,248,221	451,875
64,816 -- 111,552	36,150	2,140,058 -- 2,200,275	247,025	4,248,222 -- 4,308,463	457,900
111,553 -- 165,254	42,175	2,200,276 -- 2,260,494	253,050	4,308,464 -- 4,368,705	463,925
165,255 -- 221,906	48,200	2,260,495 -- 2,320,715	259,075	4,368,706 -- 4,428,947	469,950
221,907 -- 279,936	54,225	2,320,716 -- 2,380,938	265,100	4,428,948 -- 4,489,189	475,975
279,937 -- 338,695	60,250	2,380,939 -- 2,441,162	271,125	4,489,190 -- 4,549,432	482,000
338,696 -- 397,878	66,275	2,441,163 -- 2,501,387	277,150	4,549,433 -- 4,609,675	488,025
397,879 -- 457,330	72,300	2,501,388 -- 2,561,613	283,175	4,609,676 -- 4,669,918	494,050
457,331 -- 516,961	78,325	2,561,614 -- 2,621,841	289,200	4,669,919 -- 4,730,161	500,075
516,962 -- 576,717	84,350	2,621,842 -- 2,682,069	295,225	4,730,162 -- 4,790,404	506,100
576,718 -- 636,564	90,375	2,682,070 -- 2,742,298	301,250	4,790,405 -- 4,850,647	512,125
636,565 -- 696,479	96,400	2,742,299 -- 2,802,528	307,275	4,850,648 -- 4,910,891	518,150
696,480 -- 756,447	102,425	2,802,529 -- 2,862,760	313,300	4,910,892 -- 4,971,135	524,175
756,448 -- 816,455	108,450	2,862,761 -- 2,922,991	319,325	4,971,136 -- 5,031,379	530,200
816,456 -- 876,496	114,475	2,922,992 -- 2,983,224	325,350	5,031,380 -- 5,091,623	536,225
876,497 -- 936,563	120,500	2,983,225 -- 3,043,457	331,375	5,091,624 -- 5,151,867	542,250
936,564 -- 996,653	126,525	3,043,458 -- 3,103,691	337,400	5,151,868 -- 5,212,111	548,275
996,654 -- 1,056,760	132,550	3,103,692 -- 3,163,925	343,425	5,212,112 -- 5,272,356	554,300
1,056,761 -- 1,116,883	138,575	3,163,926 -- 3,224,161	349,450	5,272,357 -- 5,332,600	560,325
1,116,884 -- 1,177,018	144,600	3,224,162 -- 3,284,396	355,475	5,332,601 -- 5,392,845	566,350
1,177,019 -- 1,237,165	150,625	3,284,397 -- 3,344,632	361,500	5,392,846 -- 5,453,090	572,375
1,237,166 -- 1,297,321	156,650	3,344,633 -- 3,404,869	367,525	5,453,091 -- 5,513,335	578,400
1,297,322 -- 1,357,485	162,675	3,404,870 -- 3,465,106	373,550	5,513,336 -- 5,573,580	584,425
1,357,486 -- 1,417,656	168,700	3,465,107 -- 3,525,344	379,575	5,573,581 -- 5,633,825	590,450
1,417,657 -- 1,477,834	174,725	3,525,345 -- 3,585,582	385,600	5,633,826 -- 5,694,070	596,475
1,477,835 -- 1,538,018	180,750	3,585,583 -- 3,645,820	391,625	5,694,071 -- 5,753,875	602,500
1,538,019 -- 1,598,206	186,775	3,645,821 -- 3,706,059	397,650		
1,598,207 -- 1,658,399	192,800	3,706,060 -- 3,766,298	403,675		
1,658,400 -- 1,718,596	198,825	3,766,299 -- 3,826,537	409,700		
1,718,597 -- 1,778,796	204,850	3,826,538 -- 3,886,777	415,725		
1,778,797 -- 1,839,000	210,875	3,886,778 -- 3,947,017	421,750		
1,839,001 -- 1,899,207	216,900	3,947,018 -- 4,007,257	427,775		
1,899,208 -- 1,959,416	222,925	4,007,258 -- 4,067,498	433,800		
1,959,417 -- 2,019,627	228,950	4,067,499 -- 4,127,739	439,825		
2,019,628 -- 2,079,841	234,975	4,127,740 -- 4,187,980	445,850		

For Expected Losses greater than \$5,753,875, the Ballast Value can be calculated using the following formula (rounded to the nearest 1):

$$\text{Ballast} = (0.10)(\text{Expected Losses}) + 2500(\text{Expected Losses})(12.05) / (\text{Expected Losses} + (700)(12.05))$$

G = 12.05

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

IOWA—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 (\$)
IA	<u>7/1/21 and after</u>	<u>8,500</u>	<u>4,250</u>
	<u>7/1/20 - 6/30/21</u>	8,500	4,250
	<u>7/1/19 - 6/30/20</u>	8,000	4,000

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



Iowa

Workers Compensation Rate Filing – January 1, 2021

Proposed Values for Inclusion in the Retrospective Rating Plan Manual

The following pages include an explanation of the excess ratio curve refresh and values for inclusion in the Retrospective Rating Plan Manual:

- Average cost per case
- Average cost per case including ALAE
- Tax multipliers
- Countrywide expected loss ratio
- Countrywide expected loss and allocated expense ratio
- Table of expense ratios
- Excess loss factors
- Excess loss and allocated expense factors
- Retrospective development factors

The course of the COVID-19 pandemic is unclear at this time. It represents a significant source of uncertainty with respect to future workers compensation system losses and the excess ratios applicable to those losses. A number of considerations related to the pandemic may put upward or downward pressure on claim severity distributions, although the magnitude and timing of such considerations remains unclear. Although considered, since the combined impact and direction of all COVID-19-related forces is unknown, no explicit adjustment for the pandemic has been made to the Retrospective Rating Plan values in this year's filing. The proposed values rely on historical data evaluated prior to the start of the COVID-19 pandemic.

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

IOWA

Effective January 1, 2021

1. Average Cost per Case by Hazard Group

A	B	C	D	E	F	G
8,471	13,337	14,976	21,843	29,205	50,259	46,995

Average Cost per Case including ALAE by Hazard Group

A	B	C	D	E	F	G
9,208	14,480	16,245	23,664	31,602	54,326	50,693

2. Tax Multipliers

- a. State (non-F Classes) 1.025
- b. Federal Classes, or non-F classes where rate is increased by the USL&HW Act Percentage 1.058

3. Countrywide Expected Loss Ratio
0.606

Countrywide Expected Loss and Allocated Expense Ratio
0.673

4. Table of Expense Ratios
Type A: 2020-01
Type B: 2020-01

5.

Excess Loss Factors
(Applicable to New and Renewal Policies)

Per Accident Limitation	Hazard Groups						
	A	B	C	D	E	F	G
\$10,000	0.453	0.492	0.502	0.528	0.544	0.564	0.571
\$15,000	0.420	0.462	0.475	0.504	0.523	0.546	0.555
\$20,000	0.394	0.438	0.452	0.483	0.504	0.529	0.541
\$25,000	0.372	0.417	0.432	0.465	0.488	0.515	0.528
\$30,000	0.353	0.399	0.415	0.448	0.473	0.501	0.516
\$35,000	0.336	0.383	0.399	0.434	0.460	0.489	0.506
\$40,000	0.321	0.368	0.385	0.420	0.448	0.478	0.496
\$50,000	0.296	0.342	0.361	0.396	0.426	0.457	0.478
\$75,000	0.249	0.294	0.314	0.350	0.382	0.416	0.440
\$100,000	0.217	0.261	0.280	0.317	0.349	0.384	0.411
\$125,000	0.193	0.235	0.255	0.290	0.323	0.358	0.388
\$150,000	0.175	0.214	0.235	0.269	0.302	0.337	0.368
\$175,000	0.160	0.198	0.218	0.252	0.285	0.319	0.351
\$200,000	0.147	0.184	0.204	0.237	0.270	0.303	0.336
\$225,000	0.136	0.172	0.191	0.224	0.257	0.290	0.323
\$250,000	0.127	0.161	0.181	0.213	0.245	0.278	0.311
\$275,000	0.119	0.152	0.172	0.203	0.235	0.267	0.301
\$300,000	0.112	0.144	0.163	0.194	0.225	0.257	0.291
\$325,000	0.106	0.137	0.156	0.186	0.217	0.248	0.283
\$350,000	0.101	0.131	0.149	0.178	0.209	0.240	0.275
\$375,000	0.096	0.125	0.143	0.172	0.202	0.233	0.267
\$400,000	0.091	0.120	0.138	0.166	0.196	0.226	0.260
\$425,000	0.087	0.115	0.133	0.160	0.190	0.219	0.254
\$450,000	0.084	0.110	0.128	0.155	0.184	0.213	0.248
\$475,000	0.080	0.106	0.124	0.150	0.179	0.208	0.242
\$500,000	0.077	0.103	0.120	0.146	0.174	0.202	0.237
\$600,000	0.067	0.090	0.107	0.131	0.158	0.184	0.218
\$700,000	0.059	0.081	0.096	0.119	0.145	0.170	0.203
\$800,000	0.053	0.073	0.088	0.109	0.134	0.158	0.190
\$900,000	0.048	0.067	0.081	0.101	0.125	0.148	0.179
\$1,000,000	0.044	0.062	0.076	0.095	0.118	0.139	0.170
\$2,000,000	0.025	0.036	0.046	0.059	0.076	0.091	0.116
\$3,000,000	0.018	0.026	0.034	0.044	0.058	0.070	0.091
\$4,000,000	0.013	0.021	0.027	0.036	0.047	0.057	0.076
\$5,000,000	0.011	0.017	0.022	0.030	0.040	0.048	0.065
\$6,000,000	0.009	0.014	0.019	0.025	0.034	0.042	0.057
\$7,000,000	0.008	0.012	0.016	0.022	0.030	0.037	0.050
\$8,000,000	0.007	0.011	0.014	0.019	0.026	0.033	0.045
\$9,000,000	0.006	0.009	0.013	0.017	0.024	0.029	0.041
\$10,000,000	0.005	0.008	0.011	0.015	0.021	0.026	0.037

Effective January 1, 2021

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

Per Accident Limitation	Hazard Groups						
	A	B	C	D	E	F	G
\$10,000	0.497	0.538	0.549	0.576	0.593	0.613	0.619
\$15,000	0.463	0.507	0.520	0.550	0.570	0.594	0.603
\$20,000	0.435	0.482	0.496	0.528	0.551	0.577	0.588
\$25,000	0.412	0.460	0.475	0.509	0.534	0.562	0.575
\$30,000	0.391	0.440	0.457	0.492	0.518	0.548	0.563
\$35,000	0.374	0.423	0.440	0.477	0.504	0.535	0.552
\$40,000	0.358	0.407	0.425	0.463	0.491	0.523	0.542
\$50,000	0.331	0.380	0.399	0.437	0.468	0.502	0.523
\$75,000	0.281	0.329	0.350	0.389	0.422	0.458	0.483
\$100,000	0.246	0.293	0.314	0.352	0.387	0.424	0.452
\$125,000	0.220	0.265	0.286	0.324	0.359	0.396	0.427
\$150,000	0.200	0.243	0.264	0.301	0.337	0.374	0.406
\$175,000	0.183	0.225	0.246	0.282	0.318	0.354	0.387
\$200,000	0.169	0.209	0.231	0.266	0.301	0.338	0.372
\$225,000	0.158	0.196	0.217	0.252	0.287	0.323	0.358
\$250,000	0.148	0.185	0.206	0.240	0.274	0.310	0.345
\$275,000	0.139	0.175	0.196	0.229	0.263	0.298	0.334
\$300,000	0.131	0.166	0.186	0.219	0.253	0.288	0.323
\$325,000	0.124	0.158	0.178	0.211	0.244	0.278	0.314
\$350,000	0.118	0.151	0.171	0.203	0.236	0.269	0.305
\$375,000	0.113	0.145	0.164	0.195	0.228	0.261	0.297
\$400,000	0.108	0.139	0.158	0.189	0.221	0.253	0.290
\$425,000	0.103	0.134	0.153	0.182	0.214	0.246	0.283
\$450,000	0.099	0.129	0.148	0.177	0.208	0.240	0.276
\$475,000	0.095	0.124	0.143	0.171	0.203	0.234	0.270
\$500,000	0.091	0.120	0.138	0.167	0.197	0.228	0.264
\$600,000	0.080	0.106	0.123	0.150	0.179	0.208	0.244
\$700,000	0.071	0.095	0.112	0.136	0.165	0.192	0.227
\$800,000	0.064	0.086	0.102	0.126	0.153	0.179	0.213
\$900,000	0.058	0.079	0.094	0.117	0.143	0.168	0.201
\$1,000,000	0.053	0.073	0.088	0.109	0.134	0.158	0.191
\$2,000,000	0.030	0.043	0.053	0.068	0.087	0.104	0.131
\$3,000,000	0.021	0.031	0.039	0.051	0.066	0.079	0.103
\$4,000,000	0.016	0.024	0.031	0.041	0.053	0.065	0.085
\$5,000,000	0.013	0.020	0.026	0.034	0.045	0.055	0.073
\$6,000,000	0.011	0.017	0.022	0.029	0.039	0.047	0.064
\$7,000,000	0.009	0.014	0.019	0.025	0.034	0.042	0.057
\$8,000,000	0.008	0.012	0.016	0.022	0.030	0.037	0.051
\$9,000,000	0.007	0.011	0.014	0.019	0.027	0.033	0.046
\$10,000,000	0.006	0.009	0.013	0.017	0.024	0.030	0.041

6.

Retrospective Development Factors

With Loss Limit			Without Loss Limit			4th & Subsequent Adjustment
1st Adj.	2nd Adj.	3rd Adj.	1st Adj.	2nd Adj.	3rd Adj.	
0.04	0.02	0.02	0.14	0.10	0.06	0.00



Table of Expense Ratios - Excluding Taxes and Including Profit and Contingencies

Type A: 2020-01

WC Premium Range		Expense	WC Premium Range		Expense	WC Premium Range		Expense
From	To	Ratio	From	To	Ratio	From	To	Ratio
0	- 10,055	0.358	21,928	- 22,469	0.310	393,334	- 424,799	0.262
10,056	- 10,167	0.357	22,470	- 23,037	0.309	424,800	- 461,739	0.261
10,168	- 10,282	0.356	23,038	- 23,636	0.308	461,740	- 505,714	0.260
10,283	- 10,399	0.355	23,637	- 24,266	0.307	505,715	- 558,947	0.259
10,400	- 10,520	0.355	24,267	- 24,931	0.306	558,948	- 624,705	0.258
10,521	- 10,643	0.354	24,932	- 25,633	0.305	624,706	- 707,999	0.257
10,644	- 10,769	0.353	25,634	- 26,376	0.304	708,000	- 816,923	0.256
10,770	- 10,898	0.352	26,377	- 27,164	0.303	816,924	- 965,454	0.255
10,899	- 11,030	0.351	27,165	- 27,999	0.302	965,455	- 1,179,999	0.254
11,031	- 11,165	0.350	28,000	- 28,888	0.301	1,180,000	- 1,517,142	0.253
11,166	- 11,304	0.349	28,889	- 29,836	0.301	1,517,143	- 1,824,799	0.252
11,305	- 11,446	0.348	29,837	- 30,847	0.300	1,824,800	- 1,983,478	0.251
11,447	- 11,592	0.347	30,848	- 31,929	0.299	1,983,479	- 2,172,380	0.250
11,593	- 11,741	0.346	31,930	- 33,090	0.298	2,172,381	- 2,401,052	0.249
11,742	- 11,895	0.345	33,091	- 34,339	0.297	2,401,053	- 2,683,529	0.248
11,896	- 12,052	0.344	34,340	- 35,686	0.296	2,683,530	- 3,041,333	0.247
12,053	- 12,214	0.343	35,687	- 37,142	0.295	3,041,334	- 3,509,230	0.246
12,215	- 12,380	0.342	37,143	- 38,723	0.294	3,509,231	- 4,147,272	0.246
12,381	- 12,551	0.341	38,724	- 40,444	0.293	4,147,273	- 5,068,888	0.245
12,552	- 12,727	0.340	40,445	- 42,325	0.292	5,068,889	- 6,517,142	0.244
12,728	- 12,907	0.339	42,326	- 44,390	0.291	6,517,143	- 9,123,999	0.243
12,908	- 13,093	0.338	44,391	- 46,666	0.290	9,124,000	- 15,206,666	0.242
13,094	- 13,284	0.337	46,667	- 49,189	0.289	15,206,667	- 45,619,999	0.241
13,285	- 13,481	0.336	49,190	- 51,999	0.288	45,620,000	- And Above	0.240
13,482	- 13,684	0.335	52,000	- 55,151	0.287			
13,685	- 13,893	0.334	55,152	- 58,709	0.286			
13,894	- 14,108	0.333	58,710	- 62,758	0.285			
14,109	- 14,330	0.332	62,759	- 67,407	0.284			
14,331	- 14,559	0.331	67,408	- 72,799	0.283			
14,560	- 14,796	0.330	72,800	- 79,130	0.282			
14,797	- 15,041	0.329	79,131	- 86,666	0.281			
15,042	- 15,294	0.328	86,667	- 95,789	0.280			
15,295	- 15,555	0.328	95,790	- 107,058	0.279			
15,556	- 15,826	0.327	107,059	- 121,333	0.278			
15,827	- 16,106	0.326	121,334	- 139,999	0.277			
16,107	- 16,396	0.325	140,000	- 165,454	0.276			
16,397	- 16,697	0.324	165,455	- 200,377	0.275			
16,698	- 17,009	0.323	200,378	- 208,235	0.274			
17,010	- 17,333	0.322	208,236	- 216,734	0.273			
17,334	- 17,669	0.321	216,735	- 225,957	0.273			
17,670	- 18,019	0.320	225,958	- 235,999	0.272			
18,020	- 18,383	0.319	236,000	- 246,976	0.271			
18,384	- 18,762	0.318	246,977	- 259,024	0.270			
18,763	- 19,157	0.317	259,025	- 272,307	0.269			
19,158	- 19,569	0.316	272,308	- 287,027	0.268			
19,570	- 19,999	0.315	287,028	- 303,428	0.267			
20,000	- 20,449	0.314	303,429	- 321,818	0.266	First	- 10,000	0.0%
20,450	- 20,919	0.313	321,819	- 342,580	0.265	Next	- 190,000	9.1%
20,920	- 21,411	0.312	342,581	- 366,206	0.264	Next	- 1,550,000	11.3%
21,412	- 21,927	0.311	366,207	- 393,333	0.263	Over	- 1,750,000	12.3%
						Expected Loss Ratio:		0.606
						Tax Multiplier:		1.037



Table of Expense Ratios - Excluding Taxes and Including Profit and Contingencies

Type B: 2020-01

WC Premium Range		Expense Ratio
From	To	
0	- 10,099	0.358
10,100	- 10,303	0.357
10,304	- 10,515	0.356
10,516	- 10,736	0.355
10,737	- 10,967	0.355
10,968	- 11,208	0.354
11,209	- 11,460	0.353
11,461	- 11,724	0.352
11,725	- 11,999	0.351
12,000	- 12,289	0.350
12,290	- 12,592	0.349
12,593	- 12,911	0.348
12,912	- 13,246	0.347
13,247	- 13,599	0.346
13,600	- 13,972	0.345
13,973	- 14,366	0.344
14,367	- 14,782	0.343
14,783	- 15,223	0.342
15,224	- 15,692	0.341
15,693	- 16,190	0.340
16,191	- 16,721	0.339
16,722	- 17,288	0.338
17,289	- 17,894	0.337
17,895	- 18,545	0.336
18,546	- 19,245	0.335

WC Premium Range		Expense Ratio
From	To	
19,246	- 19,999	0.334
20,000	- 20,816	0.333
20,817	- 21,702	0.332
21,703	- 22,666	0.331
22,667	- 23,720	0.330
23,721	- 24,878	0.329
24,879	- 26,153	0.328
26,154	- 27,567	0.328
27,568	- 29,142	0.327
29,143	- 30,909	0.326
30,910	- 32,903	0.325
32,904	- 35,172	0.324
35,173	- 37,777	0.323
37,778	- 40,799	0.322
40,800	- 44,347	0.321
44,348	- 48,571	0.320
48,572	- 53,684	0.319
53,685	- 59,999	0.318
60,000	- 67,999	0.317
68,000	- 78,461	0.316
78,462	- 92,727	0.315
92,728	- 113,333	0.314
113,334	- 145,714	0.313
145,715	- 200,606	0.312
200,607	- 213,548	0.311

WC Premium Range		Expense Ratio
From	To	
213,549	- 228,275	0.310
228,276	- 245,185	0.309
245,186	- 264,799	0.308
264,800	- 287,826	0.307
287,827	- 315,238	0.306
315,239	- 348,421	0.305
348,422	- 389,411	0.304
389,412	- 441,333	0.303
441,334	- 509,230	0.302
509,231	- 601,818	0.301
601,819	- 735,555	0.301
735,556	- 945,714	0.300
945,715	- 1,323,999	0.299
1,324,000	- 1,809,565	0.298
1,809,566	- 1,981,904	0.297
1,981,905	- 2,190,526	0.296
2,190,527	- 2,448,235	0.295
2,448,236	- 2,774,666	0.294
2,774,667	- 3,201,538	0.293
3,201,539	- 3,783,636	0.292
3,783,637	- 4,624,444	0.291
4,624,445	- 5,945,714	0.290
5,945,715	- 8,323,999	0.289
8,324,000	- 13,873,333	0.288
13,873,334	- 41,619,999	0.287
41,620,000	- And Above	0.286
First	- 10,000	0.0%
Next	- 190,000	5.1%
Next	- 1,550,000	6.5%
Over	- 1,750,000	7.5%
Expected Loss Ratio:		0.606
Tax Multiplier:		1.037



**Table of Expense Ratios - Excluding Allocated Loss Adjustment
Expense and Taxes and Including Profit and Contingencies**

Type A: 2020-01

WC Premium Range		Expense	WC Premium Range		Expense	WC Premium Range		Expense
From	To	Ratio	From	To	Ratio	From	To	Ratio
0	- 10,055	0.292	21,928	- 22,469	0.243	393,334	- 424,799	0.195
10,056	- 10,167	0.291	22,470	- 23,037	0.243	424,800	- 461,739	0.194
10,168	- 10,282	0.290	23,038	- 23,636	0.242	461,740	- 505,714	0.193
10,283	- 10,399	0.289	23,637	- 24,266	0.241	505,715	- 558,947	0.192
10,400	- 10,520	0.288	24,267	- 24,931	0.240	558,948	- 624,705	0.191
10,521	- 10,643	0.287	24,932	- 25,633	0.239	624,706	- 707,999	0.190
10,644	- 10,769	0.286	25,634	- 26,376	0.238	708,000	- 816,923	0.189
10,770	- 10,898	0.285	26,377	- 27,164	0.237	816,924	- 965,454	0.189
10,899	- 11,030	0.284	27,165	- 27,999	0.236	965,455	- 1,179,999	0.188
11,031	- 11,165	0.283	28,000	- 28,888	0.235	1,180,000	- 1,517,142	0.187
11,166	- 11,304	0.282	28,889	- 29,836	0.234	1,517,143	- 1,824,799	0.186
11,305	- 11,446	0.281	29,837	- 30,847	0.233	1,824,800	- 1,983,478	0.185
11,447	- 11,592	0.280	30,848	- 31,929	0.232	1,983,479	- 2,172,380	0.184
11,593	- 11,741	0.279	31,930	- 33,090	0.231	2,172,381	- 2,401,052	0.183
11,742	- 11,895	0.278	33,091	- 34,339	0.230	2,401,053	- 2,683,529	0.182
11,896	- 12,052	0.277	34,340	- 35,686	0.229	2,683,530	- 3,041,333	0.181
12,053	- 12,214	0.276	35,687	- 37,142	0.228	3,041,334	- 3,509,230	0.180
12,215	- 12,380	0.275	37,143	- 38,723	0.227	3,509,231	- 4,147,272	0.179
12,381	- 12,551	0.274	38,724	- 40,444	0.226	4,147,273	- 5,068,888	0.178
12,552	- 12,727	0.273	40,445	- 42,325	0.225	5,068,889	- 6,517,142	0.177
12,728	- 12,907	0.272	42,326	- 44,390	0.224	6,517,143	- 9,123,999	0.176
12,908	- 13,093	0.271	44,391	- 46,666	0.223	9,124,000	- 15,206,666	0.175
13,094	- 13,284	0.270	46,667	- 49,189	0.222	15,206,667	- 45,619,999	0.174
13,285	- 13,481	0.270	49,190	- 51,999	0.221	45,620,000	- And Above	0.173
13,482	- 13,684	0.269	52,000	- 55,151	0.220			
13,685	- 13,893	0.268	55,152	- 58,709	0.219			
13,894	- 14,108	0.267	58,710	- 62,758	0.218			
14,109	- 14,330	0.266	62,759	- 67,407	0.217			
14,331	- 14,559	0.265	67,408	- 72,799	0.216			
14,560	- 14,796	0.264	72,800	- 79,130	0.216			
14,797	- 15,041	0.263	79,131	- 86,666	0.215			
15,042	- 15,294	0.262	86,667	- 95,789	0.214			
15,295	- 15,555	0.261	95,790	- 107,058	0.213			
15,556	- 15,826	0.260	107,059	- 121,333	0.212			
15,827	- 16,106	0.259	121,334	- 139,999	0.211			
16,107	- 16,396	0.258	140,000	- 165,454	0.210			
16,397	- 16,697	0.257	165,455	- 200,377	0.209			
16,698	- 17,009	0.256	200,378	- 208,235	0.208			
17,010	- 17,333	0.255	208,236	- 216,734	0.207			
17,334	- 17,669	0.254	216,735	- 225,957	0.206			
17,670	- 18,019	0.253	225,958	- 235,999	0.205			
18,020	- 18,383	0.252	236,000	- 246,976	0.204			
18,384	- 18,762	0.251	246,977	- 259,024	0.203			
18,763	- 19,157	0.250	259,025	- 272,307	0.202			
19,158	- 19,569	0.249	272,308	- 287,027	0.201			
19,570	- 19,999	0.248	287,028	- 303,428	0.200			
20,000	- 20,449	0.247	303,429	- 321,818	0.199	First	- 10,000	0.0%
20,450	- 20,919	0.246	321,819	- 342,580	0.198	Next	- 190,000	9.1%
20,920	- 21,411	0.245	342,581	- 366,206	0.197	Next	- 1,550,000	11.3%
21,412	- 21,927	0.244	366,207	- 393,333	0.196	Over	- 1,750,000	12.3%
						Expected Loss and ALAE Ratio:		0.673
						Tax Multiplier:		1.037



**Table of Expense Ratios - Excluding Allocated Loss Adjustment
Expense and Taxes and Including Profit and Contingencies**

Type B: 2020-01

WC Premium Range		Expense Ratio
From	To	
0	10,099	0.292
10,100	10,303	0.291
10,304	10,515	0.290
10,516	10,736	0.289
10,737	10,967	0.288
10,968	11,208	0.287
11,209	11,460	0.286
11,461	11,724	0.285
11,725	11,999	0.284
12,000	12,289	0.283
12,290	12,592	0.282
12,593	12,911	0.281
12,912	13,246	0.280
13,247	13,599	0.279
13,600	13,972	0.278
13,973	14,366	0.277
14,367	14,782	0.276
14,783	15,223	0.275
15,224	15,692	0.274
15,693	16,190	0.273
16,191	16,721	0.272
16,722	17,288	0.271
17,289	17,894	0.270
17,895	18,545	0.270
18,546	19,245	0.269

WC Premium Range		Expense Ratio
From	To	
19,246	19,999	0.268
20,000	20,816	0.267
20,817	21,702	0.266
21,703	22,666	0.265
22,667	23,720	0.264
23,721	24,878	0.263
24,879	26,153	0.262
26,154	27,567	0.261
27,568	29,142	0.260
29,143	30,909	0.259
30,910	32,903	0.258
32,904	35,172	0.257
35,173	37,777	0.256
37,778	40,799	0.255
40,800	44,347	0.254
44,348	48,571	0.253
48,572	53,684	0.252
53,685	59,999	0.251
60,000	67,999	0.250
68,000	78,461	0.249
78,462	92,727	0.248
92,728	113,333	0.247
113,334	145,714	0.246
145,715	200,606	0.245
200,607	213,548	0.244

WC Premium Range		Expense Ratio
From	To	
213,549	228,275	0.243
228,276	245,185	0.243
245,186	264,799	0.242
264,800	287,826	0.241
287,827	315,238	0.240
315,239	348,421	0.239
348,422	389,411	0.238
389,412	441,333	0.237
441,334	509,230	0.236
509,231	601,818	0.235
601,819	735,555	0.234
735,556	945,714	0.233
945,715	1,323,999	0.232
1,324,000	1,809,565	0.231
1,809,566	1,981,904	0.230
1,981,905	2,190,526	0.229
2,190,527	2,448,235	0.228
2,448,236	2,774,666	0.227
2,774,667	3,201,538	0.226
3,201,539	3,783,636	0.225
3,783,637	4,624,444	0.224
4,624,445	5,945,714	0.223
5,945,715	8,323,999	0.222
8,324,000	13,873,333	0.221
13,873,334	41,619,999	0.220
41,620,000	And Above	0.219
First	10,000	0.0%
Next	190,000	5.1%
Next	1,550,000	6.5%
Over	1,750,000	7.5%
Expected Loss and ALAE Ratio:		0.673
Tax Multiplier:		1.037



Iowa

Workers Compensation Rate Filing – January 1, 2021

Part 3 Supporting Exhibits

- Exhibit I: Determination of the Indicated Advisory Rate Level Change
- Exhibit II: Workers Compensation Expense Program
- Appendix A: Factors Underlying the Proposed Rate Level Change
- Appendix B: Calculations Underlying the Advisory Rate Change by Classification
- Appendix C: Memoranda for Laws and Assessments
- Appendix D: Internal Rate of Return Analysis
- Appendix E: Calculation of Factor to Convert Voluntary Rates to Assigned Risk Rates
- Appendix F: Derivation of Experience Rating Values



Iowa

Workers Compensation Rate Filing – January 1, 2021

Exhibit I – Determination of Indicated Advisory Rate Level Change

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

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

The indicated change based on experience, trend, and benefits for this filing is calculated as the average of the indicated changes for each of the individual policy years in the experience period. Lastly, the impact of the change in loss-based expenses, change in production and general expenses, change in premium taxes and assessments, and change in the profit and contingency provision is applied to determine the indicated overall average advisory rate level change. The detailed calculations can be found on the following pages.



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EXHIBIT I

Determination of Indicated Loss Cost Level Change

Section A - Policy Year 2018 Experience

Premium:

(1) Standard Earned Premium Developed to Ultimate (Appendix A-II)	\$696,998,785
(2) Premium On-level Factor (Appendix A-I)	0.538
(3) Pure Premium Available for Benefit Costs = (1) x (2)	\$374,985,346

Indemnity Benefit Cost:

(4) Limited Indemnity Losses Developed to Ultimate (Appendix A-II)	\$149,270,676
(5) Indemnity Loss On-level Factor (Appendix A-I)	1.003
(6) Adjusted Limited Indemnity Losses = (4) x (5)	\$149,718,488
(7) Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.399
(8) Factor to Reflect Indemnity Trend (Appendix A-III)	0.913
(9) Projected Limited Indemnity Cost Ratio = (7) x (8)	0.364
(10) Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis (Appendix A-II)	1.032
(11) Projected Indemnity Cost Ratio = (9) x (10)	0.376
(12) Factor to Reflect Proposed Changes in Indemnity Benefits (Appendix C)	1.000
(13) Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.376

Medical Benefit Cost:

(14) Limited Medical Losses Developed to Ultimate (Appendix A-II)	\$220,508,780
(15) Medical Loss On-level Factor (Appendix A-I)	1.000
(16) Adjusted Limited Medical Losses = (14) x (15)	\$220,508,780
(17) Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.588
(18) Factor to Reflect Medical Trend (Appendix A-III)	0.970
(19) Projected Limited Medical Cost Ratio = (17) x (18)	0.570
(20) Factor to Adjust Medical Cost Ratio to an Unlimited Basis (Appendix A-II)	1.032
(21) Projected Medical Cost Ratio = (19) x (20)	0.588
(22) Factor to Reflect Proposed Changes in Medical Benefits (Appendix C)	1.000
(23) Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.588

Total Benefit Cost:

(24) Indicated Change Based on Experience, Trend and Benefits = (13) + (23)	0.964
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EXHIBIT I

Determination of Indicated Loss Cost Level Change

Section B - Policy Year 2017 Experience

Premium:

(1) Standard Earned Premium Developed to Ultimate (Appendix A-II)	\$776,208,763
(2) Premium On-level Factor (Appendix A-I)	0.473
(3) Pure Premium Available for Benefit Costs = (1) x (2)	\$367,146,745

Indemnity Benefit Cost:

(4) Limited Indemnity Losses Developed to Ultimate (Appendix A-II)	\$149,632,529
(5) Indemnity Loss On-level Factor (Appendix A-I)	1.000
(6) Adjusted Limited Indemnity Losses = (4) x (5)	\$149,632,529
(7) Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.408
(8) Factor to Reflect Indemnity Trend (Appendix A-III)	0.885
(9) Projected Limited Indemnity Cost Ratio = (7) x (8)	0.361
(10) Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis (Appendix A-II)	1.032
(11) Projected Indemnity Cost Ratio = (9) x (10)	0.373
(12) Factor to Reflect Proposed Changes in Indemnity Benefits (Appendix C)	1.000
(13) Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.373

Medical Benefit Cost:

(14) Limited Medical Losses Developed to Ultimate (Appendix A-II)	\$223,078,478
(15) Medical Loss On-level Factor (Appendix A-I)	1.000
(16) Adjusted Limited Medical Losses = (14) x (15)	\$223,078,478
(17) Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.608
(18) Factor to Reflect Medical Trend (Appendix A-III)	0.961
(19) Projected Limited Medical Cost Ratio = (17) x (18)	0.584
(20) Factor to Adjust Medical Cost Ratio to an Unlimited Basis (Appendix A-II)	1.032
(21) Projected Medical Cost Ratio = (19) x (20)	0.603
(22) Factor to Reflect Proposed Changes in Medical Benefits (Appendix C)	1.000
(23) Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.603

Total Benefit Cost:

(24) Indicated Change Based on Experience, Trend and Benefits = (13) + (23)	0.976
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EXHIBIT I

Determination of Indicated Loss Cost Level Change

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

(1) Policy Year 2018 Indicated Change Based on Experience, Trend, and Benefits	0.964
(2) Policy Year 2017 Indicated Change Based on Experience, Trend, and Benefits	0.976
(3) Indicated Change Based on Experience, Trend, and Benefits = $[(1)+(2)] / 2$	0.970

Section D - Application of the Change in Production and General Expenses

(1) Indicated Loss Cost Level Change	0.970
(2) Effect of the Change in Production and General Expenses (Exhibit II)	1.003
(3) Indicated Change Modified to Reflect the Change in Production and General Expenses = (1) x (2)	0.973

Section E - Application of the Change in Taxes

(1) Indicated Loss Cost Level Change	0.973
(2) Effect of the Change in Taxes (Exhibit II)	1.001
(3) Indicated Change Modified to Reflect the Change in Taxes = (1) x (2)	0.974

Section F - Application of the Change in the Profit and Contingency Provision

(1) Indicated Loss Cost Level Change	0.974
(2) Effect of the Change in the Profit and Contingency Provision (Exhibit II)	1.021
(3) Indicated Change Modified to Reflect the Change in the Profit and Contingency Provision = (1) x (2)	0.994

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

(1) Indicated Loss Cost Level Change	0.994
(2) Effect of the Change in Loss-based Expenses (Exhibit II)	1.009
(3) Indicated Change Modified to Reflect the Change in Loss-based Expenses = (1) x (2)	1.003



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EXHIBIT I

Determination of Indicated Loss Cost Level Change

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

Industry Group Differentials (Appendix A-IV):

Manufacturing	0.983
Contracting	0.966
Office & Clerical	1.005
Goods & Services	1.008
Miscellaneous	1.046

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	1.003	0.983	0.986	(-1.4%)
Contracting	1.003	0.966	0.969	(-3.1%)
Office & Clerical	1.003	1.005	1.008	(+0.8%)
Goods & Services	1.003	1.008	1.011	(+1.1%)
Miscellaneous	1.003	1.046	1.049	(+4.9%)
Overall	1.003	1.000	1.003	(+0.3%)



Iowa

Workers Compensation Rate Filing – January 1, 2021

Exhibit II – Workers Compensation Expense Program

Loss Adjustment Expenses

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

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

Given the nature of AOE, it cannot be allocated to a specific claim, and hence cannot be accurately attributed to specific states. Therefore, the state-specific AOE ratio reflects 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 displayed in Section A are calculated on a countrywide basis using private carrier-only data.

NCCI used the following general methodology to determine the proposed DCCE provision based on Iowa-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 in Exhibit II-F.

Production and General Expenses, and Taxes

Production costs include commissions, costs of preparing the policy, verifying the correct application of rates and rating plans, billing and collecting premium and the costs of maintaining company branch offices. General expenses are commonly classified into four categories: general administration, audit, boards and bureaus, and inspection.

The proposed expenses are reviewed each year. The annual review relies on actual experience in recent years based on the most recently available data from the Insurance Expense Exhibit, which is reported annually by insurers to state insurance departments.

See Exhibit II-A for more information.

Profit and Contingency Provision

NCCI is proposing to increase the current approved profit and contingency provision of –0.5% to 1.0%. See Appendix D for more information.



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EXHIBIT II

Comparison of Proposed and Current Expense Provisions

Overhead expense provisions are itemized below. These figures are expressed as percentages of standard premium (excluding expense constant) and are indicative of the expenses of the first \$10,000 of policy premium. Taken together these allowances represent that portion of the standard premium dollar necessary to operate the benefit system. The complementary portion corresponds to the portion of the premium dollar available to finance benefits, loss adjustment expenses and loss-based assessments, if applicable. It is referred to as the "target cost ratio."

	<u>Expense Provisions Underlying Current Rates</u>	<u>Expense Provisions Underlying Proposed Rates</u>
(1) Expense Constant	\$160	\$160
(2) Production Expense	18.5%	18.3%
(3) General Expense	5.1%	5.5%
(4) Taxes, Licenses and Fees (other than Federal Income Tax)		
Premium Tax	1.0%	1.0%
Miscellaneous	0.3%	0.3%
Second Injury Fund	1.0%	1.1%
Total	2.3%	2.4%
(5) Profit and Contingency Provision	-0.5%	1.0%
(6) Total Overhead Provisions (2)+(3)+(4)+(5)	25.4%	27.2%
(7) Target Cost Ratio [100% - (6)]	74.6%	72.8%
(8) Loss Adjustment Expense	15.8%	16.9%
(9) Loss-based Assessment	0.0%	0.0%
(10) Permissible Loss Ratio (7) / [1+(8)+(9)]	64.4%	62.3%



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EXHIBIT II

Calculation of Change in Expense Provisions

	A	B	C	D
	<u>Current Expenses</u>	<u>Col. A with Proposed Prod & Gen Exp</u>	<u>Col. B with Proposed Taxes</u>	<u>Col. C with Proposed Profit and Contingency</u>
(1) Production Expense	18.5%	18.3%	18.3%	18.3%
(2) General Expense	5.1%	5.5%	5.5%	5.5%
(3) Taxes	2.3%	2.3%	2.4%	2.4%
(4) Profit and Contingency Provision	<u>-0.5%</u>	<u>-0.5%</u>	<u>-0.5%</u>	<u>1.0%</u>
(5) Total Provisions (1)+(2)+(3)+(4)	25.4%	25.6%	25.7%	27.2%
(6) TCR (100%-(5))	74.6%	74.4%	74.3%	72.8%
(7) Loss Based Expenses	15.8%	16.9%	16.9%	16.9%
(8) Change in Production and General Expense (6A) / (6B)			1.003	+0.3%
(9) Change in Taxes and Assessments (6B) / (6C)			1.001	+0.1%
(10) Change in Profit and Contingency Provision (6C) / (6D)			1.021	+2.1%
(11) Change in Loss Based Expenses [1.0 + (7B)]/[1.0 + (7A)]			1.009	+0.9%



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EXHIBIT II

Countrywide Expense Program

NCCI annually reviews expense provisions underlying workers compensation rates.

This review procedure is based on countrywide expense data. Since a significant portion of workers compensation insurance is interstate business, it is not practical to allocate expenses (especially general, other acquisition, and adjusting and other loss adjustment expenses) to particular states.

The NCCI expense program is designed to ensure equity among employers through a percentage provision in manual rates, a schedule of premium discounts for risks with standard premium in excess of \$10,000, and the application of an expense constant.

The majority of expenses incurred in workers compensation vary directly by layer of premium and are accordingly termed variable expenses. An equitable apportionment of variable expense is achieved through the application of premium discounts. As the premium for a policy increases, some expenses incurred in handling the insurance coverage become proportionately less in terms of premium. A fair expense program must, therefore, provide that the larger premium policies be charged a lower percentage of premium for these expenses than the smaller policies.

Other expenses such as issuing, recording and auditing are common to all policies regardless of size. These common expenses are called fixed expenses and are addressed by incorporating an expense constant in the program.



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EXHIBIT II

Derivation of General Expense Provisions

The data below (amounts in thousands) illustrates that the combination of a 5.5% general expense provision in the manual rates, a \$160 expense constant, and the premium discount schedule generates general expense premium dollars that are consistent with historical actual general expenses as reported in the Insurance Expense Exhibit. All figures below obtained from the Insurance Expense Exhibit (IEE) include data for stock and mutual companies.

	<u>2017</u>	<u>2018</u>	<u>2019</u>
(1) Direct Earned Premium <i>(NAIC Insurance Expense Exhibit Data)</i>	49,874,309	50,055,106	48,753,225
(1a) Effect of Premium Discounts	0.9281	0.9283	0.9286
(1b) Effect of Schedule Rating	0.9500	0.9519	0.9541
(1c) Effect of Carrier Deviations	1.0231	1.0361	1.0578
(1d) Effect of Deductibles	0.7334	0.7370	0.7407
(1e) Expense Constant Offset	0.9918	0.9913	0.9913
(2) Gross Adjusted Premium <i>(STD Premium @ NCCI Level Excl. Expense Constant)</i> $\{(1) / [(1a) \times (1b) \times (1c) \times (1d)]\} \times (1e)$	74,769,354	73,536,787	69,620,954
(3) Direct General Expenses Incurred <i>(NAIC Insurance Expense Exhibit Data)</i>	3,200,452	3,291,102	3,448,309
(3a) Proportion of Expense Constant Attributable to General Expenses	0.4063	0.4063	0.4063
(4) General Expenses Incurred <i>(Excluding Expense Constant Revenue)</i> $(3) - (2) \times [1 - (1e)] / (1e) \times (3a)$	2,949,286	3,028,882	3,200,052
(5) Ratio of General Expense to Premium <i>(Excluding Expense Constant Revenue)</i> $(4) / (2)$	3.94%	4.12%	4.60%
(6) General Expense Gradations <i>(General Expenses in Average Premium Discount)</i>	1.28%	1.27%	1.27%
(7) General Expense Provision $(5) + (6)$	5.22%	5.39%	5.87%
(8) Selected General Expense Provision <i>(Three-Year Average)</i>			5.5%



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EXHIBIT II

Derivation of Production Expense Provisions

The data below (amounts in thousands) illustrates that the combination of a 18.3% production expense provision in the manual rates, a \$160 expense constant, and the premium discount schedule generates production expense premium dollars that are consistent with historical actual production expenses as reported for combined stock and mutual companies' voluntary business. All figures below obtained from the Insurance Expense Exhibit (IEE) include data for stock and mutual companies.

	<u>2017</u>	<u>2018</u>	<u>2019</u>
(1) Direct Written Premium <i>(NAIC Insurance Expense Exhibit Data)</i>	50,045,258	49,778,219	48,579,249
(1a) Effect of Premium Discounts	0.9279	0.9286	0.9286
(1b) Effect of Schedule Rating	0.9501	0.9532	0.9547
(1c) Effect of Carrier Deviations	1.0249	1.0461	1.0662
(1d) Effect of Deductibles	0.7324	0.7407	0.7407
(1e) Expense Constant Offset	0.9918	0.9910	0.9910
(2) Pool Written Premium <i>(Summary of NCCI Managed Pools - Combined Stock and Mutual Company Data)</i>	1,110,747	1,096,491	973,698
(3) Adjusted Direct Written Premium <i>(STD Premium Excl. Pool Written Premium)</i> [(1)-(2)] / (1a) x (1e)	52,304,395	51,953,039	50,804,546
(4) Gross Direct Written Premium <i>(STD Premium @ NCCI Level Incl. Pool Written Premium)</i> {(1) / [(1a) x (1b) x (1c) x (1d)]} x (1e)	75,004,395	71,925,808	68,761,893
(5) Direct Commission & Brokerage Incurred <i>(NAIC Insurance Expense Exhibit Data)</i>	4,591,083	4,460,371	4,366,984
(6) Pool Producer Fees <i>(Summary of NCCI Managed Pools - Combined Stock and Mutual Company Data)</i>	39,826	39,215	33,836
(7) Direct Other Acquisition Expenses Incurred <i>(NAIC Insurance Expense Exhibit Data)</i>	2,498,189	2,580,093	2,418,103
(7a) Proportion of Expense Constant Attributable to Production Expenses	0.5313	0.5313	0.5313
(8) Other Acquisition Expenses Incurred <i>(Excluding Expense Constant Revenue)</i> (7) - (4) x [1-(1e)]/(1e) x (7a)	2,168,719	2,233,042	2,086,318
(9) Ratio of Other Acq. Expenses to Premium <i>(Excluding Expense Constant Revenue)</i> (8)/(4)	2.89%	3.10%	3.03%
(10) Direct Commission & Brokerage Provision [(5)-(6)]/(3)	8.70%	8.51%	8.53%
(11) Production Expense Gradations <i>(Production Expenses in Average Premium Discount)</i>	6.78%	6.74%	6.74%
(12) Production Expense Provision (9)+(10)+(11)	18.37%	18.35%	18.30%
(13) Selected Production Expense Provision <i>(Three-Year Average)</i>			18.3%



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EXHIBIT II

Workers Compensation Loss Adjustment Expense

Section A - Determination of Loss Adjustment Expense Provision

NCCI proposes a 16.9% loss adjustment expense allowance as a percentage of incurred losses. The DCCE provision is based on Iowa-specific data reported to NCCI on the Policy Year Call for Experience. The AOE provision is based on countrywide data reported to NCCI on the Call for Loss Adjustment Expense.

<u>Policy Year</u>	<u>Policy Year Developed DCCE Ratio</u>	<u>Accident Year</u>	<u>Accident Year Developed AOE Ratio</u>
2013	7.8%	2014	7.8%
2014	7.3%	2015	8.3%
2015	8.1%	2016	8.9%
2016	8.2%	2017	8.8%
2017	<u>8.7%</u>	2018	<u>8.9%</u>
Countrywide selected:			8.9%
Iowa selected:	8.0%	+	8.9%
			= 16.9%

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

(1)	(2)	(3)	(4) = (2) x (3)
<u>Policy Year</u>	<u>Reported Ratio of Paid DCCE to Paid Losses</u>	<u>Age-to-Ultimate Development Factor</u>	<u>Ultimate DCCE Ratio</u>
2013	8.2%	0.954	7.8%
2014	7.6%	0.964	7.3%
2015	8.1%	0.994	8.1%
2016	7.4%	1.106	8.2%
2017	6.7%	1.305	<u>8.7%</u>
		Iowa selected:	8.0%

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

(5) Current Iowa LAE Provision	15.8%	
(6) Proposed Iowa LAE Provision	16.9%	
(7) Proposed Change in LAE Provision	0.009	0.9%
= [1.0 + (6)] / [1.0 + (5)] - 1		



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EXHIBIT II

Table of Premium Discounts

<u>Division of Standard Premium</u>		<u>Type A Discounts</u>	<u>Type B Discounts</u>
First	\$10,000	---	---
Next	\$190,000	9.1%	5.1%
Next	\$1,550,000	11.3%	6.5%
Over	\$1,750,000	12.3%	7.5%

Application of the appropriate discount schedule to the standard premium produces a dollar discount that is subtracted from the standard premium.



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EXHIBIT II

Average Expense Provisions

Reproduced below are the graded expense provisions by policy size.

Gradation of Standard Premium

Division of Premium	Expense Gradations		
	Production*	General	Discounts
First \$10,000	18.3%	5.5%	---
Next \$190,000	10.8%	4.5%	9.1%
Next \$1,550,000	9.3%	3.9%	11.3%
Over \$ 1,750,000	9.3%	3.0%	12.3%
Proposed Average:	11.5%	4.2%	
Proposed Average Expense Gradation: (Expense for 1st \$10,000 - Avg Expense)	6.8%	1.3%	

Average Premium Discount:
 $[Avg\ Exp\ Grad] / [1 - Taxes - P\&C] = [6.8\% + 1.3\%] / [1 - 2.4\% - 1.0\%] = 8.4\%$

Composition of Standard Premium:

Benefit & Loss Adj. Cost	Production (18.3%)	General (5.5%)	Profit (1.0%)	Taxes (2.4%)
72.8%	11.5%	4.2%	0.9%	2.2%
	6.8%	1.3%	0.1%	0.2%
	0.5%	0.4%	0.0%	0.0%

} Premium After Discounts (91.6%)

} -- Discount (8.4%)

} Standard Premium Excluding Expense Constant (100.0%)

} -- Premium from \$160 expense constant. (.9% = 1/0.991 - 1)^

Notes

* The production expense gradations shown are based on Type A gradations.
 ^ The 0.991 offset is for the \$160 expense constant.

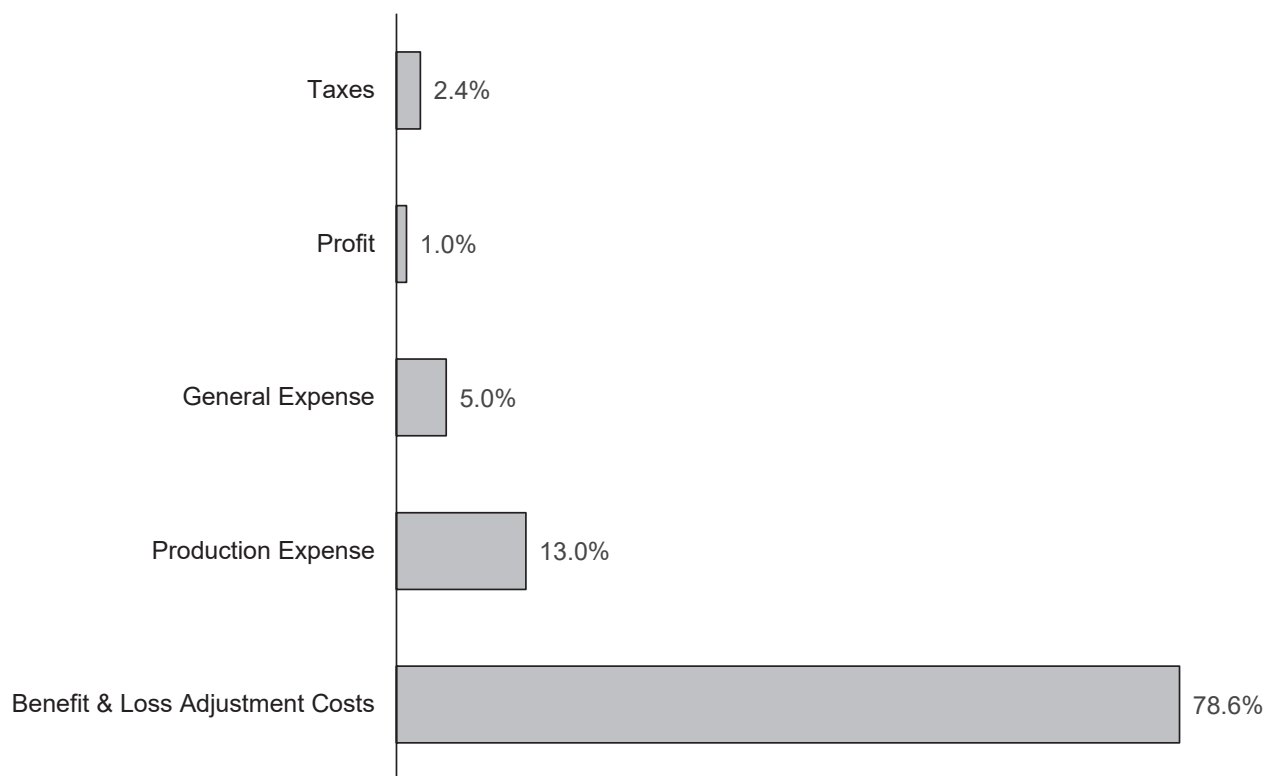


IOWA EXHIBIT II

Iowa Expense Provisions as a Percentage of Net Premium at NCCI Level

The exhibit below illustrates the allocation of the final premium dollar after the application of premium discounts and expense constants based on Iowa expense provisions.

Components of Premium



Notes

Benefit & Loss Adjustment Costs	78.6%	=	(72.8%) / 92.5%
Production Expense	13.0%	=	(11.5% + 0.5%) / 92.5%
General Expense	5.0%	=	(4.2% + 0.4%) / 92.5%
Profit	1.0%	=	(0.9% + 0.0%) / 92.5%
Taxes	2.4%	=	(2.2% + 0.0%) / 92.5%
Total	100.0%		



Iowa

Workers Compensation Rate Filing – January 1, 2021

Appendix A – Factors Underlying the Proposed Rate 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 rate 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 Iowa based on an analysis of policies reported in the Unit Statistical Data. Additional adjustments applied as part of the premium on-level factor calculation include:

- Adjustment for Expense 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.
- Experience Rating Off-Balance Adjustment Factor: This factor reflects the relative difference between the average experience rating modification for the historical year being on-leveled and the average experience rating modification targeted in the filing.

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

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



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APPENDIX A-I

Determination of Policy Year On-level Factors

Section A - Factor Adjusting 2018 Policy Year Assigned Risk Premium to Present Assigned Risk Level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Date	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	Premium Adjustment Factor (5)x(6)x(7)
NR 01/01/18	Base	1.000	0.472	0.472	0.851	0.987	0.644	0.541
NR 06/01/18	0.981	0.981	0.528	0.518				
NR 01/01/19	0.885	0.868						
NR 01/01/20	0.970	0.842						
				0.990				

Section B - Factor Adjusting 2018 Policy Year Voluntary Premium to Present Voluntary Level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Date	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	Premium Adjustment Factor (5)x(6)x(7)
NR 01/01/18	Base	1.000	0.472	0.472	0.851	0.987	0.644	0.541
NR 06/01/18	0.981	0.981	0.528	0.518				
NR 01/01/19	0.885	0.868						
NR 01/01/20	0.970	0.842						
				0.990				

Section C - Factor Adjusting 2018 Policy Year Assigned Risk Premium and Voluntary Premium to Present Statewide Level

(1) Assigned Risk Market Share PY 2018	0.039
(2) Voluntary Market Share PY 2018	0.961
(3) Assigned Risk Standard Premium Adjustment Factor (See Sec. A)	0.541
(4) Voluntary Standard Premium Adjustment Factor (See Sec. B)	0.541
(5) Premium Adjustment Factor = [(1)x(3)]/1.405+(2)x(4) #	0.535
(6) Experience Rating Off-balance Adjustment Factor*	1.005
(7) Final Premium Adjustment Factor = (5)x(6)	0.538

NR New and renewal business.

@ Eliminates premium derived from expense constants.

Current premium index (assigned risk-to-voluntary) = 1.405

* = 1.005 = 0.946 / 0.941 = (Targeted Off-balance) / (Off-balance for Policy Year 2018)



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APPENDIX A-I

Determination of Policy Year On-level Factors

Section D - Factor Adjusting 2018 Policy Year Indemnity Losses to Present Benefit Level

	(1)	(2)	(3)	(4)	(5)
Date	Benefit Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)
01/01/18	Base	1.000	0.591	0.591	1.003
01/01/19	1.005	1.005	0.409	0.411	
				<u>1.002</u>	

Section E - Factor Adjusting 2018 Policy Year Medical Losses to Present Benefit Level

	(1)	(2)	(3)	(4)	(5)
Date	Benefit Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)
01/01/18	Base	1.000	0.591	0.591	1.000
01/01/19	1.000	1.000	0.409	0.409	
				<u>1.000</u>	



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APPENDIX A-I

Determination of Policy Year On-level Factors

Section F - Factor Adjusting 2017 Policy Year Assigned Risk Premium to Present Assigned Risk Level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Date	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	Premium Adjustment Factor (5)x(6)x(7)
NR 01/01/17	Base	1.000	0.537	0.537	0.752	0.988	0.644	0.478
NR 07/01/17	0.961	0.961	0.463	0.445				
NR 01/01/18	0.913	0.877						
NR 06/01/18	0.981	0.860						
NR 01/01/19	0.885	0.761						
NR 01/01/20	0.970	0.738						
				0.982				

Section G - Factor Adjusting 2017 Policy Year Voluntary Premium to Present Voluntary Level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Date	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	Premium Adjustment Factor (5)x(6)x(7)
NR 01/01/17	Base	1.000	0.537	0.537	0.752	0.988	0.644	0.478
NR 07/01/17	0.961	0.961	0.463	0.445				
NR 01/01/18	0.913	0.877						
NR 06/01/18	0.981	0.860						
NR 01/01/19	0.885	0.761						
NR 01/01/20	0.970	0.738						
				0.982				

Section H - Factor Adjusting 2017 Policy Year Assigned Risk Premium and Voluntary Premium to Present Statewide Level

(1) Assigned Risk Market Share PY 2017	0.040
(2) Voluntary Market Share PY 2017	0.960
(3) Assigned Risk Standard Premium Adjustment Factor (See Sec. F)	0.478
(4) Voluntary Standard Premium Adjustment Factor (See Sec. G)	0.478
(5) Premium Adjustment Factor = [(1)x(3)]/1.405+(2)x(4) #	0.473
(6) Experience Rating Off-balance Adjustment Factor*	1.000
(7) Final Premium Adjustment Factor = (5)x(6)	0.473

NR New and renewal business.

@ Eliminates premium derived from expense constants.

Current premium index (assigned risk-to-voluntary) = 1.405

* = 1.000 = 0.946 / 0.946 = (Targeted Off-balance) / (Off-balance for Policy Year 2017)



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APPENDIX A-I

Determination of Policy Year On-level Factors

Section I - Factor Adjusting 2017 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)
09/07/04	Base	1.000	0.173	0.173	1.000
07/01/17	0.912	0.912	0.418	0.381	
01/01/18	1.019	0.929	0.409	0.380	
01/01/19	1.005	0.934			
				0.934	

Section J - Factor Adjusting 2017 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)
09/07/04	Base	1.000	0.173	0.173	1.000
07/01/17	1.000	1.000	0.418	0.418	
01/01/18	1.000	1.000	0.409	0.409	
01/01/19	1.000	1.000			
				1.000	



Iowa

Workers Compensation Rate Filing – January 1, 2021

Appendix A – Factors Underlying the Proposed Rate Level Change

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

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

Limited Large Loss Methodology

In order to limit volatility on the rate indications due to the impact of extraordinary large losses, a limited large loss methodology is used in Iowa. A base threshold for the large loss limitation is determined by the volume of premium in the state as well as the number of years used in the experience period. The base threshold proposed in this filing is \$7,481,806, based on the volume of premium in policy years 2016 and 2017 underlying the currently approved filing that utilizes data valued as of 12/31/2018. The base threshold is detrended by policy year to reflect the inflationary impact on claim costs due to wage inflation. The wage index used as a basis for these calculations is the Iowa average weekly wages from the Quarterly Census of Employment and Wages (QCEW). Detrended thresholds are used in the experience period, trend period, and loss development period. Indemnity and medical losses are limited at the detrended large loss threshold corresponding to their Policy Year, as shown in Appendix A-II Section L.

Limited indemnity and medical losses used to calculate the ultimate losses are shown in Appendix A-II Section A.

After developing limited indemnity and medical losses to an ultimate report, a statewide excess ratio at the base threshold is used to adjust the limited losses to an unlimited basis. The proposed excess ratio in this filing is 3.1%, as shown in Appendix A-II Section K.

Development Factors

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

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

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



Iowa

Workers Compensation Rate Filing – January 1, 2021

Appendix A – Factors Underlying the Proposed Rate Level Change

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

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



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APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section A - Premium and Loss Summary Valued as of 12/31/2019

Policy Year 2018

(1) Standard Earned Premium	\$692,841,735
(2) Factor to Develop Premium to Ultimate	1.006
(3) Standard Earned Premium Developed to Ultimate = (1)x(2)	\$696,998,785
(4) Limited Indemnity Paid Losses	\$41,707,798
(5) Limited Indemnity Paid Development Factor to Ultimate	3.688
(6) Limited Indemnity Paid Losses Developed to Ultimate = (4)x(5)	\$153,818,359
(7) Limited Indemnity Paid+Case Losses	\$109,307,396
(8) Limited Indemnity Paid+Case Development Factor to Ultimate	1.324
(9) Limited Indemnity Paid+Case Losses Developed to Ultimate = (7)x(8)	\$144,722,992
(10) Policy Year 2018 Limited Indemnity Losses Developed to Ultimate = [(6)+(9)]/2	\$149,270,676
(11) Limited Medical Paid Losses	\$142,229,456
(12) Limited Medical Paid Development Factor to Ultimate	1.556
(13) Limited Medical Paid Losses Developed to Ultimate = (11)x(12)	\$221,309,034
(14) Limited Medical Paid+Case Losses	\$209,047,123
(15) Limited Medical Paid+Case Development Factor to Ultimate	1.051
(16) Limited Medical Paid+Case Losses Developed to Ultimate = (14)x(15)	\$219,708,526
(17) Policy Year 2018 Limited Medical Losses Developed to Ultimate = [(13)+(16)]/2	\$220,508,780



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APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section A - Premium and Loss Summary Valued as of 12/31/2019

Policy Year 2017

(1) Standard Earned Premium	\$776,208,763
(2) Factor to Develop Premium to Ultimate	1.000
(3) Standard Earned Premium Developed to Ultimate = (1)x(2)	\$776,208,763
(4) Limited Indemnity Paid Losses	\$77,460,282
(5) Limited Indemnity Paid Development Factor to Ultimate	1.910
(6) Limited Indemnity Paid Losses Developed to Ultimate = (4)x(5)	\$147,949,139
(7) Limited Indemnity Paid+Case Losses	\$131,579,059
(8) Limited Indemnity Paid+Case Development Factor to Ultimate	1.150
(9) Limited Indemnity Paid+Case Losses Developed to Ultimate = (7)x(8)	\$151,315,918
(10) Policy Year 2017 Limited Indemnity Losses Developed to Ultimate = [(6)+(9)]/2	\$149,632,529
(11) Limited Medical Paid Losses	\$171,914,257
(12) Limited Medical Paid Development Factor to Ultimate	1.282
(13) Limited Medical Paid Losses Developed to Ultimate = (11)x(12)	\$220,394,077
(14) Limited Medical Paid+Case Losses	\$217,917,836
(15) Limited Medical Paid+Case Development Factor to Ultimate	1.036
(16) Limited Medical Paid+Case Losses Developed to Ultimate = (14)x(15)	\$225,762,878
(17) Policy Year 2017 Limited Medical Losses Developed to Ultimate = [(13)+(16)]/2	\$223,078,478



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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>
2015	1.007	2014	1.000	2013	1.000	2012	1.000
2016	1.005	2015	0.999	2014	1.000	2013	1.000
2017	1.007	2016	1.000	2015	1.000	2014	1.000
Average	1.006	Average	1.000	Average	1.000	Average	1.000

Summary of Premium Development Factors

<u>1st/5th</u>	<u>2nd/5th</u>	<u>3rd/5th</u>	<u>4th/5th</u>
1.006	1.000	1.000	1.000



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Determination of Premium and Losses Developed to an Ultimate Report

Section C - Limited Indemnity Paid Loss Development Factors

<u>Policy Year</u>	<u>1st/2nd</u>	<u>Policy Year</u>	<u>2nd/3rd</u>	<u>Policy Year</u>	<u>3rd/4th</u>	<u>Policy Year</u>	<u>4th/5th</u>
2015	2.040	2014	1.400	2013	1.132	2012	1.067
2016	1.886	2015	1.379	2014	1.161	2013	1.071
2017	1.867	2016	1.332	2015	1.127	2014	1.049
Average	1.931	Average	1.370	Average	1.140	Average	1.062

<u>Policy Year</u>	<u>5th/6th</u>	<u>Policy Year</u>	<u>6th/7th</u>	<u>Policy Year</u>	<u>7th/8th</u>	<u>Policy Year</u>	<u>8th/9th</u>
2011	1.026	2010	1.025	2009	1.017	2008	1.009
2012	1.031	2011	1.019	2010	1.010	2009	1.009
2013	1.027	2012	1.016	2011	1.010	2010	1.010
Average	1.028	Average	1.020	Average	1.012	Average	1.009

<u>Policy Year</u>	<u>9th/10th</u>	<u>Policy Year</u>	<u>10th/11th</u>	<u>Policy Year</u>	<u>11th/12th</u>	<u>Policy Year</u>	<u>12th/13th</u>
2007	1.012	2006	1.014	2005	1.004	2004	1.003
2008	1.006	2007	1.005	2006	1.011	2005	1.007
2009	1.008	2008	1.003	2007	1.005	2006	1.009
Average	1.009	Average	1.007	Average	1.007	Average	1.006

<u>Policy Year</u>	<u>13th/14th</u>	<u>Policy Year</u>	<u>14th/15th</u>	<u>Policy Year</u>	<u>15th/16th</u>	<u>Policy Year</u>	<u>16th/17th</u>
2003	1.008	2002	1.003	2001	1.002	2000	1.006
2004	1.011	2003	1.003	2002	1.002	2001	1.004
2005	1.005	2004	1.002	2003	1.002	2002	1.002
Average	1.008	Average	1.003	Average	1.002	Average	1.004

<u>Policy Year</u>	<u>17th/18th</u>	<u>Policy Year</u>	<u>18th/19th</u>
1999	1.002	1998	1.002
2000	1.003	1999	1.005
2001	1.005	2000	1.003
Average	1.003	Average	1.003



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Determination of Premium and Losses Developed to an Ultimate Report

Section D - Limited Medical Paid Loss Development Factors

<u>Policy Year</u>	<u>1st/2nd</u>	<u>Policy Year</u>	<u>2nd/3rd</u>	<u>Policy Year</u>	<u>3rd/4th</u>	<u>Policy Year</u>	<u>4th/5th</u>
2015	1.222	2014	1.068	2013	1.031	2012	1.017
2016	1.214	2015	1.065	2014	1.036	2013	1.018
2017	1.205	2016	1.050	2015	1.027	2014	1.022
Average	1.214	Average	1.061	Average	1.031	Average	1.019

<u>Policy Year</u>	<u>5th/6th</u>	<u>Policy Year</u>	<u>6th/7th</u>	<u>Policy Year</u>	<u>7th/8th</u>	<u>Policy Year</u>	<u>8th/9th</u>
2011	1.008	2010	1.010	2009	1.017	2008	1.009
2012	1.009	2011	1.008	2010	1.007	2009	1.009
2013	1.011	2012	1.008	2011	1.007	2010	1.009
Average	1.009	Average	1.009	Average	1.010	Average	1.009

<u>Policy Year</u>	<u>9th/10th</u>	<u>Policy Year</u>	<u>10th/11th</u>	<u>Policy Year</u>	<u>11th/12th</u>	<u>Policy Year</u>	<u>12th/13th</u>
2007	1.008	2006	1.015	2005	1.005	2004	1.005
2008	1.010	2007	1.004	2006	1.005	2005	1.005
2009	1.012	2008	1.004	2007	1.004	2006	1.003
Average	1.010	Average	1.008	Average	1.005	Average	1.004

<u>Policy Year</u>	<u>13th/14th</u>	<u>Policy Year</u>	<u>14th/15th</u>	<u>Policy Year</u>	<u>15th/16th</u>	<u>Policy Year</u>	<u>16th/17th</u>
2003	1.005	2002	1.007	2001	1.000	2000	1.005
2004	1.004	2003	1.003	2002	1.003	2001	1.003
2005	1.004	2004	1.002	2003	1.003	2002	1.004
Average	1.004	Average	1.004	Average	1.002	Average	1.004

<u>Policy Year</u>	<u>17th/18th</u>	<u>Policy Year</u>	<u>18th/19th</u>
1999	1.002	1998	1.002
2000	1.004	1999	1.001
2001	1.003	2000	1.002
Average	1.003	Average	1.002



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Determination of Premium and Losses Developed to an Ultimate Report

Section E - 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>
2013	1.169	2012	1.080	2011	1.023	2010	0.998
2014	1.203	2013	1.075	2012	1.023	2011	1.024
2015	1.165	2014	1.102	2013	1.055	2012	1.022
2016	1.117	2015	1.062	2014	1.013	2013	1.017
2017	1.100	2016	1.070	2015	1.000	2014	1.013
Average	1.151	Average	1.078	Average	1.023	Average	1.015
Policy Year	<u>5th/6th</u>	Policy Year	<u>6th/7th</u>	Policy Year	<u>7th/8th</u>	Policy Year	<u>8th/9th</u>
2009	1.010	2008	1.005	2007	1.009	2006	1.000
2010	1.007	2009	1.004	2008	1.006	2007	0.999
2011	1.006	2010	1.001	2009	0.995	2008	1.000
2012	1.000	2011	0.993	2010	1.002	2009	1.010
2013	0.996	2012	1.019	2011	1.002	2010	1.001
Average	1.004	Average	1.004	Average	1.003	Average	1.002
Policy Year	<u>9th/10th</u>	Policy Year	<u>10th/11th</u>	Policy Year	<u>11th/12th</u>	Policy Year	<u>12th/13th</u>
2005	1.005	2004	0.999	2003	1.003	2002	1.002
2006	1.010	2005	1.003	2004	1.001	2003	1.000
2007	0.999	2006	1.006	2005	0.999	2004	0.999
2008	1.005	2007	1.001	2006	1.001	2005	1.001
2009	0.997	2008	0.998	2007	0.998	2006	0.997
Average	1.003	Average	1.001	Average	1.000	Average	1.000
Policy Year	<u>13th/14th</u>	Policy Year	<u>14th/15th</u>	Policy Year	<u>15th/16th</u>	Policy Year	<u>16th/17th</u>
2001	1.000	2000	1.000	1999	0.997	1998	1.002
2002	0.999	2001	0.999	2000	1.001	1999	1.002
2003	1.001	2002	1.001	2001	1.000	2000	1.000
2004	0.997	2003	1.002	2002	1.001	2001	0.998
2005	1.001	2004	1.002	2003	0.999	2002	1.001
Average	1.000	Average	1.001	Average	1.000	Average	1.001
Policy Year	<u>17th/18th</u>	Policy Year	<u>18th/19th</u>				
1997	1.001	1996	1.002				
1998	1.002	1997	0.999				
1999	1.002	1998	1.000				
2000	0.999	1999	1.000				
2001	1.001	2000	1.001				
Average	1.001	Average	1.000				



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Determination of Premium and Losses Developed to an Ultimate Report

Section F - 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>
2013	1.022	2012	1.006	2011	0.985	2010	1.008
2014	1.006	2013	0.989	2012	0.985	2011	0.985
2015	1.025	2014	1.000	2013	0.999	2012	0.997
2016	1.014	2015	0.982	2014	1.010	2013	1.004
2017	1.001	2016	0.995	2015	0.989	2014	1.004
Average	1.014	Average	0.994	Average	0.994	Average	1.000
Policy Year	<u>5th/6th</u>	Policy Year	<u>6th/7th</u>	Policy Year	<u>7th/8th</u>	Policy Year	<u>8th/9th</u>
2009	1.001	2008	1.011	2007	1.001	2006	1.002
2010	0.994	2009	1.008	2008	1.003	2007	0.998
2011	0.998	2010	1.007	2009	1.011	2008	1.005
2012	0.996	2011	1.008	2010	1.009	2009	1.003
2013	1.002	2012	1.012	2011	1.005	2010	1.003
Average	0.998	Average	1.009	Average	1.006	Average	1.002
Policy Year	<u>9th/10th</u>	Policy Year	<u>10th/11th</u>	Policy Year	<u>11th/12th</u>	Policy Year	<u>12th/13th</u>
2005	1.008	2004	1.003	2003	1.003	2002	0.999
2006	1.003	2005	1.003	2004	1.001	2003	0.994
2007	0.997	2006	1.002	2005	1.003	2004	1.005
2008	1.001	2007	0.999	2006	0.999	2005	0.998
2009	0.998	2008	0.997	2007	1.004	2006	1.001
Average	1.001	Average	1.001	Average	1.002	Average	0.999
Policy Year	<u>13th/14th</u>	Policy Year	<u>14th/15th</u>	Policy Year	<u>15th/16th</u>	Policy Year	<u>16th/17th</u>
2001	1.002	2000	0.995	1999	0.999	1998	0.995
2002	1.002	2001	1.005	2000	1.009	1999	1.005
2003	1.004	2002	0.995	2001	1.000	2000	0.999
2004	1.003	2003	0.998	2002	0.997	2001	1.000
2005	1.001	2004	1.001	2003	1.001	2002	1.003
Average	1.002	Average	0.999	Average	1.001	Average	1.000
Policy Year	<u>17th/18th</u>	Policy Year	<u>18th/19th</u>				
1997	1.014	1996	0.999				
1998	1.008	1997	1.001				
1999	0.998	1998	1.000				
2000	1.001	1999	0.995				
2001	1.002	2000	0.998				
Average	1.005	Average	0.999				



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APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

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

Indemnity Paid+Case Data for Matching Companies

(1) Policy Year	(2) Losses for Policy Year 19th Report	(3) Losses for Policy Year 20th Report	(4) Losses for All Prior Policy Years Previous	(5) Losses for All Prior Policy Years Current	(6) Factor to Adjust Losses for Prior Policy Years	(7) Indicated 19th-to-Ult Development for Policy Year
1990	110,036,477	110,090,771	1,106,309,695	1,107,237,062	0.696	1.013
1991	98,530,504	98,529,633	1,217,327,833	1,217,908,047	0.834	1.007
1992	93,450,493	93,536,604	1,312,544,349	1,313,061,621	0.926	1.007
1993	87,319,062	87,107,611	1,406,598,225	1,406,819,743	1.030	1.000
1994	82,099,375	82,128,016	1,483,588,317	1,484,308,890	1.112	1.008
1995	85,221,368	85,310,286	1,568,473,892	1,569,599,936	1.100	1.013
1996	95,346,516	95,386,308	1,654,509,644	1,655,835,393	0.995	1.014
1997	92,843,300	92,888,304	1,748,307,509	1,749,276,465	1.035	1.011
1998	102,372,363	102,538,741	1,842,164,769	1,842,881,714	0.934	1.009
1999	105,122,707	105,137,626	1,911,291,201	1,911,609,430	0.892	1.004
Selected Indemnity 19th-to-Ultimate Loss Development Factor						1.010

Medical Paid+Case Data for Matching Companies

(8) Policy Year	(9) Losses for Policy Year 19th Report	(10) Losses for Policy Year 20th Report	(11) Losses for All Prior Policy Years Previous	(12) Losses for All Prior Policy Years Current	(13) Factor to Adjust Losses for Prior Policy Years	(14) Indicated 19th-to-Ult Development for Policy Year
1990	91,211,015	91,204,651	709,979,507	713,964,105	0.551	1.079
1991	89,375,740	89,378,456	805,168,756	805,273,671	0.629	1.002
1992	93,622,396	94,627,214	890,780,497	894,165,426	0.661	1.065
1993	81,422,582	81,357,885	988,792,640	987,065,646	0.834	0.974
1994	87,981,179	88,426,279	1,060,976,600	1,063,783,871	0.810	1.044
1995	84,860,040	84,924,354	1,155,011,907	1,157,821,436	0.899	1.038
1996	107,031,423	107,131,340	1,242,481,684	1,249,363,852	0.752	1.086
1997	91,737,394	91,544,484	1,353,980,947	1,347,106,215	0.938	0.918
1998	92,403,946	92,596,429	1,438,650,699	1,441,337,176	0.962	1.032
1999	100,831,692	100,541,259	1,499,121,113	1,496,394,765	0.888	0.967
Selected Medical 19th-to-Ultimate Loss Development Factor						1.030

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

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

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

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



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APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

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

Policy Year	Indemnity Paid-to-Paid + Case Ratio 19th Report	Medical Paid-to-Paid + Case Ratio 19th Report
1996	0.972	0.950
1997	0.985	0.944
1998	0.974	0.972
1999	0.983	0.982
2000	0.984	0.975
Selected	0.985	0.965

	Indemnity	Medical
(1) Paid+Case 19th-to-Ultimate Loss Development Factor (Section G)	1.010	1.030
(2) Factor to Adjust 19th-to-Ultimate Development Factor to a Limited Basis	0.795	0.795
(3) Limited Paid+Case 19th-to-Ultimate Loss Development Factor = $[(1)-1] \times (2) + 1$	1.008	1.024
(4) Limited Paid-to-Paid+Case Ratio (Section H)	0.985	0.965
(5) Limited Paid 19th-to-Ultimate Loss Development Factor = (3) / (4)	1.023	1.061

Section I - Summary of Limited Paid Loss Development Factors

Report	(1)	(2)	Report	(3)	(4)
	Indemnity Paid Loss Development to Next Report	to Ultimate		Medical Paid Loss Development to Next Report	to Ultimate
1st	1.931	3.688	1st	1.214	1.556
2nd	1.370	1.910	2nd	1.061	1.282
3rd	1.140	1.394	3rd	1.031	1.208
4th	1.062	1.223	4th	1.019	1.172
5th	1.028	1.152	5th	1.009	1.150
6th	1.020	1.121	6th	1.009	1.140
7th	1.012	1.099	7th	1.010	1.130
8th	1.009	1.086	8th	1.009	1.119
9th	1.009	1.076	9th	1.010	1.109
10th	1.007	1.066	10th	1.008	1.098
11th	1.007	1.059	11th	1.005	1.089
14th	1.003	1.038	14th	1.004	1.076
15th	1.002	1.035	15th	1.002	1.072
16th	1.004	1.033	16th	1.004	1.070
17th	1.003	1.029	17th	1.003	1.066
18th	1.003	1.026	18th	1.002	1.063
19th		1.023	19th		1.061

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

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



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APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

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

<u>Report</u>	<u>(1)</u> <u>Indemnity Paid+Case Loss Development</u>		<u>Report</u>	<u>(3)</u> <u>Medical Paid+Case Loss Development</u>	
	<u>to Next Report</u>	<u>to Ultimate</u>		<u>to Next Report</u>	<u>to Ultimate</u>
1st	1.151	1.324	1st	1.014	1.051
2nd	1.078	1.150	2nd	0.994	1.036
3rd	1.023	1.067	3rd	0.994	1.042
4th	1.015	1.043	4th	1.000	1.048
5th	1.004	1.028	5th	0.998	1.048
6th	1.004	1.024	6th	1.009	1.050
7th	1.003	1.020	7th	1.006	1.041
8th	1.002	1.017	8th	1.002	1.035
9th	1.003	1.015	9th	1.001	1.033
10th	1.001	1.012	10th	1.001	1.032
13th	1.000	1.011	13th	1.002	1.030
14th	1.001	1.011	14th	0.999	1.028
15th	1.000	1.010	15th	1.001	1.029
16th	1.001	1.010	16th	1.000	1.028
17th	1.001	1.009	17th	1.005	1.028
18th	1.000	1.008	18th	0.999	1.023
19th		1.008	19th		1.024

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

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



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APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

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

(1) Threshold at the Midpoint of the Loss Cost Effective Period*	7,481,806
(2) Statewide Excess Ratio for (1)	0.031
(3) Market Share for Carriers Missing from Large Loss and Catastrophe Call	0.000
(4) Factor to Adjust Limited Losses to an Unlimited Basis = $1.0 / \{1.0 - [(2) \times (1.0 - (3))]\}$	1.032

Section L - Policy Year Large Loss Limits

Experience Year	Policy Year Detrended Limit
2018	7,073,713
2017	6,853,269
2016	6,656,938
2015	6,511,672
2012	5,951,548
2011	5,799,785
2010	5,629,505
2009	5,461,561
2008	5,394,193
2007	5,300,506
2006	5,115,166
2005	4,923,940
2004	4,762,423
2003	4,575,498
2000	4,140,303
1999	4,005,138
1998	3,861,018
1997	3,691,409
1996	3,510,349

* November 28, 2021 is the midpoint of the effective period for which the revised loss costs are being proposed.



Iowa

Workers Compensation Rate Filing – January 1, 2021

Appendix A – Factors Underlying the Proposed Rate Level Change

Appendix A-III Trend Factors

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

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

The lost-time claim frequency, average costs per case, and loss ratios for Policy Years 2004 through 2018 are shown in Appendix A-III, along with the impact of the trend selection for each policy year in the experience period. The trend lengths displayed in Section B(3) are calculated by comparing the average accident date for the effective period of the proposed advisory rates to each of the policy years in the experience period. The average accident dates are based on an Iowa distribution of policy writings by month and assume a uniform probability of loss over the coverage period.



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APPENDIX A-III

Policy Year Trend Factors

Section A - Summary of Policy Year Data

(1)	(2)	(3)	(4)	(5)	(6)
Policy Year	Lost-Time Claim Frequency*	Indemnity		Medical	
		Avg Cost Per Case*^	Loss Ratio^	Avg Cost Per Case*^	Loss Ratio^
2004	25.400	23,088	0.586	27,178	0.689
2005	23.701	22,902	0.543	25,710	0.609
2006	23.371	23,500	0.559	27,944	0.652
2007	23.482	25,230	0.593	29,063	0.684
2008	22.512	26,034	0.585	31,663	0.712
2009	21.589	27,305	0.590	35,283	0.762
2010	21.901	26,852	0.588	33,507	0.734
2011	20.336	25,684	0.523	32,174	0.655
2012	19.851	25,650	0.509	33,695	0.669
2013	19.994	27,055	0.541	34,065	0.682
2014	18.732	26,517	0.497	33,469	0.627
2015	17.294	27,084	0.469	35,682	0.617
2016	16.071	23,876	0.384	33,773	0.543
2017	15.766	25,857	0.408	38,549	0.608
2018	15.635	25,536	0.399	37,610	0.588

* Figures have been adjusted to the common wage level.

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

Section B - Summary of Annual Trend Factors

	Indemnity	Medical
(1) Current Approved Annual Loss Ratio Trend Factor	0.980	0.990
(2) Selected Annual Loss Ratio Trend Factor	0.970	0.990
(3) Length of Trend Period from Midpoint of Policy Year to Midpoint of Effective Period:		
		<u>Years</u>
	Policy Year 2017	4.001
	Policy Year 2018	3.001
(4) Trend Factor Applied to Experience Year = (2) ^ (3)	Indemnity	Medical
	Policy Year 2017	0.885
	Policy Year 2018	0.913



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APPENDIX A-IV

Derivation of Industry Group Differentials

Industry group differentials are used to more equitably distribute the overall rate 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 rates. 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	148,245,067	684,732,969	670,184,381	1.167	1.177
Contracting	122,762,805	582,458,897	569,783,323	1.141	1.147
Office & Clerical	63,673,780	297,862,925	291,695,365	1.102	1.110
Goods & Services	207,107,319	970,338,951	951,011,224	1.068	1.077
Miscellaneous	98,643,265	448,920,215	438,643,441	1.112	1.117
Statewide	640,432,236	2,984,313,956	2,921,317,735		

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	146,985,550	678,915,357	664,490,376	1.022	1.000
Contracting	122,120,629	579,412,032	566,802,765	1.022	1.000
Office & Clerical	63,214,870	295,716,165	289,593,057	1.021	0.999
Goods & Services	205,376,617	962,230,268	943,064,055	1.020	0.998
Miscellaneous	98,201,711	446,910,725	436,679,952	1.023	1.001
Statewide	635,899,377	2,963,184,547	2,900,630,205	1.022	



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APPENDIX A-IV

II. Industry Group Differentials

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

Industry Group	(11) Converted Indicated Balanced Losses	(12) Indicated/ Expected Ratio (11)/[(8)x(10)]	(13) Indicated Differential (12)IG/(12)SW	(14) Lost-Time Claim Counts
Manufacturing	653,549,957	0.984	0.983	12,282
Contracting	541,506,724	0.955	0.954	6,783
Office & Clerical	291,985,963	1.009	1.008	4,899
Goods & Services	949,879,914	1.009	1.008	20,834
Miscellaneous	464,537,427	1.063	1.062	6,484
Statewide	2,901,459,985	1.001		

Industry Group	(15) Full Credibility Standard for Lost-Time Claim Counts	(16) Credibility Minimum of 1.000 and ((14)/(15))^0.5	(17) Credibility Weighted Indicated/Expected Ratio [(16)IGx(12)IG] + [1-(16)IG]x(12)SW*	(18) Final Industry Group Differential (17)IG/(17)SW
Manufacturing	12,000	1.00	0.984	0.983
Contracting	12,000	0.75	0.967	0.966
Office & Clerical	12,000	0.64	1.006	1.005
Goods & Services	12,000	1.00	1.009	1.008
Miscellaneous	12,000	0.74	1.047	1.046
Statewide			1.001	1.000

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



Iowa

Workers Compensation Rate Filing – January 1, 2021

Appendix B – Calculations Underlying the Advisory Rate Change by Classification

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

1. Calculate industry group differentials, which are used to more equitably distribute the proposed overall average advisory rate 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 Iowa payroll and loss experience
3. Indicated pure premiums are credibility-weighted with present on rate level pure premiums and national pure premiums to generate derived by formula pure premiums
4. Final adjustments include the application of a test correction factor, the ratio of manual-to-standard premium, and swing limits.



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APPENDIX B-I

Distribution of Rate Change to Occupational Classification

After determining the required changes in the overall rate 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
3/13-2/14	1.055	1.011	1.131	1.009
3/14-2/15	1.077	1.033	1.140	1.011
3/15-2/16	1.139	1.074	1.149	1.015
3/16-2/17	1.305	1.186	1.149	1.018
3/17-2/18	1.817	1.375	1.197	1.032

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
3/13-2/14	0.789	0.925
3/14-2/15	0.813	0.934
3/15-2/16	0.838	0.943
3/16-2/17	0.864	0.953
3/17-2/18	0.891	0.963

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
3/13-2/14	1.009	1.025	0.900	1.025	1.000
3/14-2/15	1.009	1.025	0.900	1.025	1.000
3/15-2/16	1.009	1.025	0.900	1.025	1.000
3/16-2/17	1.009	1.025	0.921	1.025	1.000
3/17-2/18	1.007	1.013	1.003	1.013	1.000



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APPENDIX B-I

4. Primary Conversion Factors: Indicated Pure Premiums

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

Policy Period	Fatal (L)	Fatal (NL)	P.T.*	P.P. (L)	P.P. (NL)	T.T. (L)	T.T. (NL)	Medical (L)	Medical (NL)
3/13-2/14	0.840	0.805	0.853	0.749	0.718	0.853	0.818	1.046	0.933
3/14-2/15	0.883	0.847	0.897	0.788	0.756	0.897	0.861	1.065	0.944
3/15-2/16	0.963	0.908	0.978	0.859	0.810	0.978	0.923	1.084	0.957
3/16-2/17	1.138	1.034	1.156	1.038	0.944	1.156	1.050	1.095	0.970
3/17-2/18	1.630	1.234	1.640	1.624	1.229	1.640	1.241	1.153	0.994

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

Section A-2 – Expected Excess Provision and Redistribution

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

Hazard Group	A	B	C	D	E	F	G
(1) Excess Ratios	0.117	0.158	0.185	0.227	0.274	0.319	0.375
(2) Excess Factors 1/(1-(1))	1.133	1.188	1.227	1.294	1.377	1.468	1.600

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



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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	0.954	1.008	1.008	1.062
(2) Final Differentials**	0.983	0.966	1.005	1.008	1.046
(3) Adjustment (2)/(1)	1.000	1.013	0.997	1.000	0.985

*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 rates, 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)
3/13-2/14	0.752	1.115	1.102	1.012	0.761
3/14-2/15	0.783	1.115	1.129	0.988	0.774
3/15-2/16	0.822	1.115	1.128	0.988	0.812
3/16-2/17	0.881	1.115	1.127	0.989	0.871
3/17-2/18	0.826	1.115	1.126	0.990	0.818

3. Adjustment for Experience Change

A factor of 0.984 is applied to adjust for the experience change in the proposed rate level.

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

A factor of 1.169 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
3/13-2/14	0.875	0.887	0.873	0.875	0.862
3/14-2/15	0.890	0.902	0.888	0.890	0.877
3/15-2/16	0.934	0.946	0.931	0.934	0.920
3/16-2/17	1.002	1.015	0.999	1.002	0.987
3/17-2/18	0.941	0.953	0.938	0.941	0.927



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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 rates, adjusted to the proposed level. The data sources for the above-captioned pure premiums are the partial pure premiums underlying the current rates.

1. Adjustment for Experience Change

A factor of 0.984 is applied to adjust for the experience change in the proposed rate level.

2. Factors to Adjust to the Proposed Trend Level

The pure premiums underlying the current rates contain the current trend. The change in trend factors, 0.965 and 1.000, 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 rates to the proposed benefit level.

	Indemnity	Medical
Benefit Adjustment	1.000	1.000

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

The pure premiums underlying the current rates 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	1.158	1.158	1.169	1.169
(2) Loss-based Assessment	1.000	1.000	1.000	1.000
(3) = (1) + (2) – 1.000	1.158	1.158	1.169	1.169
(4) Overall Change (3b)/(3a)			1.009	1.009

5. Adjustment to Obtain Expected Losses

The pure premiums underlying the current rates 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	1.167	1.177	0.992
Contracting	1.141	1.147	0.995
Office & Clerical	1.102	1.110	0.993
Goods & Services	1.068	1.077	0.992
Miscellaneous	1.112	1.117	0.996



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APPENDIX B-I

6. Factors to Adjust for Proposed Industry Group Differentials

The pure premiums underlying the current rates 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	0.983	1.000	0.983
Contracting	0.966	1.000	0.966
Office & Clerical	1.005	0.999	1.004
Goods & Services	1.008	0.998	1.006
Miscellaneous	1.046	1.001	1.047

*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	0.934	0.968
Contracting	0.921	0.954
Office & Clerical	0.955	0.990
Goods & Services	0.956	0.991
Miscellaneous	0.999	1.036



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APPENDIX B-I

Section C – Calculation of National Pure Premiums

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

Countrywide data is adjusted to Iowa conditions in four steps. First, statewide indicated pure premiums are determined for Iowa. Second, using Iowa payrolls as weights, corresponding statewide-average pure premiums are computed for each remaining state. Third, the ratios of Iowa 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 Iowa 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 rates.

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: \$37,170,031 for indemnity and \$28,074,413 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.



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APPENDIX B-II

Adjustments to Obtain Rates

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

1. Test Correction Factor

The payrolls are now extended by the rates presently in effect and by the indicated rates 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 rates 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	0.9965
Contracting	1.0004
Office & Clerical	0.9913
Goods & Services	0.9944
Miscellaneous	1.0112

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	1.177
Contracting	1.147
Office & Clerical	1.110
Goods & Services	1.077
Miscellaneous	1.117

3. Expense Allowance

The expense allowance is introduced into the rate by dividing the product of the proposed pure premium and the appropriate factors above by the proposed target cost ratio of 0.728 (see Exhibit II-A for derivation of this factor). This operation produces the proposed rate prior to the addition of a disease loading, if any.

4. Disease Loadings

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



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APPENDIX B-II

5. Swing Limits

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

Manufacturing	from 24% above to 26% below
Contracting	from 22% above to 28% below
Office & Clerical	from 26% above to 24% below
Goods & Services	from 26% above to 24% below
Miscellaneous	from 30% above to 20% below

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

Max. Deviation = Effect of the final change in rate level by industry group plus or minus 25% rounded to the nearest 1%.

The product of the swing limits and the present rate sets bounds for the proposed rate. If the calculated rate falls outside of the bounds, the closest bound is chosen as the proposed rate. When a code is limited, the underlying pure premiums are adjusted to reflect the limited rate. 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 rate 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 rates for other classifications are calculated in the same manner.

List of Classifications Limited by the Upper Swing

2021 3865 7711

List of Classifications Limited by the Lower Swing

7710



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APPENDIX B-III

Derivation of Proposed Rate - 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
03/01/13 - 02/28/14	0	0	0	1,790,366	2,957,202	790,665	1,505,652	2,139,053	7,314,190
03/01/14 - 02/28/15	0	181,412	0	910,209	2,543,727	839,769	647,164	2,198,574	5,324,686
03/01/15 - 02/29/16	0	500,000	0	1,235,436	1,758,676	407,228	557,028	1,081,220	5,309,708
03/01/16 - 02/28/17	0	0	0	873,606	1,611,892	398,127	962,654	1,417,742	5,087,505
03/01/17 - 02/28/18	0	0	0	571,326	1,061,760	414,384	1,168,135	1,133,716	7,206,124

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
03/01/13 - 02/28/14	0.840	0.805	0.853	0.749	0.718	0.853	0.818	1.046	0.933
03/01/14 - 02/28/15	0.883	0.847	0.897	0.788	0.756	0.897	0.861	1.065	0.944
03/01/15 - 02/29/16	0.963	0.908	0.978	0.859	0.810	0.978	0.923	1.084	0.957
03/01/16 - 02/28/17	1.138	1.034	1.156	1.038	0.944	1.156	1.050	1.095	0.970
03/01/17 - 02/28/18	1.630	1.234	1.640	1.624	1.229	1.640	1.241	1.153	0.994

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	1.227

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

Redistribution %	40%
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APPENDIX B-III

Derivation of Proposed Rate - 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
03/01/13 - 02/28/14	0	0	0	1,523,621	2,412,452	766,293	1,399,366	2,928,331	8,677,793
03/01/14 - 02/28/15	0	174,583	0	814,931	2,184,971	855,866	633,098	3,006,502	6,406,644
03/01/15 - 02/29/16	0	515,833	0	1,205,777	1,618,543	452,512	584,161	1,570,608	6,452,084
03/01/16 - 02/28/17	0	0	0	1,030,306	1,728,866	522,918	1,148,452	2,028,942	6,285,004
03/01/17 - 02/28/18	0	0	0	1,054,200	1,482,626	772,148	1,647,094	1,749,846	9,038,925

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

Policy Period	INDUSTRY GROUP: Office and Clerical
03/01/13 - 02/28/14	0.873
03/01/14 - 02/28/15	0.888
03/01/15 - 02/29/16	0.931
03/01/16 - 02/28/17	0.999
03/01/17 - 02/28/18	0.938

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
03/01/13 - 02/28/14	9,333,685,376	1,999,095	3,327,717	2,556,433	7,575,713	5,326,812	10,132,146	15,458,958
03/01/14 - 02/28/15	9,533,123,118	1,483,668	2,657,475	2,669,774	5,689,100	4,141,143	8,358,874	12,500,017
03/01/15 - 02/29/16	9,769,120,524	1,543,867	2,530,958	1,462,236	6,006,890	4,074,825	7,469,126	11,543,951
03/01/16 - 02/28/17	10,102,764,569	1,551,671	2,874,441	2,026,913	6,278,719	4,426,112	8,305,632	12,731,744
03/01/17 - 02/28/18	10,192,465,585	1,713,114	2,935,677	1,641,356	8,478,512	4,648,791	10,119,868	14,768,659
Total	48,931,159,172	8,291,415	14,326,268	10,356,712	34,028,934	22,617,683	44,385,646	67,003,329
INDICATED PURE PREMIUM						0.046	0.091	0.14

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 rate 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 Rate	0.052	0.088	0.14
Conversion Factors (App. B-I, Section B)	0.955	0.990	xxx
PURE PREMIUMS PRESENT ON RATE LEVEL (Underlying Pure Premiums) x (Conversion Factor)	0.050	0.087	0.14



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APPENDIX B-III

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

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

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
1. Indicated Pure Premium	0.046	0.091	0.14
2. Pure Premium Indicated by National Relativity	0.039	0.074	0.11
3. Pure Premium Present on Rate Level	0.050	0.087	0.14
4. State Credibilities	81%	100%	xxx
5. National Credibilities	9%	0%	xxx
6. Residual Credibilities = 100% - (4) - (5)	10%	0%	xxx
7. Derived by Formula Pure Premiums = (1) x (4) + (2) x (5) + (3) x (6)	0.046	0.091	0.14
8. Test Correction Factor	0.9913	0.9913	xxx
9. Underlying Pure Premiums = (7) x (8) *	0.050	0.090	0.14
10. Ratio of Manual to Standard Premium			1.110
11. Target Cost Ratio			0.728
12. Rate = (9) x (10) / (11)			0.21
13. Rate Within Swing Limits			0.21
Current Rate x Swing Limits			
a) Lower bound = 0.21 x 0.760 = 0.16			
b) Upper bound = 0.21 x 1.260 = 0.26			
14. Pure Premiums Underlying Proposed Rate* = ((14TOT) / (9TOT)) x (9) ; (14TOT) = (13) x (11) / (10)	0.050	0.090	0.14
15. Disease, Catastrophe and/or Miscellaneous Loadings			0.00
16. Final Loaded Rate			0.21

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



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APPENDIX B-IV

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

The Workers Compensation Statistical Plan (WCSP) data is used to determine the overall “F” classifications (F-class) premium level change as well as the individual change by the various classifications. There are three sets of pure premiums for each classification: indicated, present on rate level, and national pure premiums. All sets of pure premiums are adjusted to the common proposed level that is explained further in this exhibit. These three sets of pure premiums are credibility weighted and the results, the derived by formula pure premiums, are adjusted for additional proposed components (Section II) to determine the indicated rates. The payrolls are extended by the rates presently in effect and by the indicated rates. The rates are limited to the swing limits based on 25% above and 25% below the current rates. This results in the indicated rate level change of -6.4%.

Section A – Calculation of F-Class Indicated Pure Premiums

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

Section A-1 – Calculation of Primary Conversion Factors

1. Factors to Adjust to the Proposed Benefit Levels

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

STATE ACT

Policy Period	Fatal	Permanent Total (P.T.)	Permanent Partial (P.P.)	Temporary Total (T.T.)	Medical
1/13 - 12/13	1.009	1.025	0.900	1.025	1.000
1/14 - 12/14	1.009	1.025	0.900	1.025	1.000
1/15 - 12/15	1.009	1.025	0.900	1.025	1.000
1/16 - 12/16	1.009	1.025	0.910	1.025	1.000
1/17 - 12/17	1.007	1.016	0.993	1.016	1.000

FEDERAL ACT

Policy Period	Fatal	Permanent Total (P.T.)	Permanent Partial (P.P.)	Temporary Total (T.T.)	Medical
1/13 - 12/13	1.000	1.000	1.000	1.000	1.000
1/14 - 12/14	1.000	1.000	1.000	1.000	1.000
1/15 - 12/15	1.000	1.000	1.000	1.000	1.000
1/16 - 12/16	1.000	1.000	1.000	1.000	1.000
1/17 - 12/17	1.000	1.000	1.000	1.000	1.000

2. Factors to Adjust to the Proposed Trend Level

The following factors are applied to trend the losses in each policy year to the proposed rating year. The selected annual trends utilized were 0.970 and 0.990 for indemnity and medical, respectively.

Policy Period	Indemnity	Medical
1/13 - 12/13	0.784	0.923
1/14 - 12/14	0.808	0.932
1/15 - 12/15	0.833	0.941
1/16 - 12/16	0.859	0.951
1/17 - 12/17	0.885	0.961



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APPENDIX B-IV

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

3. Limited Loss Development Factors

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

Policy Period	Indemnity		Medical	
	Likely-to-Develop	Not-Likely-to-Develop	Likely-to-Develop	Not-Likely-to-Develop
1/13 - 12/13	1.085	1.041	1.184	1.029
1/14 - 12/14	1.110	1.055	1.228	1.028
1/15 - 12/15	1.278	1.110	1.305	1.029
1/16 - 12/16	1.477	1.255	1.374	1.065
1/17 - 12/17	2.319	1.811	1.594	1.141

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

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

STATE ACT

Policy Period	Fatal (L)	Fatal (NL)	P.T.*	P.P. (L)	P.P. (NL)	T.T. (L)	T.T. (NL)	Medical (L)	Medical (NL)
1/13 - 12/13	0.858	0.823	0.872	0.766	0.735	0.872	0.837	1.093	0.950
1/14 - 12/14	0.905	0.860	0.919	0.807	0.767	0.919	0.874	1.144	0.958
1/15 - 12/15	1.074	0.933	1.091	0.958	0.832	1.091	0.948	1.228	0.968
1/16 - 12/16	1.280	1.088	1.300	1.155	0.981	1.300	1.105	1.307	1.013
1/17 - 12/17	2.067	1.614	2.085	2.038	1.592	2.085	1.628	1.532	1.097

FEDERAL ACT

Policy Period	Fatal (L)	Fatal (NL)	P.T.*	P.P. (L)	P.P. (NL)	T.T. (L)	T.T. (NL)	Medical (L)	Medical (NL)
1/13 - 12/13	0.851	0.816	0.851	0.851	0.816	0.851	0.816	1.093	0.950
1/14 - 12/14	0.897	0.852	0.897	0.897	0.852	0.897	0.852	1.144	0.958
1/15 - 12/15	1.065	0.925	1.065	1.065	0.925	1.065	0.925	1.228	0.968
1/16 - 12/16	1.269	1.078	1.269	1.269	1.078	1.269	1.078	1.307	1.013
1/17 - 12/17	2.052	1.603	2.052	2.052	1.603	2.052	1.603	1.532	1.097

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



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APPENDIX B-IV

Section A-2 – Expected Excess Provision and Redistribution

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

Hazard Group	A	B	C	D	E	F	G
(1) Excess Ratios	0.117	0.158	0.185	0.227	0.274	0.319	0.375
(2) Excess Factors 1/(1-(1))	1.133	1.188	1.227	1.294	1.377	1.468	1.600

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

Section A-3 – Calculation of Secondary Conversion Factors

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

Policy Period	State Act	Federal Act
1/13 - 12/13	1.169	1.231
1/14 - 12/14	1.169	1.169
1/15 - 12/15	1.169	1.226
1/16 - 12/16	1.169	1.224
1/17 - 12/17	1.169	1.169

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



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APPENDIX B-IV

Section B – Present on Rate Level

1. Benefits

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

State Weight (St%)	0.300
Federal Weight (Fed%)	0.700

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

2. Trend

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

Indemnity	Medical
0.970	0.990



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APPENDIX B-IV

Section B – Present on Rate Level (continued)

3. Loss-Based Expenses

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

Proposed:

STATE ACT			
	Indemnity	Medical	Total
(a) Loss Adjustment Expense	1.169	1.169	1.169
(b) Loss-Based Assessment	1.000	1.000	1.000
(c) Total = (a) + (b) - 1	1.169	1.169	1.169

FEDERAL ACT			
	Indemnity	Medical	Total
(d) Loss Adjustment Expense	1.169	1.169	1.169
(e) Loss-Based Assessment	1.120	1.000	1.068
(f) Total = (d) + (e) - 1	1.289	1.169	1.237

	Indemnity	Medical	Total
(g) Weighted Proposed Expenses = [(c) x St%] + [(f) x Fed%]	1.253	1.169	1.217

Current:

STATE ACT			
	Indemnity	Medical	Total
(h) Loss Adjustment Expense	1.158	1.158	1.158
(i) Loss-Based Assessment	1.000	1.000	1.000
(j) Total = (h) + (i) - 1	1.158	1.158	1.158

FEDERAL ACT			
	Indemnity	Medical	Total
(k) Loss Adjustment Expense	1.158	1.158	1.158
(l) Loss-Based Assessment	1.113	1.000	1.065
(m) Total = (k) + (l) - 1	1.271	1.158	1.223

	Indemnity	Medical	Total
(n) Weighted Current Expenses = [(j) x St%] + [(m) x Fed%]	1.237	1.158	1.204

Change:

	Indemnity	Medical	Total
Weighted Expense Change in Loss-Based Expenses = [(g) / (n)]	1.013	1.009	1.011

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

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

Indemnity	Medical
0.983	0.999



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APPENDIX B-IV

Section C – National Pure Premiums

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

Class Code 9077

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

Section D – Derived by Formula Pure Premiums

The derived by formula pure premiums are calculated by a process similar to that of the industrial codes, which is described in Appendix B-I, Section D. To achieve full state credibility, a classification must have expected losses of at least: \$114,855,400 for indemnity and \$55,953,600 for medical.

II. Calculation of Proposed Rates

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

A. Test Correction Factor	1.0000
B. Ratio of Manual Premium to Earned Premium (determined on a countrywide basis)	1.241
C. Expense Allowance	0.728

The expense allowance is introduced into the rate by dividing the product of the proposed pure premiums and the appropriate factors above by the proposed target cost ratio.

D. Swing Limits

No classifications were adjusted on account of swing limits.



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APPENDIX B-IV

Derivation of Proposed Rate - Code 6872

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

STATE ACT - LIMITED LOSSES (Workers Compensation Statistical Plan)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/13 - 12/31/13	0	0	0	203,202	307,500	0	0	39,745	162,530
01/01/14 - 12/31/14	0	0	0	0	8,803	0	0	0	33,543
01/01/15 - 12/31/15	0	0	0	0	0	0	0	0	11,743
01/01/16 - 12/31/16	0	0	0	0	0	0	0	0	729
01/01/17 - 12/31/17	0	0	0	0	0	0	0	0	1,574

FEDERAL ACT - LIMITED LOSSES (Workers Compensation Statistical Plan)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/13 - 12/31/13	0	0	0	0	0	0	0	0	0
01/01/14 - 12/31/14	0	0	0	0	0	0	0	0	0
01/01/15 - 12/31/15	0	0	0	0	0	0	0	0	0
01/01/16 - 12/31/16	0	0	0	0	0	0	0	0	0
01/01/17 - 12/31/17	0	0	0	0	0	0	0	0	0

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

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/13 - 12/31/13	0.858	0.823	0.872	0.766	0.735	0.872	0.837	1.093	0.950
01/01/14 - 12/31/14	0.905	0.860	0.919	0.807	0.767	0.919	0.874	1.144	0.958
01/01/15 - 12/31/15	1.074	0.933	1.091	0.958	0.832	1.091	0.948	1.228	0.968
01/01/16 - 12/31/16	1.280	1.088	1.300	1.155	0.981	1.300	1.105	1.307	1.013
01/01/17 - 12/31/17	2.067	1.614	2.085	2.038	1.592	2.085	1.628	1.532	1.097

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

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/13 - 12/31/13	0.851	0.816	0.851	0.851	0.816	0.851	0.816	1.093	0.950
01/01/14 - 12/31/14	0.897	0.852	0.897	0.897	0.852	0.897	0.852	1.144	0.958
01/01/15 - 12/31/15	1.065	0.925	1.065	1.065	0.925	1.065	0.925	1.228	0.968
01/01/16 - 12/31/16	1.269	1.078	1.269	1.269	1.078	1.269	1.078	1.307	1.013
01/01/17 - 12/31/17	2.052	1.603	2.052	2.052	1.603	2.052	1.603	1.532	1.097



IOWA

APPENDIX B-IV

Derivation of Proposed Rate - Code 6872

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

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

	HAZARD GROUP: G
Excess Factor	1.600

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

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

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

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/13 - 12/31/13	0	0	0	211,688	307,378	0	0	106,863	301,289
01/01/14 - 12/31/14	0	0	0	0	9,183	0	0	0	53,034
01/01/15 - 12/31/15	0	0	0	0	0	0	0	0	18,187
01/01/16 - 12/31/16	0	0	0	0	0	0	0	0	1,181
01/01/17 - 12/31/17	0	0	0	0	0	0	0	0	2,763

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

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/13 - 12/31/13	0	0	0	0	0	0	0	0	0
01/01/14 - 12/31/14	0	0	0	0	0	0	0	0	0
01/01/15 - 12/31/15	0	0	0	0	0	0	0	0	0
01/01/16 - 12/31/16	0	0	0	0	0	0	0	0	0
01/01/17 - 12/31/17	0	0	0	0	0	0	0	0	0

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

	INDUSTRY GROUP: F-Class
Policy Period	
01/01/13 - 12/31/13	1.169
01/01/14 - 12/31/14	1.169
01/01/15 - 12/31/15	1.169
01/01/16 - 12/31/16	1.169
01/01/17 - 12/31/17	1.169

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

	INDUSTRY GROUP: F-Class
Policy Period	
01/01/13 - 12/31/13	1.231
01/01/14 - 12/31/14	1.169
01/01/15 - 12/31/15	1.226
01/01/16 - 12/31/16	1.224
01/01/17 - 12/31/17	1.169



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APPENDIX B-IV

Derivation of Proposed Rate - Code 6872

TOTAL - PAYROLL, FINAL CONVERTED LOSSES

Policy Period	Payroll	Indemnity Likely	Indemnity Not-Likely	Medical Likely	Medical Not-Likely	Total Indemnity	Total Medical	Total
01/01/13 - 12/31/13	2,095,925	247,463	359,325	124,923	352,207	606,788	477,130	1,083,918
01/01/14 - 12/31/14	2,525,687	0	10,735	0	61,997	10,735	61,997	72,732
01/01/15 - 12/31/15	2,371,350	0	0	0	21,261	0	21,261	21,261
01/01/16 - 12/31/16	873,862	0	0	0	1,381	0	1,381	1,381
01/01/17 - 12/31/17	459,924	0	0	0	3,230	0	3,230	3,230
Total	8,326,748	247,463	370,060	124,923	440,076	617,523	564,999	1,182,522
INDICATED PURE PREMIUM						7.416	6.785	14.20

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 rate by the conversion factors. The derivation of the present on rate level pure premiums for the above-captioned classification follows:

	Indemnity	Medical	Total
Pure Premiums Underlying Current Rate	4.502	4.738	9.24
Conversion Factors (Section B)	0.983	0.999	xxx
PURE PREMIUMS PRESENT ON RATE LEVEL (Underlying Pure Premiums) x (Conversion Factor)	4.425	4.733	9.16



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APPENDIX B-IV

Derivation of Proposed Rate - Code 6872
 Industry Group - F-Class, Hazard Group - G

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

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
1. Indicated Pure Premium	7.416	6.785	14.20
2. Pure Premium Indicated by National Relativity	2.110	2.709	4.82
3. Pure Premium Present on Rate Level	4.425	4.733	9.16
4. State Credibilities	6%	8%	xxx
5. National Credibilities	27%	29%	xxx
6. Residual Credibilities = 100% - (4) - (5)	67%	63%	xxx
7. Derived by Formula Pure Premiums = (1) x (4) + (2) x (5) + (3) x (6)	3.979	4.310	8.29
8. Test Correction Factor	1.0000	1.0000	xxx
9. Underlying Pure Premiums = (7) x (8) *	3.980	4.310	8.29
10. Ratio of Manual to Standard Premium			1.241
11. Target Cost Ratio			0.728
12. Rate = (9) x (10) / (11)			14.13
13. Rate Within Swing Limits			14.13
Current Rate x Swing Limits			
a) Lower bound = 15.23 x 0.750 = 11.43			
b) Upper bound = 15.23 x 1.250 = 19.03			
14. Pure Premiums Underlying Proposed Rate* = ((14TOT) / (9TOT)) x (9) ; (14TOT) = (13) x (11) / (10)	3.980	4.310	8.29
15. Disease, Catastrophe and/or Miscellaneous Loadings			0.00
16. Final Loaded Rate			14.13

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



Iowa

Workers Compensation Rate Filing – January 1, 2021

Appendix C – Memoranda for Laws and Assessments

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

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

- Longshore and Harbor Workers' Compensation Act Annual Assessment



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APPENDIX C-I

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

The F-class and Program II, Option II maritime class voluntary rates and assigned risk rates include the following provision for the federal assessment:

1.) Estimated Total Expense Needed for 2019 *	100,000,000
2.) Compensation Payments Reported (on indemnity only) in 2018 *	832,150,055
3.) Assessment Rate on Indemnity Losses (1) / (2)	12.0%

Breakdown of Losses Under the Longshore and Harbor Workers Act

4.) Indemnity Losses (Combination of 1st through 3rd reports) #	38,993,048
5.) Medical Losses (Combination of 1st through 3rd reports) #	30,237,088
6.) Total Losses (4) + (5)	69,230,136
7.) Assessment Rate on Total Losses { (3) x (4) } / (6)	6.8%

* Source: U.S. Department of Labor

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



Iowa

Workers Compensation Rate Filing – January 1, 2021

Appendix D – Internal Rate of Return Analysis

Appendix D provides details of the calculation of the profit and contingency provision in the Internal Rate of Return (IRR) Model.



NATIONAL COUNCIL ON COMPENSATION INSURANCE
INTERNAL RATE OF RETURN ANALYSIS
IOWA - VOLUNTARY

Overview

According to actuarial principles, insurance rates must be determined such that insurers can be expected to earn an appropriate rate of return. Analysis and determination of a profit and contingency (P&C) provision is necessary to ensure this objective is achieved. To determine the profit and contingency provision, NCCI first uses market-based financial methods to estimate the rate of return (also known as the cost of capital) required by investors of securities with a similar risk profile to workers compensation insurance. NCCI then performs an Internal Rate of Return (IRR) analysis to estimate the profit and contingency provision that needs to be included in the proposed rates for insurers to earn the cost of capital, after accounting for investment income.

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), 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 2020.
- 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 2020, with forecasts from April of that year. The starting point for the Dynamic estimates is January 1, 2021.

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	20.40%	
(2)	Reserve-to-Surplus Ratio	1.82	
(3)	Cash Flow Patterns	See Table 2	
		<u>Static</u>	<u>Dynamic*</u>
(4)	Return on Investments	2.17%	1.84% - 4.35%
(5)	Weighted Average Cost of Capital	6.97%	6.67% - 9.56%
<u>Results</u>			
		<u>Static</u>	<u>Dynamic</u>
(6)	Indicated Profit and Contingency Provision	2.65%	2.99%
(7)	Loss and Loss Adjustment Expense Provision [100% - (6) - (1)]	76.95%	76.61%

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 2019 Aggregates & Averages, for Commercial Casualty Composite, as the weighted average of Loss, LAE, and Unearned Premium Reserves to Policyholder Surplus, for years 2014 - 2018.

* See Table 3 for details by time period.



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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 and LAE
0.00	-	-	-	-	-
0.25	12.78%	3.60%	28.80%	12.88%	0.84%
0.50	29.69%	13.91%	53.70%	29.27%	3.26%
0.75	52.75%	30.55%	79.40%	51.21%	7.15%
1.00	76.03%	52.98%	100.00%	73.11%	12.40%
1.25	89.30%	74.38%		85.01%	21.43%
1.50	97.04%	89.06%		91.95%	30.45%
1.75	100.00%	97.43%		100.00%	39.48%
2.00		100.00%			48.50%
2.25					53.03%
2.50					57.55%
2.75					62.08%
3.00					66.60%
3.25					69.13%
3.50					71.65%
3.75					74.18%
4.00					76.70%
4.25					78.08%
4.50					79.45%
4.75					80.83%
5.00					82.20%
6.00					85.20%
7.00					86.50%
8.00					87.70%
9.00					89.50%
10.00					90.30%
11.00					91.10%
12.00					92.10%
13.00					92.60%
14.00					93.10%
15.00					93.70%
16.00					94.10%
17.00					94.30%
18.00					94.60%
19.00					95.00%
20.00					95.20%
21.00					95.60%
22.00					95.80%
23.00					96.10%
24.00					96.50%
25.00					96.60%
26.00					97.00%
27.00					97.30%
28.00					97.50%
29.00					97.60%
30.00					97.80%
31.00					98.40%
32.00					98.89%
33.00					99.31%
34.00					99.68%
35.00					100.00%

TABLE 3: DYNAMIC ESTIMATE
INPUTS

Time	(1) Return on Investments	(2) Weighted Average Cost of Capital
0.00	-	-
0.25	1.84%	6.67%
0.50	1.86%	6.83%
0.75	1.90%	7.00%
1.00	1.91%	7.13%
1.25	1.93%	7.30%
1.50	1.95%	7.46%
1.75	1.97%	7.62%
2.00	1.99%	7.79%
2.25	2.04%	7.99%
2.50	2.07%	8.18%
2.75	2.49%	8.38%
3.00	2.52%	8.57%
3.25	2.58%	8.75%
3.50	2.61%	8.91%
3.75	2.66%	9.04%
4.00	2.68%	9.16%
4.25	2.74%	9.29%
4.50	2.76%	9.39%
4.75	2.81%	9.49%
5.00	2.82%	9.55%
6.00	3.20%	9.67%
7.00	3.21%	9.76%
8.00	3.60%	9.73%
9.00	3.97%	9.66%
10.00	3.96%	9.62%
11.00	3.93%	9.59%
12.00	3.94%	9.59%
13.00	3.95%	9.59%
14.00	3.96%	9.58%
15.00	3.96%	9.58%
16.00	4.22%	9.58%
17.00	4.22%	9.58%
18.00	4.22%	9.58%
19.00	4.22%	9.58%
20.00	4.22%	9.59%
21.00	4.37%	9.60%
22.00	4.37%	9.60%
23.00	4.37%	9.59%
24.00	4.36%	9.58%
25.00	4.36%	9.58%
26.00	4.35%	9.57%
27.00	4.35%	9.57%
28.00	4.35%	9.56%
29.00	4.35%	9.56%
30.00	4.35%	9.56%
31.00	4.35%	9.56%
32.00	4.35%	9.56%
33.00	4.35%	9.56%
34.00	4.35%	9.56%
35.00	4.35%	9.56%

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.



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

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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.



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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 and LAE Factor	(4) Federal Income Tax Factor	(5) Insurance Cash flow Factor
0.00	-	-	-	-	-
0.25	0.1278	0.0263	0.0065	0.0066	0.0884
0.50	0.2969	0.0597	0.0251	0.0132	0.1989
0.75	0.5275	0.1045	0.0550	0.0198	0.3482
1.00	0.7603	0.1491	0.0954	0.0265	0.4893
1.25	0.8930	0.1734	0.1649	0.0240	0.5308
1.50	0.9704	0.1876	0.2343	0.0215	0.5270
1.75	1.0000	0.2040	0.3038	0.0189	0.4733
2.00	1.0000	0.2040	0.3732	0.0164	0.4063
2.25	1.0000	0.2040	0.4081	0.0157	0.3723
2.50	1.0000	0.2040	0.4429	0.0149	0.3382
2.75	1.0000	0.2040	0.4777	0.0142	0.3041
3.00	1.0000	0.2040	0.5125	0.0134	0.2701
3.25	1.0000	0.2040	0.5319	0.0129	0.2511
3.50	1.0000	0.2040	0.5514	0.0125	0.2322
3.75	1.0000	0.2040	0.5708	0.0120	0.2132
4.00	1.0000	0.2040	0.5902	0.0115	0.1942
4.25	1.0000	0.2040	0.6008	0.0112	0.1839
4.50	1.0000	0.2040	0.6114	0.0110	0.1736
4.75	1.0000	0.2040	0.6220	0.0107	0.1633
5.00	1.0000	0.2040	0.6326	0.0104	0.1530
6.00	1.0000	0.2040	0.6557	0.0098	0.1306
7.00	1.0000	0.2040	0.6657	0.0094	0.1209
8.00	1.0000	0.2040	0.6749	0.0089	0.1122
9.00	1.0000	0.2040	0.6887	0.0083	0.0989
10.00	1.0000	0.2040	0.6949	0.0079	0.0932
11.00	1.0000	0.2040	0.7011	0.0075	0.0875
12.00	1.0000	0.2040	0.7088	0.0071	0.0801
13.00	1.0000	0.2040	0.7126	0.0068	0.0765
14.00	1.0000	0.2040	0.7164	0.0066	0.0729
15.00	1.0000	0.2040	0.7211	0.0064	0.0685
16.00	1.0000	0.2040	0.7241	0.0062	0.0657
17.00	1.0000	0.2040	0.7257	0.0060	0.0643
18.00	1.0000	0.2040	0.7280	0.0059	0.0621
19.00	1.0000	0.2040	0.7311	0.0058	0.0592
20.00	1.0000	0.2040	0.7326	0.0057	0.0577
21.00	1.0000	0.2040	0.7357	0.0057	0.0546
22.00	1.0000	0.2040	0.7372	0.0057	0.0531
23.00	1.0000	0.2040	0.7395	0.0057	0.0508
24.00	1.0000	0.2040	0.7426	0.0056	0.0477
25.00	1.0000	0.2040	0.7434	0.0056	0.0470
26.00	1.0000	0.2040	0.7465	0.0056	0.0439
27.00	1.0000	0.2040	0.7488	0.0056	0.0416
28.00	1.0000	0.2040	0.7503	0.0056	0.0401
29.00	1.0000	0.2040	0.7511	0.0056	0.0393
30.00	1.0000	0.2040	0.7526	0.0056	0.0378
31.00	1.0000	0.2040	0.7572	0.0056	0.0332
32.00	1.0000	0.2040	0.7610	0.0056	0.0294
33.00	1.0000	0.2040	0.7643	0.0056	0.0262
34.00	1.0000	0.2040	0.7671	0.0056	0.0233
35.00	1.0000	0.2040	0.7695	0.0056	0.0209

Column Notes:

- (1) is Collected Premium by time period, expressed as a factor, = Table 2 col (1)
- (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 and LAE 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)]



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Calculation Details - Static Estimate (continued)

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

Time	(1) Unearned Premium, Unpaid Loss and Unpaid LAE Reserve Factor	(2) Factor for Surplus Allocated to Reserves	(3) Total Invested Funds Factor	(4) Income from Invested Funds Factor	(5) Capital Provider Equity Factor	(6) Capital Provider Cash Flow Factor	(7) Discounted Capital Provider Cash Flow Factor
0.00	-	-	-	-	-	-	-
0.25	0.2732	0.1501	0.2631	0.0007	(0.1740)	(0.1740)	(0.1725)
0.50	0.4799	0.2637	0.5034	0.0028	(0.3018)	(0.1278)	(0.1246)
0.75	0.6686	0.3673	0.7694	0.0062	(0.4151)	(0.1133)	(0.1086)
1.00	0.7825	0.4299	0.9727	0.0109	(0.4726)	(0.0575)	(0.0542)
1.25	0.6637	0.3647	0.9214	0.0160	(0.3747)	0.0979	0.0907
1.50	0.5604	0.3079	0.8388	0.0207	(0.2910)	0.0837	0.0763
1.75	0.4717	0.2592	0.7309	0.0249	(0.2327)	0.0583	0.0523
2.00	0.3963	0.2178	0.6141	0.0285	(0.1792)	0.0535	0.0471
2.25	0.3615	0.1986	0.5601	0.0317	(0.1562)	0.0230	0.0200
2.50	0.3267	0.1795	0.5062	0.0346	(0.1334)	0.0228	0.0194
2.75	0.2919	0.1604	0.4522	0.0371	(0.1109)	0.0225	0.0188
3.00	0.2570	0.1412	0.3983	0.0394	(0.0888)	0.0222	0.0183
3.25	0.2376	0.1305	0.3681	0.0415	(0.0756)	0.0132	0.0107
3.50	0.2182	0.1199	0.3380	0.0434	(0.0625)	0.0130	0.0104
3.75	0.1987	0.1092	0.3079	0.0451	(0.0496)	0.0129	0.0101
4.00	0.1793	0.0985	0.2778	0.0467	(0.0369)	0.0127	0.0098
4.25	0.1687	0.0927	0.2614	0.0481	(0.0294)	0.0075	0.0057
4.50	0.1581	0.0869	0.2450	0.0495	(0.0219)	0.0074	0.0055
4.75	0.1476	0.0811	0.2286	0.0508	(0.0146)	0.0074	0.0054
5.00	0.1370	0.0753	0.2122	0.0520	(0.0073)	0.0073	0.0052
6.00	0.1139	0.0626	0.1765	0.0562	0.0103	0.0176	0.0121
7.00	0.1039	0.0571	0.1610	0.0598	0.0198	0.0095	0.0061
8.00	0.0947	0.0520	0.1467	0.0632	0.0287	0.0089	0.0054
9.00	0.0808	0.0444	0.1252	0.0661	0.0399	0.0112	0.0063
10.00	0.0746	0.0410	0.1157	0.0687	0.0463	0.0064	0.0034
11.00	0.0685	0.0376	0.1061	0.0711	0.0525	0.0062	0.0031
12.00	0.0608	0.0334	0.0942	0.0733	0.0593	0.0068	0.0031
13.00	0.0569	0.0313	0.0882	0.0753	0.0636	0.0043	0.0019
14.00	0.0531	0.0292	0.0823	0.0771	0.0678	0.0042	0.0017
15.00	0.0485	0.0266	0.0751	0.0788	0.0723	0.0045	0.0017
16.00	0.0454	0.0249	0.0704	0.0804	0.0757	0.0035	0.0012
17.00	0.0439	0.0241	0.0680	0.0819	0.0782	0.0025	0.0008
18.00	0.0416	0.0228	0.0644	0.0833	0.0811	0.0029	0.0009
19.00	0.0385	0.0211	0.0596	0.0847	0.0842	0.0032	0.0009
20.00	0.0369	0.0203	0.0572	0.0860	0.0864	0.0022	0.0006
21.00	0.0339	0.0186	0.0525	0.0872	0.0893	0.0029	0.0007
22.00	0.0323	0.0178	0.0501	0.0883	0.0913	0.0020	0.0005
23.00	0.0300	0.0165	0.0465	0.0893	0.0936	0.0023	0.0005
24.00	0.0269	0.0148	0.0417	0.0903	0.0963	0.0027	0.0005
25.00	0.0262	0.0144	0.0405	0.0912	0.0976	0.0013	0.0003
26.00	0.0231	0.0127	0.0358	0.0920	0.1001	0.0025	0.0005
27.00	0.0208	0.0114	0.0322	0.0927	0.1021	0.0020	0.0003
28.00	0.0192	0.0106	0.0298	0.0934	0.1037	0.0015	0.0002
29.00	0.0185	0.0101	0.0286	0.0940	0.1047	0.0011	0.0002
30.00	0.0169	0.0093	0.0262	0.0946	0.1062	0.0014	0.0002
31.00	0.0123	0.0068	0.0191	0.0951	0.1092	0.0030	0.0004
32.00	0.0086	0.0047	0.0133	0.0955	0.1116	0.0024	0.0003
33.00	0.0053	0.0029	0.0082	0.0957	0.1137	0.0020	0.0002
34.00	0.0025	0.0014	0.0038	0.0958	0.1154	0.0017	0.0002
35.00	-	-	-	0.0959	0.1168	0.0014	0.0001

Column Notes:

- (1) is Unearned Premium Reserve (equal to Written Premium minus Earned Premium, per the cashflow pattern) plus Unpaid Loss and LAE Reserve (equal to Incurred minus Paid Losses and LAE) by time period, expressed as a factor, = [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) is Reserves plus Surplus minus Agent Balances by time period, expressed as a factor, = (1) + (2) - Agent Balances. Agent Balances exist when Written Premium exceeds Collected Premium, = [Table 2 col (3) - Table 2 col (1)].
- (4) 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.
- (5) is Insurance Cash Flow plus Income from Invested Funds minus Total Invested Funds by time period, expressed as a factor, = Table 4 col (5) + (4) - (3)
- (6) is the difference between Capital Provider Equity (5) at the current and previous time periods, expressed as a factor
- (7) is the Capital Provider Cash Flow (6) discounted by the Weighted Average Cost of Capital [Table 1 row (5, Static)], expressed as a factor



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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 and LAE Factor	(4) Federal Income Tax Factor	(5) Insurance Cash flow Factor
0.00	-	-	-	-	-
0.25	0.1278	0.0263	0.0065	0.0067	0.0884
0.50	0.2969	0.0597	0.0249	0.0134	0.1989
0.75	0.5275	0.1045	0.0548	0.0201	0.3482
1.00	0.7603	0.1491	0.0950	0.0268	0.4894
1.25	0.8930	0.1734	0.1641	0.0244	0.5311
1.50	0.9704	0.1876	0.2333	0.0220	0.5276
1.75	1.0000	0.2040	0.3024	0.0195	0.4741
2.00	1.0000	0.2040	0.3715	0.0171	0.4073
2.25	1.0000	0.2040	0.4062	0.0164	0.3734
2.50	1.0000	0.2040	0.4409	0.0156	0.3395
2.75	1.0000	0.2040	0.4755	0.0149	0.3056
3.00	1.0000	0.2040	0.5102	0.0141	0.2717
3.25	1.0000	0.2040	0.5295	0.0136	0.2528
3.50	1.0000	0.2040	0.5489	0.0132	0.2339
3.75	1.0000	0.2040	0.5682	0.0127	0.2151
4.00	1.0000	0.2040	0.5876	0.0122	0.1962
4.25	1.0000	0.2040	0.5981	0.0120	0.1859
4.50	1.0000	0.2040	0.6086	0.0117	0.1757
4.75	1.0000	0.2040	0.6192	0.0114	0.1654
5.00	1.0000	0.2040	0.6297	0.0112	0.1551
6.00	1.0000	0.2040	0.6527	0.0105	0.1328
7.00	1.0000	0.2040	0.6626	0.0101	0.1232
8.00	1.0000	0.2040	0.6718	0.0097	0.1145
9.00	1.0000	0.2040	0.6856	0.0090	0.1013
10.00	1.0000	0.2040	0.6918	0.0086	0.0956
11.00	1.0000	0.2040	0.6979	0.0082	0.0899
12.00	1.0000	0.2040	0.7055	0.0078	0.0826
13.00	1.0000	0.2040	0.7094	0.0076	0.0790
14.00	1.0000	0.2040	0.7132	0.0073	0.0755
15.00	1.0000	0.2040	0.7178	0.0071	0.0711
16.00	1.0000	0.2040	0.7209	0.0069	0.0682
17.00	1.0000	0.2040	0.7224	0.0068	0.0668
18.00	1.0000	0.2040	0.7247	0.0066	0.0647
19.00	1.0000	0.2040	0.7278	0.0065	0.0617
20.00	1.0000	0.2040	0.7293	0.0064	0.0603
21.00	1.0000	0.2040	0.7324	0.0064	0.0572
22.00	1.0000	0.2040	0.7339	0.0064	0.0557
23.00	1.0000	0.2040	0.7362	0.0064	0.0534
24.00	1.0000	0.2040	0.7393	0.0064	0.0504
25.00	1.0000	0.2040	0.7400	0.0064	0.0496
26.00	1.0000	0.2040	0.7431	0.0064	0.0466
27.00	1.0000	0.2040	0.7454	0.0064	0.0443
28.00	1.0000	0.2040	0.7469	0.0063	0.0427
29.00	1.0000	0.2040	0.7477	0.0063	0.0420
30.00	1.0000	0.2040	0.7492	0.0063	0.0404
31.00	1.0000	0.2040	0.7538	0.0063	0.0359
32.00	1.0000	0.2040	0.7575	0.0063	0.0321
33.00	1.0000	0.2040	0.7608	0.0063	0.0289
34.00	1.0000	0.2040	0.7636	0.0063	0.0261
35.00	1.0000	0.2040	0.7661	0.0063	0.0236

Column Notes:

- (1) is Collected Premium by time period, expressed as a factor, = Table 2 col (1)
- (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 and LAE 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)]



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Calculation Details - Dynamic Estimate (continued)

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

Time	(1) Unearned Premium, Unpaid Loss and Unpaid LAE Reserve Factor	(2) Factor for Surplus Allocated to Reserves	(3) Total Invested Funds Factor	(4) Income from Invested Funds Factor	(5) Capital Provider Equity Factor	(6) Capital Provider Cash Flow Factor	(7) Cumulative Discount Factor	(8) Discounted Capital Provider Cash Flow Factor
0.00	-	-	-	-	-	-	-	-
0.25	0.2731	0.1501	0.2630	0.0006	(0.1740)	(0.1740)	0.9920	(0.1726)
0.50	0.4795	0.2635	0.5029	0.0024	(0.3016)	(0.1276)	0.9757	(0.1245)
0.75	0.6678	0.3669	0.7681	0.0054	(0.4146)	(0.1130)	0.9593	(0.1084)
1.00	0.7811	0.4292	0.9705	0.0095	(0.4717)	(0.0570)	0.9430	(0.0538)
1.25	0.6619	0.3637	0.9186	0.0140	(0.3735)	0.0982	0.9265	0.0910
1.50	0.5584	0.3068	0.8356	0.0183	(0.2897)	0.0837	0.9100	0.0762
1.75	0.4697	0.2581	0.7278	0.0221	(0.2316)	0.0581	0.8934	0.0519
2.00	0.3945	0.2168	0.6113	0.0254	(0.1786)	0.0530	0.8768	0.0465
2.25	0.3599	0.1977	0.5576	0.0283	(0.1558)	0.0228	0.8601	0.0196
2.50	0.3252	0.1787	0.5039	0.0311	(0.1333)	0.0225	0.8434	0.0190
2.75	0.2905	0.1596	0.4502	0.0340	(0.1106)	0.0227	0.8266	0.0188
3.00	0.2559	0.1406	0.3965	0.0366	(0.0881)	0.0224	0.8098	0.0182
3.25	0.2365	0.1300	0.3665	0.0391	(0.0746)	0.0135	0.7930	0.0107
3.50	0.2172	0.1193	0.3365	0.0413	(0.0612)	0.0134	0.7762	0.0104
3.75	0.1978	0.1087	0.3065	0.0435	(0.0480)	0.0132	0.7596	0.0100
4.00	0.1785	0.0981	0.2766	0.0454	(0.0350)	0.0130	0.7431	0.0097
4.25	0.1680	0.0923	0.2602	0.0472	(0.0271)	0.0079	0.7268	0.0057
4.50	0.1574	0.0865	0.2439	0.0489	(0.0193)	0.0078	0.7107	0.0055
4.75	0.1469	0.0807	0.2276	0.0506	(0.0116)	0.0077	0.6948	0.0053
5.00	0.1364	0.0749	0.2113	0.0521	(0.0040)	0.0076	0.6791	0.0052
6.00	0.1134	0.0623	0.1757	0.0583	0.0155	0.0195	0.6410	0.0125
7.00	0.1034	0.0568	0.1602	0.0637	0.0267	0.0112	0.5840	0.0065
8.00	0.0942	0.0518	0.1460	0.0692	0.0377	0.0110	0.5323	0.0059
9.00	0.0804	0.0442	0.1246	0.0746	0.0513	0.0136	0.4854	0.0066
10.00	0.0743	0.0408	0.1151	0.0793	0.0598	0.0085	0.4428	0.0038
11.00	0.0682	0.0375	0.1056	0.0837	0.0679	0.0081	0.4040	0.0033
12.00	0.0605	0.0333	0.0938	0.0876	0.0764	0.0085	0.3687	0.0031
13.00	0.0567	0.0311	0.0878	0.0912	0.0824	0.0059	0.3364	0.0020
14.00	0.0529	0.0290	0.0819	0.0945	0.0881	0.0057	0.3070	0.0017
15.00	0.0483	0.0265	0.0748	0.0976	0.0939	0.0059	0.2801	0.0016
16.00	0.0452	0.0248	0.0700	0.1007	0.0988	0.0049	0.2557	0.0013
17.00	0.0437	0.0240	0.0677	0.1036	0.1027	0.0039	0.2333	0.0009
18.00	0.0414	0.0227	0.0641	0.1064	0.1069	0.0042	0.2129	0.0009
19.00	0.0383	0.0210	0.0593	0.1090	0.1114	0.0044	0.1943	0.0009
20.00	0.0368	0.0202	0.0570	0.1114	0.1147	0.0034	0.1773	0.0006
21.00	0.0337	0.0185	0.0522	0.1138	0.1188	0.0041	0.1618	0.0007
22.00	0.0322	0.0177	0.0499	0.1160	0.1219	0.0031	0.1476	0.0005
23.00	0.0299	0.0164	0.0463	0.1181	0.1253	0.0034	0.1347	0.0005
24.00	0.0268	0.0147	0.0415	0.1200	0.1289	0.0036	0.1229	0.0004
25.00	0.0260	0.0143	0.0404	0.1218	0.1311	0.0022	0.1122	0.0002
26.00	0.0230	0.0126	0.0356	0.1235	0.1344	0.0033	0.1024	0.0003
27.00	0.0207	0.0114	0.0320	0.1250	0.1372	0.0027	0.0934	0.0003
28.00	0.0192	0.0105	0.0297	0.1263	0.1394	0.0022	0.0853	0.0002
29.00	0.0184	0.0101	0.0285	0.1276	0.1411	0.0017	0.0778	0.0001
30.00	0.0169	0.0093	0.0261	0.1288	0.1431	0.0020	0.0710	0.0001
31.00	0.0123	0.0067	0.0190	0.1297	0.1466	0.0035	0.0648	0.0002
32.00	0.0085	0.0047	0.0132	0.1304	0.1494	0.0028	0.0592	0.0002
33.00	0.0053	0.0029	0.0082	0.1309	0.1516	0.0023	0.0540	0.0001
34.00	0.0024	0.0013	0.0038	0.1312	0.1535	0.0018	0.0493	0.0001
35.00	-	-	-	0.1312	0.1549	0.0014	0.0450	0.0001

Column Notes:

- (1) is Unearned Premium Reserve (equal to Written Premium minus Earned Premium, per the cashflow pattern) plus Unpaid Loss and LAE Reserve (equal to Incurred minus Paid Losses and LAE) by time period, expressed as a factor,
= [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) is Reserves plus Surplus minus Agent Balances by time period, expressed as a factor, = (1) + (2) - Agent Balances. Agent Balances exist when Written Premium exceeds Collected Premium, = [Table 2 col (3) - Table 2 col (1)].
- (4) 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.
- (5) is Insurance Cash Flow plus Income from Invested Funds minus Total Invested Funds by time period, expressed as a factor,
= Table 6 col (5) + (4) - (3)
- (6) is the difference between Capital Provider Equity (5) at the current and previous time periods, expressed as a factor
- (7) is derived from the respective Weighted Average Cost of Capital [Table 3 col (2)] for each time period, expressed as a factor
- (8) is the Capital Provider Cash Flow (6) discounted by the Cumulative Discount Factor (7), expressed as a factor



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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	1.14%	1.31%	1.99%	3.84%
(2) US Equity Market Risk Premium	7.72%			
(3) Beta for Property/Casualty (P/C) Insurers	0.92			
(4) Equity Cost of Capital for P/C Insurers	8.25%	8.41%	9.10%	10.94%
(5) Share of Equity Capital for P/C Insurers	80%			
(6) Debt Cost of Capital for P/C Insurers	1.88%	2.01%	2.54%	4.00%
(7) Weighted Average Cost of Capital (WACC)	6.97%	7.13%	7.79%	9.55%

Column Notes:

- (1) Forward estimates of the 5-year US T-note yield 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 5-year US T-note yield plus the historical corporate spread, net of income tax.
- (7) = (4) x (5) + (6) x [1 - (5)]



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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	73.9%							
Government Direct Obligations	6.7%							
< 1yr	2.1%	6 mo US T-bill	0.50 yrs	21.00%	0.86%	0.38%	0.37%	2.29%
1 – 5 yrs	2.7%	2.5 yr US T-note	2.50 yrs	21.00%	0.86%	0.52%	0.52%	1.67%
5 – 10 yrs	1.2%	7.5 yr US T-note	7.50 yrs	21.00%	1.02%	0.75%	0.75%	0.75%
10 – 20 yrs	0.2%	15 yr US T-note	15.00 yrs	21.00%	1.21%	1.07%	1.07%	1.07%
> 20 yrs	0.5%	20 yr US T-note	20.00 yrs	21.00%	1.34%	1.36%	1.36%	1.36%
Collateralized Securities	7.4%							
< 1yr	0.9%	6 mo US T-bill + 50 basis points	0.50 yrs	21.00%	1.25%	0.77%	0.77%	2.69%
1 – 5 yrs	2.6%	2.5 yr US T-note + 50 basis points	2.50 yrs	21.00%	1.25%	0.92%	0.92%	2.07%
5 – 10 yrs	2.1%	7.5 yr US T-note + 50 basis points	7.50 yrs	21.00%	1.42%	1.15%	1.15%	1.15%
10 – 20 yrs	1.4%	15 yr US T-note + 50 basis points	15.00 yrs	21.00%	1.61%	1.47%	1.47%	1.47%
> 20 yrs	0.4%	20 yr US T-note + 50 basis points	20.00 yrs	21.00%	1.74%	1.75%	1.75%	1.75%
Tax-exempt Bonds	24.1%							
< 1yr	1.6%	6 mo US T-bill + Tax-exempt spread	0.50 yrs	5.25%	1.16%	0.59%	0.59%	2.88%
1 – 5 yrs	6.4%	2.5 yr US T-note + Tax-exempt spread	2.50 yrs	5.25%	1.21%	0.81%	0.81%	2.19%
5 – 10 yrs	8.2%	7.5 yr US T-note + Tax-exempt spread	7.50 yrs	5.25%	1.41%	1.08%	1.08%	1.08%
10 – 20 yrs	6.1%	15 yr US T-note + Tax-exempt spread	15.00 yrs	5.25%	1.75%	1.58%	1.58%	1.58%
> 20 yrs	1.8%	20 yr US T-note + Tax-exempt spread	20.00 yrs	5.25%	2.04%	2.04%	2.04%	2.04%
Industrial and Hybrid Securities (unaffiliated)	35.1%							
< 1yr	3.7%	6 mo US T-bill + Corp spread	0.50 yrs	21.00%	1.39%	0.91%	0.91%	2.82%
1 – 5 yrs	14.5%	2.5 yr US T-note + Corp spread	2.50 yrs	21.00%	1.64%	1.30%	1.30%	2.45%
5 – 10 yrs	12.9%	7.5 yr US T-note + Corp spread	7.50 yrs	21.00%	2.10%	1.83%	1.83%	1.83%
10 – 20 yrs	2.0%	15 yr US T-note + Corp spread	15.00 yrs	21.00%	2.39%	2.23%	2.23%	2.23%
> 20 yrs	2.0%	20 yr US T-note + Corp spread	20.00 yrs	21.00%	2.54%	2.52%	2.52%	2.52%
Industrial and Hybrid Securities (affiliated)	0.5%							
< 1yr	0.0%	6 mo US T-bill + Corp spread	0.50 yrs	5.25%	1.66%	1.09%	1.09%	3.39%
1 – 5 yrs	0.5%	2.5 yr US T-note + Corp spread	2.50 yrs	5.25%	1.97%	1.57%	1.57%	2.94%
5 – 10 yrs	0.0%	7.5 yr US T-note + Corp spread	7.50 yrs	5.25%	2.51%	2.19%	2.19%	2.19%
10 – 20 yrs	0.0%	15 yr US T-note + Corp spread	15.00 yrs	5.25%	2.86%	2.68%	2.68%	2.68%
> 20 yrs	0.0%	20 yr US T-note + Corp spread	20.00 yrs	5.25%	3.05%	3.03%	3.03%	3.03%
Stocks, of which	12.0%							
Preferred Stock	0.4%	5 year US T-note + 386 basis points	0.25 yrs	13.13%	4.35%	4.49%	5.09%	6.69%
Common Stock	11.6%	5 year US T-note + 772 basis points	0.25 yrs	18.40%	7.23%	7.37%	7.93%	9.43%
Mortgage Loans	2.1%							
Real Estate	0.5%							
Cash & Short-Term Investment	4.3%	3 month US T-bill	0.25 yrs	21.00%	0.86%	0.24%	0.24%	2.23%
All Other Assets*	7.2%							
Post-Tax Return on Invested Funds, pre-Expense:					2.31%	2.05%	2.13%	2.96%
Investment Expense**:					-0.14%	-0.14%	-0.14%	-0.14%
Post-Tax Return on Invested Funds:					2.17%	1.91%	1.99%	2.82%

Table Notes:

- 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.
- Bond and total portfolio distributions are 3-year averages for 2016-2018, calculated from annual editions of Best's Aggregates & Averages (Property-Casualty), Assets for Commercial Casualty Composite, p. 276, Column 3, Net Admitted Assets. For each year 2016-2018, 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.
- 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.
- 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.
- 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-ratio" 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 67.0% while the income portion is 33.0%. The percentages are obtained from Morningstar's Analyst Research Center, SBBI Summary Statistics of Annual Returns: large company stocks, arithmetic mean.
- Static estimates of US Treasury yields are constant maturity yields from the first quarter of 2020.
- (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 2018 is from the Annual Statement, Exhibit of Net Investment Income.

Average cash and invested assets for 2017 and 2018 are from Best's Aggregates and Averages (Property-Casualty), Assets for Commercial Casualty Composite.



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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 (4) are the same under both the Static and Dynamic Estimates; the paid losses and LAE factors (col (5)) 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) Discount Factor	(5) Paid Losses and LAE Factor	(6) AY1 Paid Losses and LAE Factor	(7) AY2 Paid Losses and LAE Factor	(8) Discounted AY1 Unpaid Losses & LAE Factor	(9) Discounted AY2 Unpaid Losses & LAE Factor	(10) Federal Income Tax Factor
0.00	-	-	-	-	-	-	-	-	-	-
1.00	1.0000	0.4703	0.1491	0.8752	0.0954	0.0954	-	0.2532	-	0.0265
2.00	1.0000	-	0.2040	0.8596	0.3732	0.2322	0.1410	0.1311	0.2133	0.0164
3.00	1.0000	-	0.2040	0.8482	0.5125	0.2683	0.2442	0.0988	0.1208	0.0134
4.00	1.0000	-	0.2040	0.8327	0.5902	0.3085	0.2817	0.0635	0.0874	0.0115
5.00	1.0000	-	0.2040	0.8269	0.6326	0.3202	0.3124	0.0534	0.0603	0.0104
6.00	1.0000	-	0.2040	0.8214	0.6557	0.3317	0.3240	0.0436	0.0503	0.0098
7.00	1.0000	-	0.2040	0.8252	0.6657	0.3334	0.3322	0.0424	0.0431	0.0094
8.00	1.0000	-	0.2040	0.8339	0.6749	0.3395	0.3354	0.0378	0.0407	0.0089
9.00	1.0000	-	0.2040	0.8402	0.6887	0.3468	0.3419	0.0319	0.0357	0.0083
10.00	1.0000	-	0.2040	0.8598	0.6949	0.3478	0.3471	0.0318	0.0316	0.0079
11.00	1.0000	-	0.2040	0.8724	0.7011	0.3519	0.3491	0.0287	0.0306	0.0075
12.00	1.0000	-	0.2040	0.8853	0.7088	0.3556	0.3531	0.0258	0.0276	0.0071
13.00	1.0000	-	0.2040	0.8984	0.7126	0.3566	0.3560	0.0253	0.0255	0.0068
14.00	1.0000	-	0.2040	0.9118	0.7164	0.3590	0.3574	0.0235	0.0246	0.0066
15.00	1.0000	-	0.2040	0.9254	0.7211	0.3613	0.3598	0.0217	0.0228	0.0064
16.00	1.0000	-	0.2040	0.9393	0.7241	0.3625	0.3617	0.0210	0.0214	0.0062
17.00	1.0000	-	0.2040	0.9535	0.7257	0.3630	0.3627	0.0207	0.0208	0.0060
18.00	1.0000	-	0.2040	0.9678	0.7280	0.3645	0.3635	0.0196	0.0203	0.0059
19.00	1.0000	-	0.2040	0.9821	0.7311	0.3661	0.3650	0.0184	0.0191	0.0058
20.00	1.0000	-	0.2040	0.9848	0.7326	0.3664	0.3662	0.0181	0.0183	0.0057
21.00	1.0000	-	0.2040	0.9848	0.7357	0.3686	0.3671	0.0160	0.0174	0.0057
22.00	1.0000	-	0.2040	0.9848	0.7372	0.3686	0.3686	0.0159	0.0159	0.0057
23.00	1.0000	-	0.2040	0.9848	0.7395	0.3703	0.3692	0.0142	0.0153	0.0057
24.00	1.0000	-	0.2040	0.9848	0.7426	0.3718	0.3708	0.0128	0.0137	0.0056
25.00	1.0000	-	0.2040	0.9848	0.7434	0.3716	0.3717	0.0129	0.0128	0.0056
26.00	1.0000	-	0.2040	0.9848	0.7465	0.3740	0.3724	0.0106	0.0122	0.0056
27.00	1.0000	-	0.2040	0.9848	0.7488	0.3746	0.3742	0.0101	0.0104	0.0056
28.00	1.0000	-	0.2040	0.9848	0.7503	0.3754	0.3749	0.0092	0.0098	0.0056
29.00	1.0000	-	0.2040	0.9848	0.7511	0.3756	0.3755	0.0090	0.0091	0.0056
30.00	1.0000	-	0.2040	0.9848	0.7526	0.3767	0.3759	0.0080	0.0087	0.0056
31.00	1.0000	-	0.2040	0.9848	0.7572	0.3796	0.3776	0.0051	0.0070	0.0056
32.00	1.0000	-	0.2040	0.9848	0.7610	0.3810	0.3800	0.0038	0.0047	0.0056
33.00	1.0000	-	0.2040	0.9848	0.7643	0.3827	0.3815	0.0020	0.0032	0.0056
34.00	1.0000	-	0.2040	0.9848	0.7671	0.3840	0.3831	0.0008	0.0016	0.0056
35.00	1.0000	-	0.2040	0.9848	0.7695	0.3848	0.3848	-	-	0.0056

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 from Internal Revenue Bulletin 2019-33, Rev. Proc. 2019-31, dated August 12, 2019
- (5) is Paid Losses and LAE by time period, expressed as a factor, = Table 1 row (7, Static) x Table 2 col (5)
- (6) and (7) 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 (6) and (7) are determined by solving these two equations simultaneously:

$$\text{Col (6)} + \text{Col (7)} = \text{Col (5)}$$

$$\text{Col (7)} = (2/3) * \text{Col (6, previous row)} + (1/3) * \text{Col (6)}$$
 with Col (6, Time 1) = Col (5, Time 1) and Col (6, Time 35) = Col (7, Time 35)
- (8) is the discounted difference between AY1 Losses and LAE that will ultimately be paid, and the amount already paid,

$$= [\text{col (6, Time 35)} - (6)] * (4)$$
- (9) is the discounted difference between AY2 Losses and LAE that will ultimately be paid, and the amount already paid,

$$= [\text{col (7, Time 35)} - (7)] * \text{col (4, previous row)}$$
- (10) Per IRS rules, federal income tax equals the tax rate (21%) times the adjusted underwriting income

$$= 21\% * \{ (1) - 0.8 * (2) - [(3) + (5) + (8) + (9)] \}$$



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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) Discount Factor	(5) Paid Losses and LAE Factor	(6) AY1 Paid Losses and LAE Factor	(7) AY2 Paid Losses and LAE Factor	(8) Discounted AY1 Unpaid Losses & LAE Factor	(9) Discounted AY2 Unpaid Losses & LAE Factor	(10) Federal Income Tax Factor
0.00	-	-	-	-	-	-	-	-	-	-
1.00	1.0000	0.4703	0.1491	0.8752	0.0950	0.0950	-	0.2521	-	0.0268
2.00	1.0000	-	0.2040	0.8596	0.3715	0.2312	0.1404	0.1305	0.2124	0.0171
3.00	1.0000	-	0.2040	0.8482	0.5102	0.2671	0.2431	0.0984	0.1203	0.0141
4.00	1.0000	-	0.2040	0.8327	0.5876	0.3071	0.2804	0.0632	0.0870	0.0122
5.00	1.0000	-	0.2040	0.8269	0.6297	0.3187	0.3110	0.0532	0.0600	0.0112
6.00	1.0000	-	0.2040	0.8214	0.6527	0.3302	0.3225	0.0434	0.0500	0.0105
7.00	1.0000	-	0.2040	0.8252	0.6626	0.3319	0.3307	0.0422	0.0430	0.0101
8.00	1.0000	-	0.2040	0.8339	0.6718	0.3379	0.3339	0.0376	0.0405	0.0097
9.00	1.0000	-	0.2040	0.8402	0.6856	0.3453	0.3404	0.0317	0.0356	0.0090
10.00	1.0000	-	0.2040	0.8598	0.6918	0.3462	0.3456	0.0317	0.0315	0.0086
11.00	1.0000	-	0.2040	0.8724	0.6979	0.3503	0.3476	0.0285	0.0305	0.0082
12.00	1.0000	-	0.2040	0.8853	0.7055	0.3540	0.3515	0.0257	0.0275	0.0078
13.00	1.0000	-	0.2040	0.8984	0.7094	0.3550	0.3543	0.0252	0.0254	0.0076
14.00	1.0000	-	0.2040	0.9118	0.7132	0.3574	0.3558	0.0234	0.0245	0.0073
15.00	1.0000	-	0.2040	0.9254	0.7178	0.3597	0.3581	0.0216	0.0227	0.0071
16.00	1.0000	-	0.2040	0.9393	0.7209	0.3608	0.3600	0.0209	0.0213	0.0069
17.00	1.0000	-	0.2040	0.9535	0.7224	0.3614	0.3610	0.0206	0.0207	0.0068
18.00	1.0000	-	0.2040	0.9678	0.7247	0.3628	0.3619	0.0196	0.0202	0.0066
19.00	1.0000	-	0.2040	0.9821	0.7278	0.3644	0.3634	0.0183	0.0190	0.0065
20.00	1.0000	-	0.2040	0.9848	0.7293	0.3648	0.3645	0.0180	0.0182	0.0064
21.00	1.0000	-	0.2040	0.9848	0.7324	0.3669	0.3655	0.0159	0.0173	0.0064
22.00	1.0000	-	0.2040	0.9848	0.7339	0.3670	0.3669	0.0158	0.0159	0.0064
23.00	1.0000	-	0.2040	0.9848	0.7362	0.3687	0.3675	0.0142	0.0153	0.0064
24.00	1.0000	-	0.2040	0.9848	0.7393	0.3701	0.3691	0.0127	0.0137	0.0064
25.00	1.0000	-	0.2040	0.9848	0.7400	0.3700	0.3701	0.0129	0.0128	0.0064
26.00	1.0000	-	0.2040	0.9848	0.7431	0.3723	0.3707	0.0105	0.0121	0.0064
27.00	1.0000	-	0.2040	0.9848	0.7454	0.3729	0.3725	0.0100	0.0104	0.0064
28.00	1.0000	-	0.2040	0.9848	0.7469	0.3737	0.3732	0.0091	0.0097	0.0063
29.00	1.0000	-	0.2040	0.9848	0.7477	0.3739	0.3738	0.0090	0.0091	0.0063
30.00	1.0000	-	0.2040	0.9848	0.7492	0.3750	0.3742	0.0079	0.0087	0.0063
31.00	1.0000	-	0.2040	0.9848	0.7538	0.3779	0.3759	0.0051	0.0070	0.0063
32.00	1.0000	-	0.2040	0.9848	0.7575	0.3792	0.3783	0.0037	0.0046	0.0063
33.00	1.0000	-	0.2040	0.9848	0.7608	0.3810	0.3798	0.0020	0.0032	0.0063
34.00	1.0000	-	0.2040	0.9848	0.7636	0.3822	0.3814	0.0008	0.0016	0.0063
35.00	1.0000	-	0.2040	0.9848	0.7661	0.3830	0.3830	-	-	0.0063

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 from Internal Revenue Bulletin 2019-33, Rev. Proc. 2019-31, dated August 12, 2019
- (5) is Paid Losses and LAE by time period, expressed as a factor, = Table 1 row (7, Dynamic) x Table 2 col (5)
- (6) and (7) 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 (6) and (7) are determined by solving these two equations simultaneously:

$$\text{Col (6)} + \text{Col (7)} = \text{Col (5)}$$

$$\text{Col (7)} = (2/3) * \text{Col (6, previous row)} + (1/3) * \text{Col (6)}$$
 with Col (6, Time 1) = Col (5, Time 1) and Col (6, Time 35) = Col (7, Time 35)
- (8) is the discounted difference between AY1 Losses and LAE that will ultimately be paid, and the amount already paid,

$$= [\text{col (6, Time 35)} - (6)] * (4)$$
- (9) is the discounted difference between AY2 Losses and LAE that will ultimately be paid, and the amount already paid,

$$= [\text{col (7, Time 35)} - (7)] * \text{col (4, previous row)}$$
- (10) Per IRS rules, federal income tax equals the tax rate (21%) times the adjusted underwriting income

$$= 21\% * \{ (1) - 0.8 * (2) - [(3) + (5) + (8) + (9)] \}$$



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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)
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
2016	186,424,236	41,741,053	72,716,997	169,831,305	1.34	1.77
2015	185,919,427	42,816,231	73,469,477	169,017,203	1.35	1.79
2014	214,239,981	48,564,685	83,674,315	192,947,461	1.36	1.80
2014 - 2018	979,347,082	218,868,788	391,822,679	873,118,735	1.37	1.82

Selected Ratio including Unearned Premium: 1.82

Source: Columns (1) - (4) for the latest year are taken from Liabilities, Surplus and Other Funds on page 277 in Best's 2019 Aggregates & Averages, for Commercial Casualty Composite.



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Appendix E – Calculation of Factor to Convert Voluntary Rates to Assigned Risk Rates

A factor of 1.300 is applied to the voluntary rates in order to convert to assigned risk rates. This factor is the proposed assigned risk differential in Iowa.



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Appendix F – Derivation of Experience Rating Values

1. Expected Loss Rate (ELR) factors

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

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

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

The final ELR for each classification is calculated as follows:

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

2. Discount Ratio (D-Ratio) factors

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



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Appendix F – Derivation of Experience Rating Values

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

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

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

3. Additional experience rating values

Table of Weighting Values

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

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

Table of Ballast Values

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

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



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Part 4 Additional Information

- Definitions
- NCCI Affiliate List
- Key Contacts



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Definitions

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

Calendar Year (CY):

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

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

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

Frequency: The number of lost-time claims per million dollars of on-leveled, wage-adjusted premium.

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

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

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

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

Paid+Case Losses: The sum of paid losses and case reserves. Also known as “case incurred losses.”

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

Policy Year:

- The one-year period beginning with the effective date or anniversary of a policy.
- A premium and loss accounting definition in which experience is summarized for all policies with effective dates in a given calendar year period.

Severity: The average cost per case (claim) calculated as ultimate losses divided by ultimate lost-time claim counts.



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Definitions

Ultimate Development Factor: For an aggregation of data, an estimate of the development that will occur between the data's current valuation date and the time when all claims are closed.

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

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

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



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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 AND CASUALTY CO INC
ACE AMERICAN INSURANCE COMPANY
ACE FIRE UNDERWRITERS INSURANCE COMPANY
ACE PROPERTY & CASUALTY INSURANCE COMPANY
ACIG INS CO
ACUITY A MUTUAL INS COMPANY
ADDISON INSURANCE COMPANY
AIG ASSURANCE COMPANY
AIG PROPERTY CASUALTY COMPANY
AIU INSURANCE CO (NATIONAL UNION FIRE OF PITTS PA)
AK NATIONAL INS CO
ALLIED EASTERN IND CO
ALLIED INSURANCE COMPANY OF AMERICA
ALLIED PROPERTY AND CASUALTY INS CO
ALLMERICA FINANCIAL ALLIANCE INS CO
ALLMERICA FINANCIAL BENEFIT INS CO
AMERICAN ALTERNATIVE INSURANCE CORPORATION
AMERICAN AUTOMOBILE INSURANCE CO
AMERICAN BUSINESS AND MERCANTILE INS MUTUAL INC
AMERICAN CASUALTY COMPANY OF READING P A
AMERICAN COMPENSATION INS CO
AMERICAN ECONOMY INS CO
AMERICAN FAMILY HOME INS CO
AMERICAN FAMILY INS CO
AMERICAN FAMILY MUTUAL INSURANCE COMPANY, S.I.
AMERICAN FIRE AND CASUALTY CO
AMERICAN GUARANTEE AND LIABILITY INS CO
AMERICAN HOME ASSUR CO-NATIONAL UNION FIRE OF PIT
AMERICAN INS CO
AMERICAN INTERSTATE INS CO
AMERICAN LIBERTY INSURANCE CO
AMERICAN MODERN HOME INS CO
AMERICAN NATIONAL PROPERTY AND CASUALTY CO
AMERICAN SELECT INS CO
AMERICAN STATES INS CO A SAFECO COMPANY
AMERICAN ZURICH INS CO
AMERISURE INS CO
AMERISURE MUTUAL INS CO
AMERISURE PARTNERS INS CO
AMGUARD INS CO
AMTRUST INSURANCE CO
ARCH INDEMNITY INSURANCE COMPANY
ARCH INSURANCE COMPANY
ARCH PROPERTY CASUALTY INS CO
ARGONAUT GREAT CENTRAL INS CO
ARGONAUT INS CO
ARGONAUT MIDWEST INS CO
ASHMERE INSURANCE COMPANY
ASSOCIATED INDEMNITY CORP
ATLANTIC SPECIALTY INS CO (ONEBEACON)
ATLANTIC STATES INS CO
AUSTIN MUTUAL INSURANCE COMPANY
AUTO OWNERS INS CO
BADGER MUTUAL INS CO
BANKERS STANDARD INS CO
BEARING MIDWEST CASUALTY COMPANY
BENCHMARK INSURANCE COMPANY
BERKLEY CASUALTY COMPANY
BERKLEY INSURANCE COMPANY
BERKLEY NATIONAL INSURANCE COMPANY
BERKLEY REGIONAL INS CO
BERKSHIRE HATHAWAY DIRECT INSURANCE COMPANY
BERKSHIRE HATHAWAY HOMESTATE INS CO
BITCO GENERAL INSURANCE CORPORATION
BITCO NATIONAL INSURANCE COMPANY
BLACKBOARD INSURANCE COMPANY
BRICKSTREET MUTUAL INS CO
BROTHERHOOD MUTUAL INS CO
CALIFORNIA INSURANCE COMPANY
CAROLINA CASUALTY INS CO
CELINA 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.
CIMARRON INSURANCE COMPANY INC
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
COLUMBIA MUTUAL INSURANCE CO
COLUMBIA NATIONAL INS CO
COMMERCE AND INDUSTRY INS CO
CONSOLIDATED INS CO
CONTINENTAL CASUALTY CO
CONTINENTAL INDEMNITY CO
CONTINENTAL INS CO
CONTINENTAL WESTERN INSURANCE COMPANY
CRESTBROOK INS CO
CRUM AND FORSTER INDEMNITY CO
DAKOTA TRUCK UNDERWRITERS
DEPOSITORS INS CO
DIAMOND INS CO
DISCOVER PROPERTY & CASUALTY INS CO
DONEGAL MUTUAL 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



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NCCI Affiliate List

EVEREST NATIONAL INS CO
EVEREST PREMIER INSURANCE COMPANY
EVEREST REINSURANCE CO DIRECT
EXECUTIVE RISK INDEMNITY INC
EXPLORER INS CO
FALLS LAKE NATIONAL INSURANCE CO
FARM BUREAU PROPERTY & CASUALTY INS CO
FARMERS AUTOMOBILE INS ASSN
FARMERS INSURANCE EXCHANGE
FARMINGTON CASUALTY COMPANY
FEDERAL INSURANCE COMPANY
FEDERATED MUTUAL INS CO
FEDERATED RESERVE INSURANCE CO
FEDERATED RURAL ELECTRIC INS EXCHANGE
FEDERATED SERVICE INS CO
FIDELITY & DEPOSIT COMPANY OF MARYLAND
FIDELITY & GUARANTY INS UNDERWRITERS
FIDELITY & GUARANTY INSURANCE CO
FIRE INS EXCHANGE
FIREMANS FUND INSURANCE CO
FIREMENS INS CO OF WASHINGTON DC
FIRST DAKOTA INDEMNITY CO
FIRST LIBERTY INS CORP
FIRST NATIONAL INS CO OF AMERICA
FIRSTCOMP INSURANCE CO
FLORISTS MUTUAL INSURANCE CO
FRANK WINSTON CRUM INSURANCE CO
GENERAL CASUALTY COMPANY OF WISCONSIN
GENERAL CASUALTY INSURANCE COMPANY
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
GRINNELL MUTUAL REINSURANCE CO
GRINNELL SELECT INS CO
GUIDEONE ELITE INS CO
GUIDEONE MUTUAL INS CO
GUIDEONE SPECIALTY MUTUAL INS CO
HANOVER AMERICAN INS CO
HANOVER INS CO
HARLEYSVILLE INSURANCE COMPANY
HARLEYSVILLE LAKE STATES 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
HASTINGS MUTUAL INS CO
HAWKEYE-SECURITY INS CO
HDI GLOBAL INSURANCE COMPANY
HORIZON MIDWEST CASUALTY COMPANY
IA AMERICAN INS CO
IA LONG TERM CARE RISK MGMT ASSN
IA MUTUAL INS CO
IL EMCASCO INS CO
ILLINOIS CASUALTY COMPANY
ILLINOIS INSURANCE COMPANY
ILLINOIS NATIONAL INSURANCE COMPANY
IMPERIUM INSURANCE COMPANY
IMT INS CO
INDEMNITY INS CO OF N AMERICA (INA INS) (CT GEN)
INDIANA INSURANCE COMPANY
INS CO OF NORTH AMERICA
INS CO OF THE STATE PA
INS CO OF THE WEST
INTEGRITY INSURANCE COMPANY
INTEGRITY PROPERTY & CASUALTY INS CO
INTEGRITY SELECT INSURANCE COMPANY
INTREPID INSURANCE COMPANY
KEY RISK INS CO
LACKAWANNA AMERICAN INS CO
LACKAWANNA CASUALTY CO
LACKAWANNA NATIONAL INS CO
LAFAYETTE INS CO
LIBERTY INS CORP
LIBERTY INSURANCE UNDERWRITERS INC
LIBERTY MUTUAL FIRE INS CO
LIBERTY MUTUAL INS CO
LM INS CORP
MA BAY INS CO
MAG MUTUAL INS CO
MANUFACTURERS ALLIANCE INS CO
MARKEL AMERICAN INSURANCE CO
MARKEL INSURANCE CO
MEMIC INDEMNITY CO
MERIDIAN SECURITY INSURANCE COMPANY
MID CENTURY INS CO
MIDDLESEX INS CO
MIDVALE INDEMNITY COMPANY
MIDWEST BUILDERS CASUALTY MUTUAL COMPANY
MIDWEST EMPLOYERS CASUALTY CO
MIDWEST FAMILY ADVANTAGE INSURANCE CO
MIDWEST FAMILY MUTUAL INS CO
MIDWEST INS CO
MIDWESTERN INDEMNITY CO
MILBANK INSURANCE COMPANY
MILFORD CASUALTY INSURANCE CO
MITSUI SUMITOMO INS CO OF AMERICA
MITSUI SUMITOMO INS USA INC
MOTORISTS COMMERCIAL MUTUAL INSURANCE COMPANY
NATIONAL AMERICAN INS CO
NATIONAL CASUALTY CO
NATIONAL FIRE INS CO OF HARTFORD
NATIONAL INTERSTATE INS CO



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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 FIRE INS CO
NATIONWIDE MUTUAL INS CO
NATIONWIDE PROPERTY AND CASUALTY INS CO
NETHERLANDS INSURANCE COMPANY
NEW HAMPSHIRE INSURANCE COMPANY
NEW YORK MARINE AND GENERAL INSURANCE CO
NHRMA MUTUAL INSURANCE COMPANY
NORGUARD INS CO
NORTH AMERICAN ELITE INSURANCE CO
NORTH AMERICAN SPECIALTY INS CO
NORTH POINTE INS CO
NORTH RIVER INS CO
NORTHSTONE INSURANCE COMPANY
NOVA CASUALTY COMPANY
OAK RIVER INSURANCE COMPANY
OBI AMERICA INSURANCE COMPANY
OBI NATIONAL INSURANCE COMPANY
OH CASUALTY INS CO
OH FARMERS INS CO
OHIO SECURITY INS CO
OLD GUARD INSURANCE COMPANY
OLD REPUBLIC GENERAL INSURANCE CORPORATION
OLD REPUBLIC INS CO
OWNERS INSURANCE COMPANY
PA MANUFACTURERS ASSN INS CO
PA MANUFACTURERS INDEMNITY CO
PACIFIC EMPLOYERS INS CO
PACIFIC INDEMNITY CO
PACIFIC INS CO LTD
PARTNERS MUTUAL INS CO
PATRONS MUTUAL INS CO OF CT
PEERLESS INDEMNITY INS CO
PEERLESS INSURANCE COMPANY
PEKIN INS CO
PENN MILLERS INS CO
PENNSYLVANIA INSURANCE COMPANY
PETROLEUM CASUALTY CO
PHARMACISTS MUTUAL INS CO
PHOENIX INS CO
PINNACLEPOINT INSURANCE COMPANY
PIONEER SPECIALTY INSURANCE COMPANY
PLAZA INSURANCE CO
PRAETORIAN INSURANCE COMPANY
PREFERRED EMPLOYERS INS CO
PREFERRED PROFESSIONAL INSURANCE COMPANY
PREVISOR INSURANCE COMPANY
PROPERTY AND CASUALTY INS CO OF HARTFORD
PROSELECT INSURANCE COMPANY
PROTECTIVE INS CO
QBE INSURANCE CORPORATION
REDWOOD FIRE & CASUALTY INS CO
REGENT INSURANCE COMPANY
REPUBLIC INDEMNITY COMPANY OF AMERICA
RIVERPORT INSURANCE COMPANY
RLI INSURANCE COMPANY
ROCKWOOD CASUALTY INS CO
RURAL TRUST INSURANCE COMPANY
SAFECO INS CO OF AMERICA
SAFETY FIRST INS CO
SAFETY NATIONAL CASUALTY CORP
SAGAMORE INSURANCE CO
SAMSUNG FIRE AND MARINE INS CO LTD USB
SECURA INSURANCE A MUTUAL CO
SECURA SUPREME INS 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 INSURANCE A MUTUAL CO
SENTRY SELECT INSURANCE COMPANY
SEQUOIA INSURANCE CO
SERVICE AMERICAN INDEMNITY COMPANY
SFM MUTUAL INS CO
SFM SAFE INSURANCE COMPANY
SFM SELECT INSURANCE COMPANY
SIRIUS AMERICA INSURANCE COMPANY
SOCIETY INSURANCE A MUTUAL 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
SUMMITPOINT INSURANCE COMPANY
SUNZ INSURANCE COMPANY
T H E INSURANCE COMPANY
TECHNOLOGY INSURANCE CO
THE TRAVELERS CASUALTY COMPANY
TNUS INSURANCE CO
TOKIO MARINE AMERICA INSURANCE CO
TRANS PACIFIC INS CO
TRANSGUARD INS CO OF AMERICA INC
TRANSPORTATION INS CO
TRAVELERS CASUALTY AND SURETY CO
TRAVELERS CASUALTY INS CO OF AMERICA
TRAVELERS INDEMNITY CO
TRAVELERS INDEMNITY CO OF AMERICA



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TRAVELERS INDEMNITY CO OF CT
TRAVELERS INSURANCE CO
TRAVELERS PROPERTY CASUALTY CO OF AMERICA
TRI STATE INSURANCE COMPANY OF MINNESOTA
TRIANGLE INSURANCE COMPANY INC
TRIUMPH CASUALTY COMPANY
TRUCK INSURANCE EXCHANGE
TRUMBULL INS CO
TWIN CITY FIRE INS CO
UNION INS CO OF PROVIDENCE
UNION INSURANCE COMPANY
UNITED FIRE AND CASUALTY CO
UNITED STATES FIDELITY AND GUARANTY CO
UNITED WI INS CO
US FIRE INS CO
UTICA MUTUAL INS CO
VALLEY FORGE INS CO
VANLINER INS CO
VANTAPRO SPECIALTY INS CO
VICTORIA FIRE & CASUALTY COMPANY
VIGILANT INS CO
WADENA INSURANCE COMPANY
WASHINGTON INTERNATIONAL INSURANCE COMPANY
WCF NATIONAL 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
WESTERN AGRICULTURAL INS CO
WESTERN NATIONAL ASSURANCE CO
WESTERN NATIONAL MUTUAL INS CO
WESTFIELD CHAMPION INSURANCE COMPANY
WESTFIELD INS CO
WESTFIELD NATIONAL INS CO
WESTFIELD PREMIER INSURANCE COMPANY
WESTFIELD SUPERIOR INSURANCE COMPANY
WESTFIELD TOUCHSTONE INSURANCE COMPANY
WESTPORT INSURANCE CORPORATION
WILLIAMSBURG NATIONAL INS CO
WORK FIRST CASUALTY CO
WORTH CASUALTY COMPANY
XL INS CO OF NY INC
XL INSURANCE AMERICA INC
XL SPECIALTY INS CO
ZENITH INS CO
ZNAT INS CO
ZURICH AMERICAN INS CO
ZURICH AMERICAN INS CO OF IL



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