



# Iowa

Advisory Rates,  
Assigned Risk Rates,  
and Rating Values Filing

Proposed Effective January 1, 2022



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August 4, 2021

Honorable Doug Ommen  
Insurance Commissioner  
Iowa Insurance Division  
1963 Bell Avenue  
Des Moines, IA 50315

**Re: Iowa Advisory Rates, Assigned Risk Rates, and Rating Values Filing  
Proposed Effective January 1, 2022**

Dear Commissioner Ommen:

In accordance with the applicable statutes and regulations of the state of Iowa, we are filing for your consideration and approval of prospective rates and rating values for the Iowa voluntary and assigned risk markets to become effective January 1, 2022 for new and renewal policies.

This filing proposes an overall average decrease of -5.5% to the voluntary rate level and an overall average decrease of -9.1% to assigned risk rate level. The advisory prospective rates of the voluntary market are used as a basis for the rates in the assigned risk market.

Reported COVID-19-related claims have been excluded from the data on which this filing is based to better reflect the conditions likely to prevail during the proposed effective period. After an in-depth review and analysis, NCCI has determined that its standard ratemaking methodologies continue to remain appropriate for use in this year's filing.

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.

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,

A handwritten signature in blue ink that reads "Dan Nelson". The signature is written in a cursive, flowing style.

Dan Nelson, MCM, WCP  
State Relations Executive



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Iowa

## Workers Compensation Rate Filing – January 1, 2022

### 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".

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



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### 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, 2022. 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.).

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 1, 2021 were not considered for inclusion in the analysis.

Advisory rate level changes at the classification code level are based on Unit Statistical Plan Data, which is the audited exposure, premium, and loss information reported to NCCI on a policy level. In this filing, Unit Statistical Data submissions received after June 3, 2021 were not considered for inclusion in the analysis.



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## Workers Compensation Rate Filing – January 1, 2022

### Disclosures

NCCI categorizes catastrophic events as those that incur aggregate workers compensation losses in excess of \$50 million per occurrence. NCCI's standard ratemaking methodology excludes catastrophe-related losses from the calculation of rates since these events are not considered to be predictive of future experience. NCCI is proposing to treat the COVID-19 pandemic as a catastrophic event and, therefore, the losses from reported COVID-19-related claims have been excluded from the underlying data in this year's analysis to better reflect the conditions likely to prevail during this filing's proposed effective period.

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 29, 2021. 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 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



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## Workers Compensation Rate Filing – January 1, 2022

### Disclosures

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 course of the COVID-19 pandemic and related considerations, such as future economic conditions and the labor market, contribute additional uncertainty when estimating future costs. After an in-depth review and analysis of NCCI's general ratemaking methodologies, NCCI has determined that those approaches remain appropriate for use in this filing.



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## Workers Compensation Rate Filing – January 1, 2022

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## Workers Compensation Rate Filing – January 1, 2022

### Part 1 Filing Overview

- Executive Summary
- Overview of Methodology
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- Additional Proposed Changes



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Workers Compensation Rate Filing – January 1, 2022

Executive Summary

Based on its review of the most recently available data, NCCI has proposed an overall average workers compensation voluntary rate level change of – 5.5% and assigned risk rate level change of – 9.1% to become effective January 1, 2022.

<b>Key Components</b>	<b>Percentage Change</b>
Experience, Trend and Benefit Change	– 8.2%
Production and General Expense Change	+ 0.6%
Taxes & Fee Change	0.0%
Loss-based Expense Change	+ 0.9%
<u>Profit &amp; Contingency Change</u>	<u>+ 1.4%</u>
<b>Proposed Change in Overall Voluntary Rate Level</b>	<b>– 5.5%</b>
 <u>Assigned Risk Differential Change</u>	 <u>– 3.8%</u>
<b>Proposed Change in Overall Assigned Risk Rate Level</b>	<b>– 9.1%</b>

Key Observations:

- The overall rate level change in this filing is based on premium and loss experience for policy years 2018 and 2019, evaluated as of December 31, 2020. The reported claims resulting from COVID-19 have been excluded from the data on which this filing is based.
- Iowa’s claim frequency shows a long-term pattern of decline.
- The average indemnity cost per lost-time claim figures, adjusted for wage growth, have been fairly level to slightly increasing in recent years, while the average medical cost per lost-time claim figures have been increasing.
- The rate change varies by classification code, each of which belongs to one of 5 industry groups. The average change by industry group ranges from –6.5% for Office and Clerical to –4.5% for Contracting.

Additional Notable Change(s) Proposed in the Filing:

- Catastrophic Handling of the COVID-19 Pandemic
- Federal-Classification (F-Class) Ratemaking
- Calendar Year 2020 Wage Adjustment
- Expense Constant Removal Factor



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## Workers Compensation Rate Filing – January 1, 2022

### 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 via a non-catastrophe excess ratio (with excess ratios at limits beyond \$50 million set equal to zero)
- 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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Workers Compensation Rate Filing – January 1, 2022

Summary of Selections

The following is a summary of selections underlying the voluntary and assigned risk rates proposed to be effective January 1, 2022, along with the selections underlying the filing effective January 1, 2021.

<b>Voluntary and Assigned Risk Rates</b>	<b>Currently Approved January 1, 2021</b>	<b>Proposed Effective January 1, 2022</b>
Experience Period	Policy Years 2017 and 2018	Policy Years 2018 and 2019
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	0.970	0.965
Medical Annual Loss Ratio Trend Factor	0.990	0.985
Loss Adjustment Expense Provision	16.9%	17.9%
Base Threshold for Limiting Losses	\$7,481,806	\$7,421,321
Large Loss Excess Ratio	3.1%	3.0%*
Production and General Expenses	23.8%	24.2%
Premium Taxes and Assessments	2.4%	2.4%
Profit and Contingencies Provision	1.0%	2.0%
Maximum Minimum Premium**	\$1,000	\$1,000
Assigned Risk Differential	1.300	1.250
Classification Swing Limits (applied by Industry Group)	+/-25%	+/-25%

\* The proposed value reflects the updated hazard group assignment changes as detailed in the approved Item Filing B-1442.

\*\* MMP varies for Farming and Agricultural class codes.



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## Workers Compensation Rate Filing – January 1, 2022

### 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 2018 and 2019 evaluated as of December 31, 2020. The most recently available full policy year is 2019 since the last policy had an effective date of December 31, 2019 and did not expire until December 31, 2020. During this year's analysis, which included an assessment of pandemic claim-related impacts, 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

After analysis and consideration of the most recent data, and the assessment of COVID-19 impacts, NCCI has determined that its standard development procedures and methodologies remain appropriate.

#### Trend

This filing relies primarily on the experience from policy years 2018 and 2019. However, the proposed voluntary and assigned risk rates are intended for use with policies with effective dates starting on January 1, 2022. 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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## Workers Compensation Rate Filing – January 1, 2022

### 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.

After analysis and consideration of the most recent data, and the assessment of COVID-19 impacts, NCCI has determined that its standard trend procedures and methodologies remain appropriate.

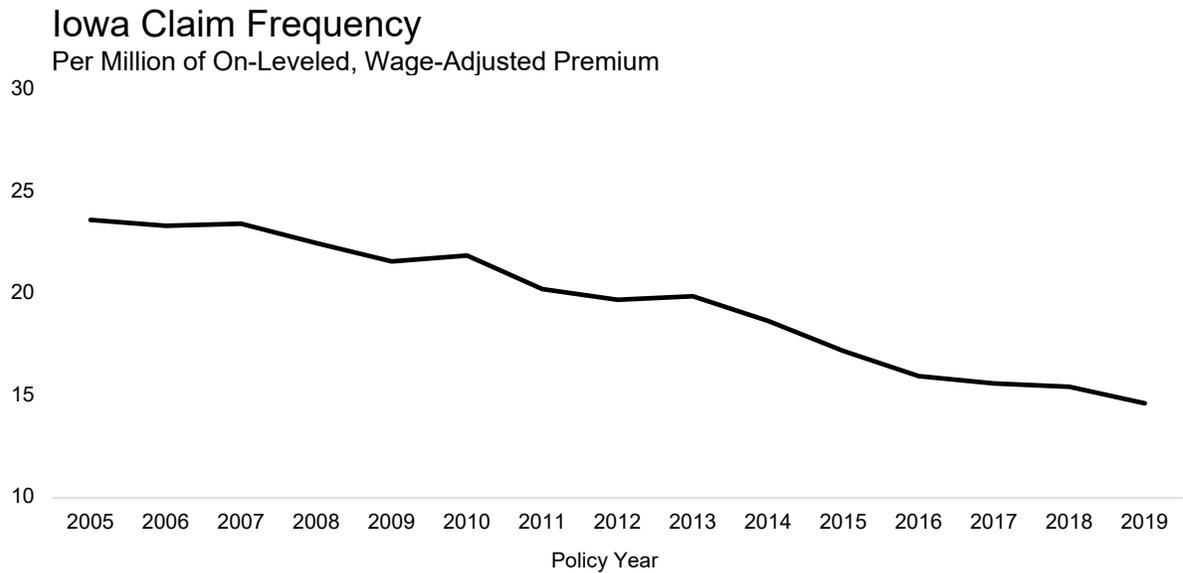


## Iowa

### Workers Compensation Rate Filing – January 1, 2022

#### 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.



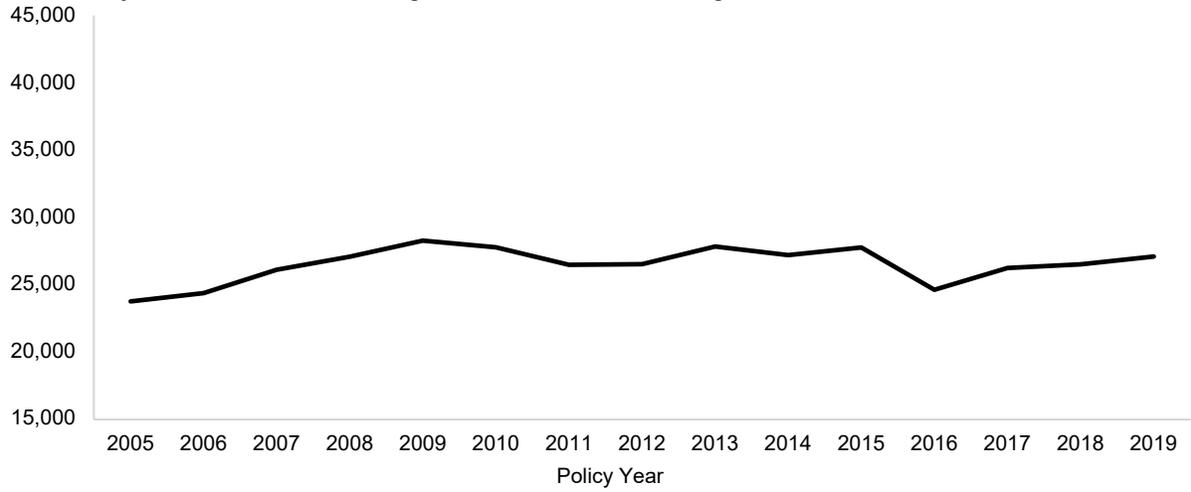
## Iowa

### Workers Compensation Rate Filing – January 1, 2022

#### Selections Underlying the Proposed Changes

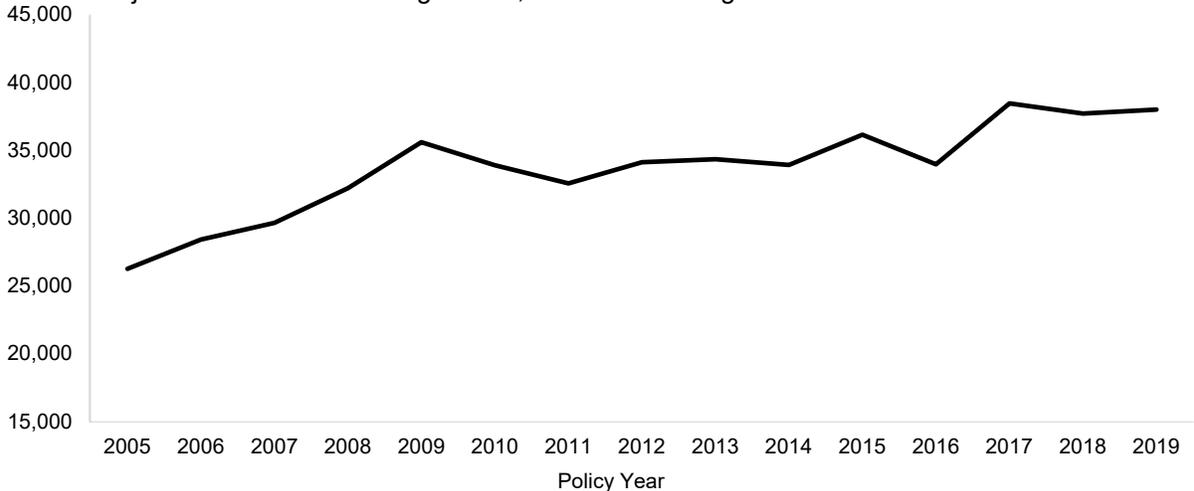
##### Iowa Indemnity Average Cost Per Case

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.



# Iowa

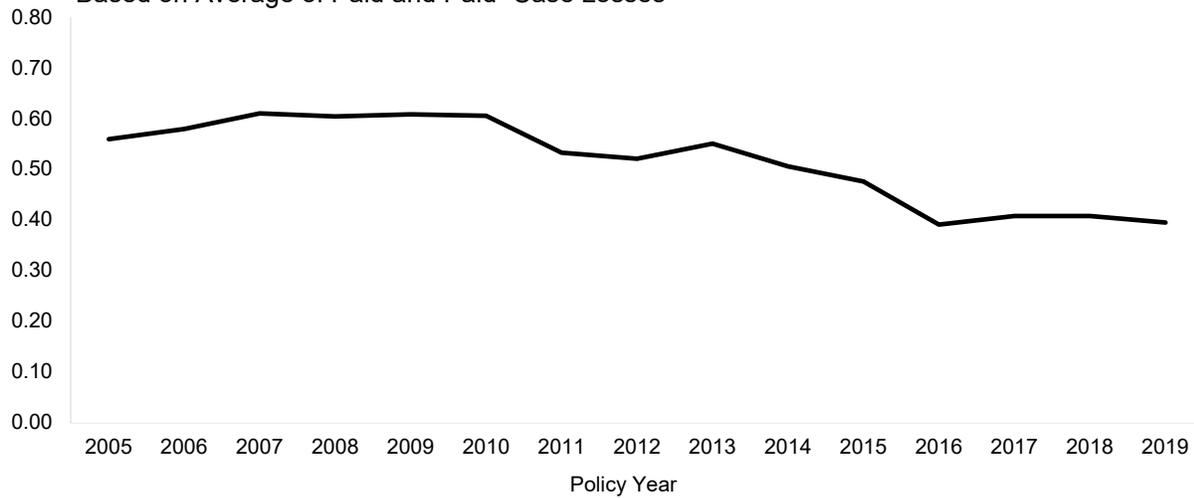
## Workers Compensation Rate Filing – January 1, 2022

### 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.

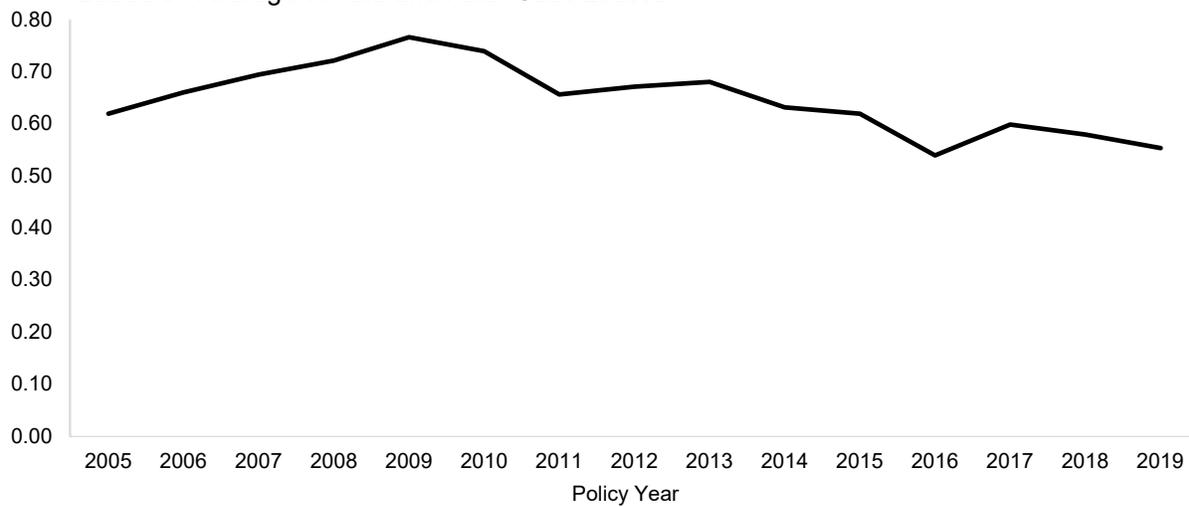
#### Iowa Indemnity Loss Ratio History

Based on Average of Paid and Paid+Case Losses



#### Iowa Medical Loss Ratio History

Based on Average of Paid and Paid+Case Losses



Based on our analysis this year, we are proposing to decrease the annual indemnity loss ratio trend from –3.0% to –3.5% and to decrease the annual medical loss ratio trend –1.0% to –1.5%.



## Iowa

### Workers Compensation Rate Filing – January 1, 2022

#### 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 16.9% to 17.9% 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 18.3% of premium. This filing proposes no change to the provision of 18.3%.

The current provision in the advisory rates for general expenses is 5.5% of premium. This filing proposes to increase the provision to 5.9%.

The overall advisory rate change due to the proposed production and general expense provisions is an increase of 0.6%.

##### Premium Taxes and Assessments

The current provision in the rates for taxes and assessments is 2.4% of premium. This filing proposes no change to the provision of 2.4%. The breakdown of the proposed provision is shown below:

Premium Tax	1.0%
Second Injury Fund	1.1%
Miscellaneous	0.3%
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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Workers Compensation Rate Filing – January 1, 2022

Selections Underlying the Proposed Changes

Current advisory rates contain a profit and contingency of 1.0%. Based upon the results from its latest internal rate of return model, NCCI is proposing to increase the current profit and contingency provision to 2.0% in this rate filing.

Assigned Risk Market

An overall average decrease of –9.1% to the current assigned risk rate level is being proposed effective January 1, 2022.

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 (Decreased to 1.25)	01/01/2022

In this filing, NCCI is proposing to decrease the current Assigned Risk Differential from 1.300 to 1.250. This filing proposes no change to any other current assigned risk pricing programs.



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## Workers Compensation Rate Filing – January 1, 2022

### Additional Proposed Changes

#### Catastrophic Handling of the COVID-19 Pandemic

##### Overview

NCCI recently reviewed its actuarial catastrophe methodology as a result of the COVID-19 pandemic. Currently, NCCI's Catastrophe (other than Certified Acts of Terrorism) Provision accounts for single-event losses resulting only from earthquakes, noncertified acts of terrorism, or catastrophic industrial accidents that exceed \$50 million in aggregate workers compensation losses. However, the COVID-19 pandemic has shown that there are other perils that can result in catastrophic losses.

In the calculation of rates, NCCI is proposing to use data that excludes the impact of the catastrophic COVID-19 event. NCCI is proposing for the Catastrophe (other than Certified Acts of Terrorism) Provision to contemplate the exposure to all events or perils that could result in aggregate workers compensation losses in excess of \$50 million (which may include pandemics). At this time, NCCI is proposing no change to the currently approved Miscellaneous Value.

Due to the uncertainty surrounding quantifying the impact future pandemics could have on the workers compensation system, it is appropriate to contemplate all catastrophic perils, including pandemics, within the Catastrophe (other than Certified Acts of Terrorism) definition without a change in the advisory value. This handling recognizes that there are additional catastrophic exposures (which may include pandemics) on workers compensation system costs that should be considered in the calculation of rates in adherence with the Actuarial Standards of Practice (ASOPs).

##### Background

The COVID-19 pandemic has shown that pandemics have the potential to be a catastrophic peril on workers compensation system costs. In this filing, COVID-19 is being treated as a catastrophe and all reported data from COVID-19 pandemic claims have been excluded from ratemaking to better reflect the conditions likely to prevail in the filing's proposed effective period beginning on January 1, 2022.

Both the definition of catastrophe and the treatment of catastrophe losses in property and casualty ratemaking are addressed in the Actuarial Standards of Practice (ASOP). As defined in ASOP 39 ("Treatment of Catastrophe Losses in Property/Casualty Insurance Ratemaking"), a



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catastrophe is “a relatively infrequent event or phenomenon that produces unusually large aggregate losses.” ASOP 39 also states that “consideration should be given to the impact of catastrophes and that procedures should be developed to include an allowance for catastrophe exposure in the rate.”

In the calculation of rates, NCCI uses ratemaking data that excludes the impact of catastrophes because the full unadjusted impact of the catastrophe experience is not considered predictive on a prospective basis. NCCI’s current advisory Catastrophe (other than Certified Acts of Terrorism) Provision accounts for single-event aggregate workers compensation losses resulting only from earthquakes, noncertified acts of terrorism, or catastrophic industrial accidents that exceed \$50 million. This \$50 million threshold applies per occurrence, across all states for which claims arise from a single event or peril. In Iowa, the currently approved Catastrophe (other than Certified Acts of Terrorism) Provisions are \$0.01 per \$100 of payroll and can be found in the Miscellaneous Values in this filing.

The COVID-19 pandemic has shown that there are other perils that can result in catastrophic losses and that regardless of the specific peril, any event exceeding \$50 million should be removed from the data used in ratemaking. NCCI is proposing to revise the Catastrophe (other than Certified Acts of Terrorism) Provision to contemplate a single event or peril resulting in a group of claims with aggregate workers compensation losses in excess of \$50 million. This revision recognizes that there are other potentially catastrophic perils with exposure on workers compensation system costs. NCCI is proposing no change at this time to the currently approved provision of \$0.01 per \$100 of payroll.

#### Changes to the Catastrophe (Other Than Certified Acts of Terrorism) Premium Endorsement

In Item Filing P-1418, NCCI proposes to revise the Catastrophe (Other Than Certified Acts of Terrorism) Premium Endorsement in NCCI’s ***Forms Manual of Workers Compensation and Employers Liability Insurance (Forms Manual)*** to define “Catastrophe (other than Certified Acts of Terrorism)” as “[a] single event or peril resulting in a group of claims with aggregate workers compensation losses in excess of \$50 million. This \$50 million threshold applies per occurrence, across all states for which claims arise from a single event or peril.” This item is to become effective for new and renewal policies effective on and after 12:01 a.m. August 1, 2022. This lead time will provide insurance companies ample time to incorporate the new endorsement into their processes. This revision will not change the currently approved advisory Miscellaneous Value.



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#### Additional Proposed Changes

##### Federal-Classification (F-Class) Ratemaking

This filing proposes to revise the current approach used to determine the rates for those classification codes that are subject to the benefits provided under the United States Longshore and Harbor Workers Compensation Act (USL&HW Act). The proposed approach has several advantages over the current methodology that has been in effect, without significant changes, for more than 20 years. These advantages include:

- Greater year-to-year stability in rates
- A simplified ratemaking approach
- Direct recognition that federal act USL&HW benefits are the same across jurisdictions

For reference, the F-classifications in Iowa have a total of \$3 million in payroll in the latest policy period used in the filing; this represents roughly 0.1% of Iowa's total payroll.

The USL&HW Act is a federal law that provides indemnity and medical benefits to employees such as longshore workers, harbor workers, ship repair workers, shipbuilders, and other employees who perform the loading, unloading, repairing, or building of a vessel or dock. It applies to such employees while working on US navigable waters and while working on any adjoining pier, wharf, dry dock, terminal, building way, marine railway, or other area adjoining such navigable waters customarily used for the loading, unloading, repairing, or building of a vessel. It does not cover masters or members of the crew of a vessel.

An injured F-class worker (or beneficiary) may receive state or federal act benefits, based on the exposure at the time of the accident. While federal and state act losses are reported separately, payroll is reported on a combined basis. Therefore, F-class rates must reflect both state and federal act benefits.

In the past, updates were made to NCCI's general class ratemaking methodology, which have increased the year-to-year stability for the F-class codes. Even so, relative to the industrial codes, the F-class codes have generally exhibited a higher level of volatility associated with their lower volume of data.

NCCI recently completed a review of the current F-class methodology. The proposed F-class approach incorporates a countrywide pure premium based on 10 policy years of F-class data, state-specific benefit relativities, and F-class code relativities.

The proposed approach recognizes that F-class experience across all jurisdictions consists primarily of federal act benefits. These benefits are based on a federal benefit structure and are subject to a federal medical fee schedule—neither of which vary by individual jurisdiction.



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### Additional Proposed Changes

Accordingly, the proposed methodology leverages this consistency by combining the data at a countrywide level—rather than relying on smaller volumes of state-specific data during the F-class ratemaking process. This change, alongside the expansion to 10 policy years of data, helps increase the stability of these low volume and unique classifications.

The state act benefits portion of the reported F-class experience is initially adjusted to a countrywide level and then back down to a state level using industrial codes' data as a proxy. This allows a greater volume of combined data to be used in the F-class ratemaking process as well as retaining the ability to directly reflect state-specific cost differences.

For more details, refer to Appendix B-IV.



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### Additional Proposed Changes

#### Calendar Year 2020 Wage Adjustment

NCCI's standard methodology is to adjust frequency and severity values included in its rate filings to a common wage level before analyzing trends that may be present in those values. This practice allows NCCI to analyze trends above and beyond changes that may be due solely to wage inflation. More specifically, in this year's filing, the frequency and severity adjustments would have incorporated the state's estimated Calendar Year 2020 average weekly wage (AWW) level using data from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages (QCEW).

In addition to the traditional growth in wages/salaries that may be expected to occur each year, the observed change in the 2019-to-2020 AWW was also impacted by COVID-19-related shifts in employment across industry sectors. While a change in industry-sector mix occurs to a small degree each year, its impact on the 2020 AWW change was unusually large, due to pandemic-related job losses in relatively low wage industries, and ignoring this effect would otherwise distort the intended nature of the adjustment. Therefore, in this year's ratemaking analysis the 2020 AWW value was adjusted to exclude the estimated impact of the pandemic-related, industry-sector mix change.

This adjustment is reflected in the frequency and severity values shown in Appendix A-III Trend Factors. The impact of the AWW adjustment is expected to be immaterial.



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### Additional Proposed Changes

#### Expense Constant Removal Factor

The premium reported to NCCI, for use in determination of the overall indication, includes premium collected via the charged expense constant. The premium on-level calculation includes year-specific factors that remove the expense constant premium from the total premium reported. Currently, these expense constant removal factors are based on statewide (voluntary plus assigned risk) market data.

In this filing, separate voluntary and assigned risk market-specific expense constant removal factors have been calculated for each year. This methodological enhancement recognizes and is more responsive to changes in market-specific average policy sizes that may occur over time. The overall impact of this change is expected to be negligible.



Iowa

## Workers Compensation Rate Filing – January 1, 2022

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



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### 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
- 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

Please note the following in connection with this filing:

- 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-1439, effective January 1, 2021:
  - Class Codes 2683 and 2501 are combined to reflect the final year of a two-year transition program and Class Code 2683 is discontinued.
  - Class Codes 3240 and 3257 are combined to reflect the final year of a two-year transition program, and Class Code 3240 is discontinued.
- As a result of Item B-1442, effective January 1, 2022, class code hazard group changes were incorporated.

**WORKERS COMPENSATION AND EMPLOYERS LIABILITY**

**IOWA**

Effective January 1, 2022

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	3.77	575	2.10	0.35	2016	3.48	543	1.94	0.35	2710	9.72	1000	4.74	0.29
0008	3.00	490	1.67	0.35	2021	3.79	577	2.04	0.33	2714	4.82	690	2.69	0.35
0016	5.43	500	2.65	0.29	2039	3.03	493	1.69	0.35	2731	4.70	677	2.62	0.35
0034	4.72	650	2.54	0.33	2041	4.45	650	2.49	0.35	2735	6.87	916	3.83	0.35
0035	2.75	463	1.48	0.33	2065	2.12	393	1.14	0.33	2759	6.62	888	3.69	0.35
0036	3.41	500	1.90	0.35	2070	5.78	796	3.11	0.33	2790	2.04	384	1.20	0.36
0037	4.00	500	1.95	0.29	2081	3.28	521	1.94	0.36	2797	5.86	805	3.46	0.36
0042	6.03	650	3.24	0.33	2089	5.45	760	3.04	0.35	2799	5.90	809	3.18	0.33
0050	7.38	972	3.60	0.29	2095	3.94	593	2.12	0.33	2802	4.92	701	2.64	0.33
0059D	0.41	-	0.10	0.25	2105	4.92	701	2.90	0.36	2835	3.76	574	2.22	0.36
0065D	0.10	-	0.02	0.29	2110	2.65	452	1.48	0.35	2836	3.59	555	2.12	0.36
0066D	0.10	-	0.03	0.33	2111	3.26	519	1.82	0.35	2841	5.23	735	2.91	0.35
0067D	0.10	-	0.03	0.33	2112	4.45	650	2.48	0.35	2881	3.21	513	1.90	0.36
0079	3.47	542	1.86	0.33	2114	3.18	510	1.88	0.36	2883	3.64	560	2.03	0.35
0083	4.94	500	2.66	0.33	2121	1.75	353	1.04	0.36	2913	-	-	2.03	0.35
0106	10.15	1000	4.61	0.25	2130	2.25	408	1.21	0.33	2915	3.76	574	1.84	0.29
0113	4.58	664	2.55	0.35	2131	2.04	384	1.14	0.35	2916	3.64	560	1.78	0.29
0170	3.99	599	2.22	0.35	2143	2.90	479	1.71	0.36	2923	2.17	399	1.28	0.36
0251	3.81	579	2.05	0.33	2157	4.35	639	2.43	0.35	2942	-	-	0.77	0.36
0400	-	-	1.59	0.33	2172	1.87	366	0.91	0.29	2960	5.31	744	2.86	0.33
0401	11.18	A	5.08	0.25	2174	3.53	548	1.97	0.35	3004	1.85	364	0.84	0.25
0771N	0.52	-	-	-	2211	8.26	1000	4.03	0.29	3018	2.68	455	1.22	0.25
0908P	184.00	344	99.07	0.33	2220	2.96	486	1.60	0.33	3022	4.09	610	2.28	0.35
0913P	490.00	650	263.68	0.33	2286	-	-	1.60	0.33	3027	2.45	430	1.20	0.29
0917	3.86	585	2.28	0.36	2288	4.54	659	2.53	0.35	3028	3.06	497	1.50	0.29
1005	6.92	921	2.95	0.25	2300	-	-	1.66	0.35	3030	6.26	849	3.06	0.29
1016	16.32	1000	6.96	0.24	2302	2.10	391	1.13	0.33	3040	5.74	791	3.09	0.33
1164D	3.31	524	1.38	0.24	2305	2.83	471	1.38	0.29	3041	5.00	710	2.69	0.33
1165D	3.74	571	1.57	0.24	2361	2.22	404	1.19	0.33	3042	5.36	750	2.89	0.33
1320	1.76	354	0.80	0.25	2362	2.47	432	1.38	0.35	3064	4.55	661	2.45	0.33
1322	8.04	1000	3.43	0.24	2380	2.27	410	1.27	0.35	3076	3.74	571	2.09	0.35
1430	5.03	713	2.46	0.29	2386	-	-	1.66	0.35	3081D	7.46	981	3.95	0.33
1438	6.06	827	2.96	0.29	2388	1.82	360	1.08	0.36	3082D	4.35	639	2.10	0.29
1452	2.60	446	1.27	0.29	2402	3.26	519	1.59	0.29	3085D	6.91	920	3.66	0.33
1463	13.66	1000	5.82	0.24	2413	2.76	464	1.49	0.33	3110	5.60	776	3.01	0.33
1472	3.64	560	1.78	0.29	2416	2.58	444	1.44	0.35	3111	3.38	532	1.88	0.35
1624D	3.57	553	1.60	0.25	2417	1.57	333	0.88	0.35	3113	2.25	408	1.21	0.33
1642	2.83	471	1.38	0.29	2501	2.98	488	1.66	0.35	3114	3.76	574	2.02	0.33
1654	4.44	648	2.17	0.29	2503	1.29	302	0.72	0.35	3118	1.75	353	1.04	0.36
1655	-	-	1.38	0.29	2534	-	-	1.66	0.35	3119	1.09	280	0.67	0.41
1699	3.41	535	1.66	0.29	2570	4.52	657	2.52	0.35	3122	2.27	410	1.34	0.36
1701	3.00	490	1.36	0.25	2585	4.40	644	2.37	0.33	3126	2.27	410	1.22	0.33
1710D	4.39	643	2.12	0.29	2586	3.59	555	2.00	0.35	3131	2.10	391	1.13	0.33
1741	-	-	1.36	0.25	2587	2.30	413	1.28	0.35	3132	3.15	507	1.75	0.35
1747	3.16	508	1.55	0.29	2589	2.91	480	1.57	0.33	3145	2.48	433	1.34	0.33
1748	6.37	861	3.11	0.29	2600	4.78	686	2.67	0.35	3146	2.37	421	1.27	0.33
1803D	8.51	1000	3.99	0.29	2623	7.33	966	3.58	0.29	3169	3.16	508	1.76	0.35
1852	-	-	0.97	0.24	2651	2.42	426	1.35	0.35	3175	-	-	1.76	0.35
1853	-	-	1.36	0.25	2660	2.86	475	1.69	0.36	3179	2.48	433	1.39	0.35
1860	-	-	1.18	0.29	2670	-	-	1.94	0.35	3180	2.43	427	1.36	0.35
1924	2.78	466	1.55	0.35	2683	-	-	1.66	0.35	3188	2.52	437	1.35	0.33
1925	5.69	786	3.06	0.33	2688	3.48	543	1.94	0.35	3220	2.22	404	1.19	0.33
2002	3.29	522	1.84	0.35	2701	14.05	1000	6.40	0.25	3223	-	-	1.36	0.35
2003	4.47	652	2.41	0.33	2702	23.81	1000	10.14	0.24	3224	4.20	622	2.49	0.36
2014	4.92	701	2.40	0.29	2709	9.03	1000	4.11	0.25	3227	4.22	624	2.35	0.35

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

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

**WORKERS COMPENSATION AND EMPLOYERS LIABILITY**

**IOWA**

Effective January 1, 2022

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	-	-	1.73	0.35	4036	3.00	490	1.46	0.29	4670	-	-	2.03	0.33
3241	3.23	515	1.80	0.35	4038	2.63	449	1.56	0.36	4683	3.77	575	2.03	0.33
3255	2.86	475	1.69	0.36	4053	-	-	1.61	0.33	4686	2.38	422	1.16	0.29
3257	3.10	501	1.73	0.35	4061	-	-	1.61	0.33	4692	0.70	237	0.39	0.35
3270	2.75	463	1.53	0.35	4062	3.00	490	1.61	0.33	4693	1.37	311	0.77	0.35
3300	5.45	760	3.21	0.36	4101	3.31	524	1.78	0.33	4703	1.77	355	0.95	0.33
3303	2.70	457	1.51	0.35	4109	0.50	215	0.28	0.35	4717	1.82	360	1.08	0.36
3307	3.39	533	1.83	0.33	4110	0.89	258	0.50	0.35	4720	2.40	424	1.29	0.33
3315	3.49	544	1.95	0.35	4111	2.04	384	1.14	0.35	4740	1.27	300	0.54	0.24
3334	2.70	457	1.45	0.33	4113	-	-	1.14	0.35	4741	3.28	521	1.77	0.33
3336	2.95	485	1.59	0.33	4114	2.80	468	1.51	0.33	4751	4.73	680	2.31	0.29
3365	4.89	698	2.22	0.25	4130	3.48	543	1.94	0.35	4771N	2.95	542	1.34	0.25
3372	4.45	650	2.39	0.33	4131	5.73	790	3.19	0.35	4777	3.56	552	1.62	0.25
3373	4.95	705	2.76	0.35	4133	2.58	444	1.52	0.36	4825	0.94	263	0.46	0.29
3383	1.75	353	0.98	0.35	4149	0.86	255	0.51	0.36	4828	2.25	408	1.02	0.25
3385	1.06	277	0.59	0.35	4206	3.46	541	1.93	0.35	4829	1.21	293	0.55	0.25
3400	2.50	435	1.40	0.35	4207	3.31	524	1.51	0.25	4902	2.93	482	1.63	0.35
3507	3.43	537	1.84	0.33	4239	2.71	458	1.24	0.25	4923	1.26	299	0.68	0.33
3515	2.71	458	1.46	0.33	4240	3.61	557	2.13	0.36	5020	5.79	797	2.64	0.25
3548	1.42	316	0.79	0.35	4243	2.23	405	1.20	0.33	5022	8.43	1000	3.59	0.24
3559	4.85	694	2.61	0.33	4244	2.95	485	1.44	0.29	5037	16.38	1000	6.98	0.24
3574	1.42	316	0.79	0.35	4250	2.10	391	1.13	0.33	5040	7.80	1000	3.32	0.24
3581	1.56	332	0.87	0.35	4251	3.44	538	1.92	0.35	5057	5.72	789	2.44	0.24
3612	2.40	424	1.29	0.33	4263	4.04	604	2.17	0.33	5059	19.44	1000	8.28	0.24
3620	3.97	597	1.94	0.29	4273	3.11	502	1.68	0.33	5069	-	-	8.28	0.24
3629	2.43	427	1.31	0.33	4279	2.42	426	1.18	0.29	5102	6.43	867	2.93	0.25
3632	3.21	513	1.73	0.33	4282	-	-	1.18	0.29	5146	4.37	641	2.14	0.29
3634	1.72	349	0.93	0.33	4283	1.77	355	0.99	0.35	5160	3.99	599	1.70	0.24
3635	2.47	432	1.33	0.33	4299	1.99	379	1.07	0.33	5183	2.97	487	1.35	0.25
3638	2.40	424	1.34	0.35	4304	5.26	739	2.83	0.33	5188	3.38	532	1.54	0.25
3642	2.15	397	1.20	0.35	4307	1.97	377	1.16	0.36	5190	2.57	443	1.17	0.25
3643	2.38	422	1.16	0.29	4351	1.18	290	0.66	0.35	5191	0.99	269	0.48	0.29
3647	3.31	524	1.78	0.33	4352	1.77	355	0.99	0.35	5192	2.92	481	1.57	0.33
3648	1.77	355	1.05	0.36	4360	-	-	0.33	0.29	5213	7.30	963	3.11	0.24
3681	0.96	266	0.54	0.35	4361	1.00	270	0.56	0.35	5215	5.35	749	2.62	0.29
3685	1.57	333	0.88	0.35	4410	3.21	513	1.79	0.35	5221	4.71	678	2.14	0.25
3719	1.11	282	0.47	0.24	4420	6.47	872	2.95	0.25	5222	13.10	1000	5.58	0.24
3724	4.66	673	1.99	0.24	4431	1.67	344	0.99	0.36	5223	4.90	699	2.40	0.29
3726	4.12	613	1.75	0.24	4432	1.31	304	0.77	0.36	5348	5.29	742	2.58	0.29
3803	2.88	477	1.61	0.35	4439	-	-	1.12	0.33	5402	6.19	841	3.45	0.35
3807	3.54	549	1.98	0.35	4452	3.08	499	1.66	0.33	5403	9.12	1000	4.15	0.25
3808	4.02	602	2.17	0.33	4459	3.48	543	1.70	0.29	5437	5.71	788	2.60	0.25
3821	6.04	824	2.95	0.29	4470	2.50	435	1.35	0.33	5443	3.92	591	2.11	0.33
3822	4.62	668	2.57	0.35	4484	3.53	548	1.97	0.35	5445	5.61	777	2.39	0.24
3824	4.92	701	2.74	0.35	4493	3.00	490	1.61	0.33	5462	6.06	827	2.96	0.29
3826	0.99	269	0.53	0.33	4511	0.68	235	0.37	0.33	5472	6.38	862	2.72	0.24
3827	2.32	415	1.29	0.35	4557	2.48	433	1.21	0.29	5473	8.41	1000	3.58	0.24
3830	1.44	318	0.78	0.33	4558	2.09	390	1.12	0.33	5474	6.62	888	2.82	0.24
3851	3.03	493	1.69	0.35	4568	2.19	401	1.07	0.29	5478	4.28	631	1.95	0.25
3865	2.75	463	1.62	0.36	4581	1.19	291	0.54	0.25	5479	6.06	827	2.96	0.29
3881	4.60	666	2.48	0.33	4583	3.89	588	1.77	0.25	5480	6.75	903	3.07	0.25
4000	4.68	675	2.13	0.25	4611	1.24	296	0.69	0.35	5491	1.95	375	0.88	0.25
4021	5.41	755	2.91	0.33	4635	3.86	585	1.75	0.25	5506	7.20	952	3.28	0.25
4024D	7.22	954	3.50	0.29	4653	1.92	371	1.07	0.35	5507	4.42	646	2.01	0.25
4034	7.20	952	3.52	0.29	4665	8.38	1000	4.09	0.29	5508	-	-	2.01	0.25

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**WORKERS COMPENSATION AND EMPLOYERS LIABILITY**

**IOWA**

Effective January 1, 2022

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	6.30	853	2.68	0.24	7050M	7.79	1000	3.17	0.24	7711	46.79	1000	21.29	0.25
5537	4.31	634	2.10	0.29	7090M	6.27	850	2.66	0.24	7720	3.40	534	1.66	0.29
5551	15.07	1000	6.41	0.24	7098M	13.63	1000	5.81	0.24	7855	3.36	530	1.64	0.29
5606	1.37	311	0.58	0.24	7099M	16.94	1000	6.91	0.24	8001	2.59	445	1.44	0.35
5610	4.73	680	2.31	0.29	7133	3.75	573	1.70	0.25	8002	2.34	417	1.31	0.35
5645	9.65	1000	4.11	0.24	7151M	4.56	662	2.07	0.25	8006	2.39	423	1.41	0.36
5703	13.12	1000	6.41	0.29	7152M	6.29	852	2.73	0.25	8008	1.16	288	0.68	0.36
5705	13.88	1000	6.77	0.29	7153M	5.06	717	2.30	0.25	8010	2.08	389	1.16	0.35
5951	0.73	240	0.41	0.35	7219	7.44	978	3.39	0.25	8013	0.40	204	0.21	0.33
6003	5.71	788	2.60	0.25	7222	7.50	985	3.42	0.25	8015	0.79	247	0.43	0.33
6005	3.91	590	1.91	0.29	7225	8.56	1000	4.18	0.29	8017	1.83	361	1.08	0.36
6017	-	-	3.11	0.24	7228	-	-	3.39	0.25	8018	3.36	530	1.88	0.35
6018	2.52	437	1.24	0.29	7229	-	-	3.39	0.25	8021	2.31	414	1.29	0.35
6045	4.86	695	2.37	0.29	7230	8.46	1000	4.56	0.33	8031	2.62	448	1.46	0.35
6204	7.78	1000	3.54	0.25	7231	7.11	942	3.83	0.33	8032	2.08	389	1.16	0.35
6206	2.83	471	1.21	0.24	7232	11.06	1000	5.04	0.25	8033	1.43	317	0.84	0.36
6213	1.74	351	0.74	0.24	7309F	10.83	1000	3.72	0.22	8037	1.83	361	1.12	0.41
6214	1.85	364	0.84	0.25	7313F	4.23	625	1.45	0.22	8039	1.78	356	1.05	0.36
6216	5.63	779	2.40	0.24	7317F	8.20	1000	2.81	0.22	8044	2.65	452	1.48	0.35
6217	4.69	676	2.00	0.24	7327F	22.50	1000	7.73	0.22	8045	0.64	230	0.36	0.35
6229	5.27	740	2.57	0.29	7333M	7.71	1000	3.29	0.25	8046	2.48	433	1.38	0.35
6233	3.38	532	1.44	0.24	7335M	8.57	1000	3.66	0.25	8047	0.94	263	0.53	0.35
6235	5.51	766	2.35	0.24	7337M	10.65	1000	4.36	0.25	8058	2.81	469	1.57	0.35
6236	6.66	893	3.25	0.29	7350F	9.48	1000	3.39	0.23	8072	0.58	224	0.34	0.36
6237	1.51	326	0.69	0.25	7360	4.00	600	1.96	0.29	8102	1.58	334	0.88	0.35
6251D	7.69	1000	3.48	0.26	7370	4.63	669	2.58	0.35	8103	2.95	485	1.59	0.33
6252D	2.92	481	1.23	0.24	7380	5.14	725	2.51	0.29	8105	-	-	1.88	0.35
6260	-	-	3.48	0.26	7382	4.79	687	2.58	0.33	8106	5.69	786	2.78	0.29
6306	5.24	736	2.38	0.25	7390	4.21	623	2.35	0.35	8107	3.38	532	1.54	0.25
6319	3.46	541	1.47	0.24	7394M	3.89	588	1.66	0.24	8111	2.42	426	1.30	0.33
6325	4.28	631	1.82	0.24	7395M	4.32	635	1.84	0.24	8116	2.56	442	1.37	0.33
6400	5.56	772	2.72	0.29	7398M	5.37	751	2.19	0.24	8203	8.58	1000	4.62	0.33
6503	2.65	452	1.48	0.35	7402	0.27	190	0.15	0.35	8204	5.49	764	2.95	0.33
6504	2.91	480	1.63	0.35	7403	4.36	640	2.44	0.35	8209	4.33	636	2.42	0.35
6702M*	4.08	609	1.99	0.29	7405N	1.24	370	0.70	0.35	8215	3.54	549	1.73	0.29
6703M*	5.64	780	2.64	0.29	7420	6.11	832	2.61	0.25	8227	3.60	556	1.64	0.25
6704M*	4.54	659	2.22	0.29	7421	0.93	262	0.45	0.29	8232	4.64	670	2.27	0.29
6801F	6.11	832	2.27	0.27	7422	1.72	349	0.78	0.25	8233	2.42	426	1.18	0.29
6811	6.52	877	3.18	0.29	7425	2.77	465	1.26	0.25	8235	4.76	684	2.56	0.33
6824F	7.43	977	2.76	0.27	7431N	1.18	360	0.54	0.25	8263	6.54	879	3.52	0.33
6826F	6.56	882	2.44	0.27	7445N	0.67	-	-	-	8264	6.30	853	3.07	0.29
6834	3.17	509	1.77	0.35	7453N	0.64	-	-	-	8265	6.48	873	2.94	0.25
6836	4.19	621	2.25	0.33	7502	1.72	349	0.84	0.29	8279	7.54	989	3.43	0.25
6843F	12.38	1000	4.25	0.22	7515	1.13	284	0.48	0.24	8288	7.30	963	3.92	0.33
6845F	5.97	817	2.05	0.22	7520	3.26	519	1.76	0.33	8291	4.44	648	2.39	0.33
6854	5.99	819	2.72	0.25	7538	3.49	544	1.49	0.24	8292	4.35	639	2.43	0.35
6872F	10.60	1000	3.64	0.22	7539	2.08	389	0.95	0.25	8293	8.99	1000	5.02	0.35
6874F	18.33	1000	6.30	0.22	7540	2.88	477	1.23	0.24	8304	6.45	870	2.93	0.25
6882	7.39	973	3.36	0.25	7580	2.57	443	1.25	0.29	8350	5.63	779	2.56	0.25
6884	6.38	862	2.91	0.25	7590	3.45	540	1.68	0.29	8380	2.80	468	1.51	0.33
7016M	6.08	829	2.59	0.24	7600	3.81	579	1.86	0.29	8381	1.90	369	1.02	0.33
7024M	6.76	904	2.88	0.24	7605	2.03	383	0.92	0.25	8385	2.49	434	1.34	0.33
7038M	5.64	780	2.40	0.24	7610	0.67	234	0.33	0.29	8392	2.37	421	1.40	0.36
7046M	12.27	1000	5.23	0.24	7705	5.04	714	2.72	0.33	8393	1.75	353	0.85	0.29
7047M	8.40	1000	3.43	0.24	7710	46.79	1000	21.29	0.25	8500	6.21	843	3.03	0.29

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

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

**WORKERS COMPENSATION AND EMPLOYERS LIABILITY**

**IOWA**

Effective January 1, 2022

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	0.38	202	0.17	0.25	9063	0.87	256	0.51	0.36					
8602	1.58	334	0.77	0.29	9077F	6.16	838	2.46	0.34					
8603	0.11	172	0.06	0.35	9082	1.23	295	0.76	0.41					
8606	1.90	369	0.87	0.25	9083	1.32	305	0.81	0.41					
8709F	5.59	775	1.92	0.22	9084	1.28	301	0.75	0.36					
8719	2.21	403	1.00	0.25	9088a	a	a	a	a					
8720	1.22	294	0.55	0.25	9089	1.28	301	0.75	0.36					
8721	0.36	200	0.18	0.29	9093	1.37	311	0.81	0.36					
8723	0.16	178	0.08	0.33	9101	4.73	680	2.79	0.36					
8725	2.97	487	1.45	0.29	9102	3.56	552	1.91	0.33					
8726F	2.58	444	0.96	0.27	9154	1.83	361	1.02	0.35					
8734M	0.57	223	0.28	0.29	9156	3.53	548	2.08	0.36					
8737M	0.51	216	0.25	0.29	9170	12.08	1000	5.48	0.25					
8738M	0.70	237	0.34	0.29	9178	5.81	799	3.57	0.41					
8742	0.42	206	0.21	0.29	9179	15.02	1000	9.23	0.41					
8745	3.79	577	2.04	0.33	9180	6.11	832	3.29	0.33					
8748	0.64	230	0.29	0.25	9182	2.60	446	1.45	0.35					
8755	0.55	221	0.27	0.29	9186	13.00	1000	5.90	0.25					
8799	0.66	233	0.37	0.35	9220	5.11	722	2.75	0.33					
8800	1.77	355	0.99	0.35	9402	4.98	708	2.26	0.25					
8803	0.06	167	0.03	0.29	9403	9.75	1000	4.44	0.25					
8805M	0.27	190	0.15	0.35	9410	2.40	424	1.34	0.35					
8810	0.20	182	0.11	0.35	9501	4.24	626	2.07	0.29					
8814M	0.24	186	0.13	0.35	9505	4.32	635	2.32	0.33					
8815M	0.34	197	0.18	0.35	9516	3.24	516	1.74	0.33					
8820	0.19	181	0.09	0.29	9519	3.70	567	1.81	0.29					
8824	2.08	389	1.28	0.41	9521	4.02	602	1.96	0.29					
8825	-	-	1.33	0.36	9522	3.08	499	1.82	0.36					
8826	2.25	408	1.33	0.36	9534	3.38	532	1.44	0.24					
8829	-	-	1.28	0.41	9554	9.31	1000	4.23	0.25					
8831	1.35	309	0.83	0.41	9586	0.49	214	0.29	0.36					
8832	0.31	194	0.17	0.35	9600	3.08	499	1.72	0.35					
8833	0.74	241	0.41	0.35	9620	1.35	309	0.66	0.29					
8835	2.16	398	1.21	0.35										
8842	2.72	459	1.67	0.41										
8855	0.16	178	0.09	0.35										
8856	0.77	245	0.43	0.35										
8864	1.64	340	0.97	0.36										
8868	0.53	218	0.31	0.36										
8869	1.11	282	0.66	0.36										
8871	0.06	167	0.03	0.35										
8901	0.20	182	0.10	0.29										
9012	1.46	321	0.71	0.29										
9014	3.15	507	1.76	0.35										
9015	3.03	493	1.63	0.33										
9016	2.59	445	1.44	0.35										
9019	2.87	476	1.40	0.29										
9033	2.04	384	1.10	0.33										
9040	3.41	535	2.01	0.36										
9044	1.35	309	0.80	0.36										
9052	1.99	379	1.18	0.36										
9058	1.81	359	1.11	0.41										
9060	1.73	350	1.02	0.36										
9061	1.26	299	0.75	0.36										
9062	1.37	311	0.81	0.36										

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

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

Effective January 1, 2022

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 the **Basic Manual** rule, Supplemental and supplementary loading.

Disease			Disease			Disease		
Code No.	Loading	Symbol	Code No.	Loading	Symbol	Code No.	Loading	Symbol
0059D	0.41	S	1165D	0.05	S	3082D	0.05	S
0065D	0.10	S	1624D	0.04	S	3085D	0.11	S
0066D	0.10	S	1710D	0.06	S	4024D	0.05	S
0067D	0.10	S	1803D	0.33	S	6251D	0.05	S
1164D	0.06	S	3081D	0.13	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 1.678 and elr x 1.607.
- 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, 2022

MISCELLANEOUS VALUES

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

Employee operated vehicle.....	\$78,200
Leased or rented vehicle.....	\$52,100

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

**Expense Constant** applicable in accordance with the **Basic Manual** rule..... \$160

**Maximum Minimum Premium**..... \$1,000  
 Note: Maximum Minimum Premium varies for farming and agricultural class codes

**Maximum Weekly Payroll** applicable in accordance with the **Basic Manual** notes for Code 9178 -- "Athletic Sports or Park: Noncontact Sports," and Code 9179 -- "Athletic Sports or Park: Contact Sports" ..... \$4,000

**Maximum Weekly Payroll for executive officers including members of limited liability companies and partners or sole proprietors** in accordance with the **Basic Manual** rules, Rule for premium determination of executive officers, Rule for premium determination of members of LLCs, and Rule for premium determination for partners or sole proprietors ..... \$4,000

**Minimum Premium Multiplier**..... 110

**Minimum Weekly Payroll for executive officers including members of limited liability companies and partners or sole proprietors** in accordance with the **Basic Manual** rules, Rule for premium determination of executive officers, Rule for premium determination of members of LLCs, and Rule for premium determination for partners or sole proprietors ..... \$500

**Premium Discount Percentages - (See the Basic Manual rule, Premium discount.)** 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 the **Basic Manual** rule, Federal coverages..... 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 (1.053).)

**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, 2022

### 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
- 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, 2022  
**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	4.71	650	2.10	0.35	2016	4.35	639	1.94	0.35	2710	12.15	1000	4.74	0.29
0008	3.75	573	1.67	0.35	2021	4.74	681	2.04	0.33	2714	6.03	823	2.69	0.35
0016	6.79	500	2.65	0.29	2039	3.79	577	1.69	0.35	2731	5.88	807	2.62	0.35
0034	5.90	650	2.54	0.33	2041	5.56	772	2.49	0.35	2735	8.59	1000	3.83	0.35
0035	3.44	538	1.48	0.33	2065	2.65	452	1.14	0.33	2759	8.28	1000	3.69	0.35
0036	4.26	500	1.90	0.35	2070	7.23	955	3.11	0.33	2790	2.55	441	1.20	0.36
0037	5.00	500	1.95	0.29	2081	4.10	611	1.94	0.36	2797	7.33	966	3.46	0.36
0042	7.54	650	3.24	0.33	2089	6.81	909	3.04	0.35	2799	7.38	972	3.18	0.33
0050	9.23	1000	3.60	0.29	2095	4.93	702	2.12	0.33	2802	6.15	837	2.64	0.33
0059D	0.51	-	0.10	0.25	2105	6.15	837	2.90	0.36	2835	4.70	677	2.22	0.36
0065D	0.13	-	0.02	0.29	2110	3.31	524	1.48	0.35	2836	4.49	654	2.12	0.36
0066D	0.13	-	0.03	0.33	2111	4.08	609	1.82	0.35	2841	6.54	879	2.91	0.35
0067D	0.13	-	0.03	0.33	2112	5.56	772	2.48	0.35	2881	4.01	601	1.90	0.36
0079	4.34	637	1.86	0.33	2114	3.98	598	1.88	0.36	2883	4.55	661	2.03	0.35
0083	6.18	500	2.66	0.33	2121	2.19	401	1.04	0.36	2913	-	-	2.03	0.35
0106	12.69	1000	4.61	0.25	2130	2.81	469	1.21	0.33	2915	4.70	677	1.84	0.29
0113	5.73	790	2.55	0.35	2131	2.55	441	1.14	0.35	2916	4.55	661	1.78	0.29
0170	4.99	709	2.22	0.35	2143	3.63	559	1.71	0.36	2923	2.71	458	1.28	0.36
0251	4.76	684	2.05	0.33	2157	5.44	758	2.43	0.35	2942	-	-	0.77	0.36
0400	-	-	1.59	0.33	2172	2.34	417	0.91	0.29	2960	6.64	890	2.86	0.33
0401	13.98	A	5.08	0.25	2174	4.41	645	1.97	0.35	3004	2.31	414	0.84	0.25
0771N	0.65	-	-	-	2211	10.33	1000	4.03	0.29	3018	3.35	529	1.22	0.25
0908P	230.00	390	99.07	0.33	2220	3.70	567	1.60	0.33	3022	5.11	722	2.28	0.35
0913P	613.00	773	263.68	0.33	2286	-	-	1.60	0.33	3027	3.06	497	1.20	0.29
0917	4.83	691	2.28	0.36	2288	5.68	785	2.53	0.35	3028	3.83	581	1.50	0.29
1005	8.65	1000	2.95	0.25	2300	-	-	1.66	0.35	3030	7.83	1000	3.06	0.29
1016	20.40	1000	6.96	0.24	2302	2.63	449	1.13	0.33	3040	7.18	950	3.09	0.33
1164D	4.14	615	1.38	0.24	2305	3.54	549	1.38	0.29	3041	6.25	848	2.69	0.33
1165D	4.67	674	1.57	0.24	2361	2.78	466	1.19	0.33	3042	6.70	897	2.89	0.33
1320	2.20	402	0.80	0.25	2362	3.09	500	1.38	0.35	3064	5.69	786	2.45	0.33
1322	10.05	1000	3.43	0.24	2380	2.84	472	1.27	0.35	3076	4.68	675	2.09	0.35
1430	6.29	852	2.46	0.29	2386	-	-	1.66	0.35	3081D	9.32	1000	3.95	0.33
1438	7.58	994	2.96	0.29	2388	2.28	411	1.08	0.36	3082D	5.44	758	2.10	0.29
1452	3.25	518	1.27	0.29	2402	4.08	609	1.59	0.29	3085D	8.64	1000	3.66	0.33
1463	17.08	1000	5.82	0.24	2413	3.45	540	1.49	0.33	3110	7.00	930	3.01	0.33
1472	4.55	661	1.78	0.29	2416	3.23	515	1.44	0.35	3111	4.23	625	1.88	0.35
1624D	4.46	651	1.60	0.25	2417	1.96	376	0.88	0.35	3113	2.81	469	1.21	0.33
1642	3.54	549	1.38	0.29	2501	3.73	570	1.66	0.35	3114	4.70	677	2.02	0.33
1654	5.55	771	2.17	0.29	2503	1.61	337	0.72	0.35	3118	2.19	401	1.04	0.36
1655	-	-	1.38	0.29	2534	-	-	1.66	0.35	3119	1.36	310	0.67	0.41
1699	4.26	629	1.66	0.29	2570	5.65	782	2.52	0.35	3122	2.84	472	1.34	0.36
1701	3.75	573	1.36	0.25	2585	5.50	765	2.37	0.33	3126	2.84	472	1.22	0.33
1710D	5.49	764	2.12	0.29	2586	4.49	654	2.00	0.35	3131	2.63	449	1.13	0.33
1741	-	-	1.36	0.25	2587	2.88	477	1.28	0.35	3132	3.94	593	1.75	0.35
1747	3.95	595	1.55	0.29	2589	3.64	560	1.57	0.33	3145	3.10	501	1.34	0.33
1748	7.96	1000	3.11	0.29	2600	5.98	818	2.67	0.35	3146	2.96	486	1.27	0.33
1803D	10.64	1000	3.99	0.29	2623	9.16	1000	3.58	0.29	3169	3.95	595	1.76	0.35
1852	-	-	0.97	0.24	2651	3.03	493	1.35	0.35	3175	-	-	1.76	0.35
1853	-	-	1.36	0.25	2660	3.58	554	1.69	0.36	3179	3.10	501	1.39	0.35
1860	-	-	1.18	0.29	2670	-	-	1.94	0.35	3180	3.04	494	1.36	0.35
1924	3.48	543	1.55	0.35	2683	-	-	1.66	0.35	3188	3.15	507	1.35	0.33
1925	7.11	942	3.06	0.33	2688	4.35	639	1.94	0.35	3220	2.78	466	1.19	0.33
2002	4.11	612	1.84	0.35	2701	17.56	1000	6.40	0.25	3223	-	-	1.36	0.35
2003	5.59	775	2.41	0.33	2702	29.76	1000	10.14	0.24	3224	5.25	738	2.49	0.36
2014	6.15	837	2.40	0.29	2709	11.29	1000	4.11	0.25	3227	5.28	741	2.35	0.35

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

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**WORKERS COMPENSATION AND EMPLOYERS LIABILITY**

**IOWA**

Effective January 1, 2022  
**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	—	—	1.73	0.35	4036	3.75	573	1.46	0.29	4670	—	—	2.03	0.33
3241	4.04	604	1.80	0.35	4038	3.29	522	1.56	0.36	4683	4.71	678	2.03	0.33
3255	3.58	554	1.69	0.36	4053	—	—	1.61	0.33	4686	2.98	488	1.16	0.29
3257	3.88	587	1.73	0.35	4061	—	—	1.61	0.33	4692	0.88	257	0.39	0.35
3270	3.44	538	1.53	0.35	4062	3.75	573	1.61	0.33	4693	1.71	348	0.77	0.35
3300	6.81	909	3.21	0.36	4101	4.14	615	1.78	0.33	4703	2.21	403	0.95	0.33
3303	3.38	532	1.51	0.35	4109	0.63	229	0.28	0.35	4717	2.28	411	1.08	0.36
3307	4.24	626	1.83	0.33	4110	1.11	282	0.50	0.35	4720	3.00	490	1.29	0.33
3315	4.36	640	1.95	0.35	4111	2.55	441	1.14	0.35	4740	1.59	335	0.54	0.24
3334	3.38	532	1.45	0.33	4113	—	—	1.14	0.35	4741	4.10	611	1.77	0.33
3336	3.69	566	1.59	0.33	4114	3.50	545	1.51	0.33	4751	5.91	810	2.31	0.29
3365	6.11	832	2.22	0.25	4130	4.35	639	1.94	0.35	4771N	3.69	637	1.34	0.25
3372	5.56	772	2.39	0.33	4131	7.16	948	3.19	0.35	4777	4.45	650	1.62	0.25
3373	6.19	841	2.76	0.35	4133	3.23	515	1.52	0.36	4825	1.18	290	0.46	0.29
3383	2.19	401	0.98	0.35	4149	1.08	279	0.51	0.36	4828	2.81	469	1.02	0.25
3385	1.33	306	0.59	0.35	4206	4.33	636	1.93	0.35	4829	1.51	326	0.55	0.25
3400	3.13	504	1.40	0.35	4207	4.14	615	1.51	0.25	4902	3.66	563	1.63	0.35
3507	4.29	632	1.84	0.33	4239	3.39	533	1.24	0.25	4923	1.58	334	0.68	0.33
3515	3.39	533	1.46	0.33	4240	4.51	656	2.13	0.36	5020	7.24	956	2.64	0.25
3548	1.78	356	0.79	0.35	4243	2.79	467	1.20	0.33	5022	10.54	1000	3.59	0.24
3559	6.06	827	2.61	0.33	4244	3.69	566	1.44	0.29	5037	20.48	1000	6.98	0.24
3574	1.78	356	0.79	0.35	4250	2.63	449	1.13	0.33	5040	9.75	1000	3.32	0.24
3581	1.95	375	0.87	0.35	4251	4.30	633	1.92	0.35	5057	7.15	947	2.44	0.24
3612	3.00	490	1.29	0.33	4263	5.05	716	2.17	0.33	5059	24.30	1000	8.28	0.24
3620	4.96	706	1.94	0.29	4273	3.89	588	1.68	0.33	5069	—	—	8.28	0.24
3629	3.04	494	1.31	0.33	4279	3.03	493	1.18	0.29	5102	8.04	1000	2.93	0.25
3632	4.01	601	1.73	0.33	4282	—	—	1.18	0.29	5146	5.46	761	2.14	0.29
3634	2.15	397	0.93	0.33	4283	2.21	403	0.99	0.35	5160	4.99	709	1.70	0.24
3635	3.09	500	1.33	0.33	4299	2.49	434	1.07	0.33	5183	3.71	568	1.35	0.25
3638	3.00	490	1.34	0.35	4304	6.58	884	2.83	0.33	5188	4.23	625	1.54	0.25
3642	2.69	456	1.20	0.35	4307	2.46	431	1.16	0.36	5190	3.21	513	1.17	0.25
3643	2.98	488	1.16	0.29	4351	1.48	323	0.66	0.35	5191	1.24	296	0.48	0.29
3647	4.14	615	1.78	0.33	4352	2.21	403	0.99	0.35	5192	3.65	562	1.57	0.33
3648	2.21	403	1.05	0.36	4360	—	—	0.33	0.29	5213	9.13	1000	3.11	0.24
3681	1.20	292	0.54	0.35	4361	1.25	298	0.56	0.35	5215	6.69	896	2.62	0.29
3685	1.96	376	0.88	0.35	4410	4.01	601	1.79	0.35	5221	5.89	808	2.14	0.25
3719	1.39	313	0.47	0.24	4420	8.09	1000	2.95	0.25	5222	16.38	1000	5.58	0.24
3724	5.83	801	1.99	0.24	4431	2.09	390	0.99	0.36	5223	6.13	834	2.40	0.29
3726	5.15	727	1.75	0.24	4432	1.64	340	0.77	0.36	5348	6.61	887	2.58	0.29
3803	3.60	556	1.61	0.35	4439	—	—	1.12	0.33	5402	7.74	1000	3.45	0.35
3807	4.43	647	1.98	0.35	4452	3.85	584	1.66	0.33	5403	11.40	1000	4.15	0.25
3808	5.03	713	2.17	0.33	4459	4.35	639	1.70	0.29	5437	7.14	945	2.60	0.25
3821	7.55	991	2.95	0.29	4470	3.13	504	1.35	0.33	5443	4.90	699	2.11	0.33
3822	5.78	796	2.57	0.35	4484	4.41	645	1.97	0.35	5445	7.01	931	2.39	0.24
3824	6.15	837	2.74	0.35	4493	3.75	573	1.61	0.33	5462	7.58	994	2.96	0.29
3826	1.24	296	0.53	0.33	4511	0.85	254	0.37	0.33	5472	7.98	1000	2.72	0.24
3827	2.90	479	1.29	0.35	4557	3.10	501	1.21	0.29	5473	10.51	1000	3.58	0.24
3830	1.80	358	0.78	0.33	4558	2.61	447	1.12	0.33	5474	8.28	1000	2.82	0.24
3851	3.79	577	1.69	0.35	4568	2.74	461	1.07	0.29	5478	5.35	749	1.95	0.25
3865	3.44	538	1.62	0.36	4581	1.49	324	0.54	0.25	5479	7.58	994	2.96	0.29
3881	5.75	793	2.48	0.33	4583	4.86	695	1.77	0.25	5480	8.44	1000	3.07	0.25
4000	5.85	804	2.13	0.25	4611	1.55	331	0.69	0.35	5491	2.44	428	0.88	0.25
4021	6.76	904	2.91	0.33	4635	4.83	691	1.75	0.25	5506	9.00	1000	3.28	0.25
4024D	9.02	1000	3.50	0.29	4653	2.40	424	1.07	0.35	5507	5.53	768	2.01	0.25
4034	9.00	1000	3.52	0.29	4665	10.48	1000	4.09	0.29	5508	—	—	2.01	0.25

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**WORKERS COMPENSATION AND EMPLOYERS LIABILITY**

**IOWA**

Effective January 1, 2022  
**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	7.88	1000	2.68	0.24	7050M	9.74	1000	3.17	0.24	7711	58.49	1000	21.29	0.25
5537	5.39	753	2.10	0.29	7090M	7.84	1000	2.66	0.24	7720	4.25	628	1.66	0.29
5551	18.84	1000	6.41	0.24	7098M	17.04	1000	5.81	0.24	7855	4.20	622	1.64	0.29
5606	1.71	348	0.58	0.24	7099M	21.18	1000	6.91	0.24	8001	3.24	516	1.44	0.35
5610	5.91	810	2.31	0.29	7133	4.69	676	1.70	0.25	8002	2.93	482	1.31	0.35
5645	12.06	1000	4.11	0.24	7151M	5.70	787	2.07	0.25	8006	2.99	489	1.41	0.36
5703	16.40	1000	6.41	0.29	7152M	7.86	1000	2.73	0.25	8008	1.45	320	0.68	0.36
5705	17.35	1000	6.77	0.29	7153M	6.33	856	2.30	0.25	8010	2.60	446	1.16	0.35
5951	0.91	260	0.41	0.35	7219	9.30	1000	3.39	0.25	8013	0.50	215	0.21	0.33
6003	7.14	945	2.60	0.25	7222	9.38	1000	3.42	0.25	8015	0.99	269	0.43	0.33
6005	4.89	698	1.91	0.29	7225	10.70	1000	4.18	0.29	8017	2.29	412	1.08	0.36
6017	-	-	3.11	0.24	7228	-	-	3.39	0.25	8018	4.20	622	1.88	0.35
6018	3.15	507	1.24	0.29	7229	-	-	3.39	0.25	8021	2.89	478	1.29	0.35
6045	6.08	829	2.37	0.29	7230	10.58	1000	4.56	0.33	8031	3.28	521	1.46	0.35
6204	9.73	1000	3.54	0.25	7231	8.89	1000	3.83	0.33	8032	2.60	446	1.16	0.35
6206	3.54	549	1.21	0.24	7232	13.83	1000	5.04	0.25	8033	1.79	357	0.84	0.36
6213	2.18	400	0.74	0.24	7309F	13.54	1000	3.72	0.22	8037	2.29	412	1.12	0.41
6214	2.31	414	0.84	0.25	7313F	5.29	742	1.45	0.22	8039	2.23	405	1.05	0.36
6216	7.04	934	2.40	0.24	7317F	10.25	1000	2.81	0.22	8044	3.31	524	1.48	0.35
6217	5.86	805	2.00	0.24	7327F	28.13	1000	7.73	0.22	8045	0.80	248	0.36	0.35
6229	6.59	885	2.57	0.29	7333M	9.64	1000	3.29	0.25	8046	3.10	501	1.38	0.35
6233	4.23	625	1.44	0.24	7335M	10.71	1000	3.66	0.25	8047	1.18	290	0.53	0.35
6235	6.89	918	2.35	0.24	7337M	13.31	1000	4.36	0.25	8058	3.51	546	1.57	0.35
6236	8.33	1000	3.25	0.29	7350F	11.85	1000	3.39	0.23	8072	0.73	240	0.34	0.36
6237	1.89	368	0.69	0.25	7360	5.00	710	1.96	0.29	8102	1.98	378	0.88	0.35
6251D	9.61	1000	3.48	0.26	7370	5.79	797	2.58	0.35	8103	3.69	566	1.59	0.33
6252D	3.65	562	1.23	0.24	7380	6.43	867	2.51	0.29	8105	-	-	1.88	0.35
6260	-	-	3.48	0.26	7382	5.99	819	2.58	0.33	8106	7.11	942	2.78	0.29
6306	6.55	881	2.38	0.25	7390	5.26	739	2.35	0.35	8107	4.23	625	1.54	0.25
6319	4.33	636	1.47	0.24	7394M	4.86	695	1.66	0.24	8111	3.03	493	1.30	0.33
6325	5.35	749	1.82	0.24	7395M	5.40	754	1.84	0.24	8116	3.20	512	1.37	0.33
6400	6.95	925	2.72	0.29	7398M	6.71	898	2.19	0.24	8203	10.73	1000	4.62	0.33
6503	3.31	524	1.48	0.35	7402	0.34	197	0.15	0.35	8204	6.86	915	2.95	0.33
6504	3.64	560	1.63	0.35	7403	5.45	760	2.44	0.35	8209	5.41	755	2.42	0.35
6702M*	5.10	721	1.99	0.29	7405N	1.55	423	0.70	0.35	8215	4.43	647	1.73	0.29
6703M*	7.05	936	2.64	0.29	7420	7.64	1000	2.61	0.25	8227	4.50	655	1.64	0.25
6704M*	5.68	785	2.22	0.29	7421	1.16	288	0.45	0.29	8232	5.80	798	2.27	0.29
6801F	7.64	1000	2.27	0.27	7422	2.15	397	0.78	0.25	8233	3.03	493	1.18	0.29
6811	8.15	1000	3.18	0.29	7425	3.46	541	1.26	0.25	8235	5.95	815	2.56	0.33
6824F	9.29	1000	2.76	0.27	7431N	1.48	411	0.54	0.25	8263	8.18	1000	3.52	0.33
6826F	8.20	1000	2.44	0.27	7445N	0.84	-	-	-	8264	7.88	1000	3.07	0.29
6834	3.96	596	1.77	0.35	7453N	0.80	-	-	-	8265	8.10	1000	2.94	0.25
6836	5.24	736	2.25	0.33	7502	2.15	397	0.84	0.29	8279	9.43	1000	3.43	0.25
6843F	15.48	1000	4.25	0.22	7515	1.41	315	0.48	0.24	8288	9.13	1000	3.92	0.33
6845F	7.46	981	2.05	0.22	7520	4.08	609	1.76	0.33	8291	5.55	771	2.39	0.33
6854	7.49	984	2.72	0.25	7538	4.36	640	1.49	0.24	8292	5.44	758	2.43	0.35
6872F	13.25	1000	3.64	0.22	7539	2.60	446	0.95	0.25	8293	11.24	1000	5.02	0.35
6874F	22.91	1000	6.30	0.22	7540	3.60	556	1.23	0.24	8304	8.06	1000	2.93	0.25
6882	9.24	1000	3.36	0.25	7580	3.21	513	1.25	0.29	8350	7.04	934	2.56	0.25
6884	7.98	1000	2.91	0.25	7590	4.31	634	1.68	0.29	8380	3.50	545	1.51	0.33
7016M	7.60	996	2.59	0.24	7600	4.76	684	1.86	0.29	8381	2.38	422	1.02	0.33
7024M	8.45	1000	2.88	0.24	7605	2.54	439	0.92	0.25	8385	3.11	502	1.34	0.33
7038M	7.05	936	2.40	0.24	7610	0.84	252	0.33	0.29	8392	2.96	486	1.40	0.36
7046M	15.34	1000	5.23	0.24	7705	6.30	853	2.72	0.33	8393	2.19	401	0.85	0.29
7047M	10.50	1000	3.43	0.24	7710	58.49	1000	21.29	0.25	8500	7.76	1000	3.03	0.29

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**WORKERS COMPENSATION AND EMPLOYERS LIABILITY**

**IOWA**

Effective January 1, 2022

**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	0.48	213	0.17	0.25	9063	1.09	280	0.51	0.36					
8602	1.98	378	0.77	0.29	9077F	7.70	1000	2.46	0.34					
8603	0.14	175	0.06	0.35	9082	1.54	329	0.76	0.41					
8606	2.38	422	0.87	0.25	9083	1.65	342	0.81	0.41					
8709F	6.99	929	1.92	0.22	9084	1.60	336	0.75	0.36					
8719	2.76	464	1.00	0.25	9088a	a	a	a	a					
8720	1.53	328	0.55	0.25	9089	1.60	336	0.75	0.36					
8721	0.45	210	0.18	0.29	9093	1.71	348	0.81	0.36					
8723	0.20	182	0.08	0.33	9101	5.91	810	2.79	0.36					
8725	3.71	568	1.45	0.29	9102	4.45	650	1.91	0.33					
8726F	3.23	515	0.96	0.27	9154	2.29	412	1.02	0.35					
8734M	0.71	238	0.28	0.29	9156	4.41	645	2.08	0.36					
8737M	0.64	230	0.25	0.29	9170	15.10	1000	5.48	0.25					
8738M	0.88	257	0.34	0.29	9178	7.26	959	3.57	0.41					
8742	0.53	218	0.21	0.29	9179	18.78	1000	9.23	0.41					
8745	4.74	681	2.04	0.33	9180	7.64	1000	3.29	0.33					
8748	0.80	248	0.29	0.25	9182	3.25	518	1.45	0.35					
8755	0.69	236	0.27	0.29	9186	16.25	1000	5.90	0.25					
8799	0.83	251	0.37	0.35	9220	6.39	863	2.75	0.33					
8800	2.21	403	0.99	0.35	9402	6.23	845	2.26	0.25					
8803	0.08	169	0.03	0.29	9403	12.19	1000	4.44	0.25					
8805M	0.34	197	0.15	0.35	9410	3.00	490	1.34	0.35					
8810	0.25	188	0.11	0.35	9501	5.30	743	2.07	0.29					
8814M	0.30	193	0.13	0.35	9505	5.40	754	2.32	0.33					
8815M	0.43	207	0.18	0.35	9516	4.05	606	1.74	0.33					
8820	0.24	186	0.09	0.29	9519	4.63	669	1.81	0.29					
8824	2.60	446	1.28	0.41	9521	5.03	713	1.96	0.29					
8825	-	-	1.33	0.36	9522	3.85	584	1.82	0.36					
8826	2.81	469	1.33	0.36	9534	4.23	625	1.44	0.24					
8829	-	-	1.28	0.41	9554	11.64	1000	4.23	0.25					
8831	1.69	346	0.83	0.41	9586	0.61	227	0.29	0.36					
8832	0.39	203	0.17	0.35	9600	3.85	584	1.72	0.35					
8833	0.93	262	0.41	0.35	9620	1.69	346	0.66	0.29					
8835	2.70	457	1.21	0.35										
8842	3.40	534	1.67	0.41										
8855	0.20	182	0.09	0.35										
8856	0.96	266	0.43	0.35										
8864	2.05	386	0.97	0.36										
8868	0.66	233	0.31	0.36										
8869	1.39	313	0.66	0.36										
8871	0.08	169	0.03	0.35										
8901	0.25	188	0.10	0.29										
9012	1.83	361	0.71	0.29										
9014	3.94	593	1.76	0.35										
9015	3.79	577	1.63	0.33										
9016	3.24	516	1.44	0.35										
9019	3.59	555	1.40	0.29										
9033	2.55	441	1.10	0.33										
9040	4.26	629	2.01	0.36										
9044	1.69	346	0.80	0.36										
9052	2.49	434	1.18	0.36										
9058	2.26	409	1.11	0.41										
9060	2.16	398	1.02	0.36										
9061	1.58	334	0.75	0.36										
9062	1.71	348	0.81	0.36										

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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 the **Basic Manual** rule, Supplemental and supplementary loading.

Disease			Disease			Disease		
Code No.	Loading	Symbol	Code No.	Loading	Symbol	Code No.	Loading	Symbol
0059D	0.51	S	1165D	0.06	S	3082D	0.06	S
0065D	0.13	S	1624D	0.05	S	3085D	0.14	S
0066D	0.13	S	1710D	0.08	S	4024D	0.06	S
0067D	0.13	S	1803D	0.41	S	6251D	0.06	S
1164D	0.08	S	3081D	0.16	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 1.678 and elr x 1.607.
- 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, 2022*  
**APPLICABLE TO ASSIGNED RISK POLICIES ONLY**

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**MISCELLANEOUS VALUES**

<b>Basis of premium</b> applicable in accordance with the <i>Basic Manual</i> notes for Code 7370 -- "Taxicab Co.":	
Employee operated vehicle.....	\$78,200
Leased or rented vehicle.....	\$52,100
<b>Catastrophe (other than Certified Acts of Terrorism)</b> - (Assigned Risk).....	0.01
<b>Expense Constant</b> applicable in accordance with the <i>Basic Manual</i> rule.....	\$160
<b>Maximum Minimum Premium</b> .....	\$1,000
Note: Maximum Minimum Premium varies for farming and agricultural class codes	
<b>Maximum Weekly Payroll</b> applicable in accordance with the <i>Basic Manual</i> notes for Code 9178 -- "Athletic Sports or Park: Noncontact Sports," and Code 9179 -- "Athletic Sports or Park: Contact Sports" .....	\$4,000
<b>Maximum Weekly Payroll for executive officers including members of limited liability companies and partners or sole proprietors</b> in accordance with the <i>Basic Manual</i> rules, Rule for premium determination of executive officers, Rule for premium determination of members of LLCs, and Rule for premium determination for partners or sole proprietors .....	\$4,000
<b>Minimum Premium Multiplier</b> .....	110
<b>Minimum Weekly Payroll for executive officers including members of limited liability companies and partners or sole proprietors</b> in accordance with the <i>Basic Manual</i> rules, Rule for premium determination of executive officers, Rule for premium determination of members of LLCs, and Rule for premium determination for partners or sole proprietors .....	\$500
<b>Terrorism</b> - (Assigned Risk).....	0.01
<b>United States Longshore and Harbor Workers' Compensation Coverage Percentage</b> applicable only in connection with the <i>Basic Manual</i> rule, Federal coverages.....	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 (1.053).)

**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, 2022**

**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, 2022  
**TABLE OF WEIGHTING VALUES**  
**APPLICABLE TO ALL POLICIES**  
*Experience Rating Program - ERA*

Expected Losses			Weighting Values	Expected Losses			Weighting Values
0	--	2,575	0.04	1,452,495	--	1,532,613	0.44
2,576	--	10,412	0.05	1,532,614	--	1,617,371	0.45
10,413	--	18,417	0.06	1,617,372	--	1,707,183	0.46
18,418	--	26,594	0.07	1,707,184	--	1,802,517	0.47
26,595	--	34,950	0.08	1,802,518	--	1,903,898	0.48
34,951	--	58,458	0.09	1,903,899	--	2,011,921	0.49
58,459	--	87,017	0.10	2,011,922	--	2,127,264	0.50
87,018	--	112,420	0.11	2,127,265	--	2,250,695	0.51
112,421	--	137,154	0.12	2,250,696	--	2,383,099	0.52
137,155	--	161,892	0.13	2,383,100	--	2,525,491	0.53
161,893	--	186,933	0.14	2,525,492	--	2,679,046	0.54
186,934	--	212,450	0.15	2,679,047	--	2,845,132	0.55
212,451	--	238,556	0.16	2,845,133	--	3,025,349	0.56
238,557	--	265,338	0.17	3,025,350	--	3,221,580	0.57
265,339	--	292,868	0.18	3,221,581	--	3,436,062	0.58
292,869	--	321,212	0.19	3,436,063	--	3,671,464	0.59
321,213	--	350,431	0.20	3,671,465	--	3,931,006	0.60
350,432	--	380,584	0.21	3,931,007	--	4,218,603	0.61
380,585	--	411,733	0.22	4,218,604	--	4,539,064	0.62
411,734	--	443,940	0.23	4,539,065	--	4,898,364	0.63
443,941	--	477,268	0.24	4,898,365	--	5,304,021	0.64
477,269	--	511,786	0.25	5,304,022	--	5,765,627	0.65
511,787	--	547,566	0.26	5,765,628	--	6,295,614	0.66
547,567	--	584,682	0.27	6,295,615	--	6,910,395	0.67
584,683	--	623,217	0.28	6,910,396	--	7,632,090	0.68
623,218	--	663,258	0.29	7,632,091	--	8,491,245	0.69
663,259	--	704,899	0.30	8,491,246	--	9,531,270	0.70
704,900	--	748,240	0.31	9,531,271	--	10,816,001	0.71
748,241	--	793,392	0.32	10,816,002	--	12,443,322	0.72
793,393	--	840,471	0.33	12,443,323	--	14,571,350	0.73
840,472	--	889,608	0.34	14,571,351	--	17,473,198	0.74
889,609	--	940,941	0.35	17,473,199	--	21,664,749	0.75
940,942	--	994,624	0.36	21,664,750	--	28,251,461	0.76
994,625	--	1,050,823	0.37	28,251,462	--	40,107,527	0.77
1,050,824	--	1,109,721	0.38	40,107,528	--	67,771,660	0.78
1,109,722	--	1,171,519	0.39	67,771,661	--	206,092,258	0.79
1,171,520	--	1,236,439	0.40	206,092,259	AND OVER	0.80	
1,236,440	--	1,304,723	0.41				
1,304,724	--	1,376,641	0.42				
1,376,642	--	1,452,494	0.43				

- (a) G ..... 12.30
  - (b) State Per Claim Accident Limitation ..... \$307,000
  - (c) State Multiple Claim Accident Limitation ..... \$614,000
  - (d) USL&HW Per Claim Accident Limitation ..... \$625,500
  - (e) USL&HW Multiple Claim Accident Limitation ..... \$1,251,000
  - (f) Employers Liability Accident Limitation ..... \$55,000
  - (g) Primary/Excess Loss Split Point ..... \$18,500
  - (h) USL&HW Act -- Expected Loss Factor -- Non-F Classes ..... 1.25
- (Multiply a Non-F classification ELR by the USL&HW Act - Expected Loss Factor of 1.25.)*

Effective January 1, 2022  
**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	--	66,159	30,750	2,122,993	--	2,184,457	246,000	4,274,869	--	4,336,359	461,250
66,160	--	113,866	36,900	2,184,458	--	2,245,924	252,150	4,336,360	--	4,397,850	467,400
113,867	--	168,683	43,050	2,245,925	--	2,307,393	258,300	4,397,851	--	4,459,342	473,550
168,684	--	226,510	49,200	2,307,394	--	2,368,863	264,450	4,459,343	--	4,520,834	479,700
226,511	--	285,744	55,350	2,368,864	--	2,430,335	270,600	4,520,835	--	4,582,326	485,850
285,745	--	345,722	61,500	2,430,336	--	2,491,808	276,750	4,582,327	--	4,643,819	492,000
345,723	--	406,133	67,650	2,491,809	--	2,553,283	282,900	4,643,820	--	4,705,311	498,150
406,134	--	466,818	73,800	2,553,284	--	2,614,759	289,050	4,705,312	--	4,766,804	504,300
466,819	--	527,686	79,950	2,614,760	--	2,676,236	295,200	4,766,805	--	4,828,297	510,450
527,687	--	588,682	86,100	2,676,237	--	2,737,714	301,350	4,828,298	--	4,889,790	516,600
588,683	--	649,771	92,250	2,737,715	--	2,799,192	307,500	4,889,791	--	4,951,283	522,750
649,772	--	710,929	98,400	2,799,193	--	2,860,672	313,650	4,951,284	--	5,012,777	528,900
710,930	--	772,141	104,550	2,860,673	--	2,922,153	319,800	5,012,778	--	5,074,270	535,050
772,142	--	833,394	110,700	2,922,154	--	2,983,634	325,950	5,074,271	--	5,135,764	541,200
833,395	--	894,681	116,850	2,983,635	--	3,045,116	332,100	5,135,765	--	5,197,258	547,350
894,682	--	955,994	123,000	3,045,117	--	3,106,599	338,250	5,197,259	--	5,258,752	553,500
955,995	--	1,017,330	129,150	3,106,600	--	3,168,083	344,400	5,258,753	--	5,320,246	559,650
1,017,331	--	1,078,685	135,300	3,168,084	--	3,229,567	350,550	5,320,247	--	5,381,741	565,800
1,078,686	--	1,140,054	141,450	3,229,568	--	3,291,052	356,700	5,381,742	--	5,443,235	571,950
1,140,055	--	1,201,437	147,600	3,291,053	--	3,352,537	362,850	5,443,236	--	5,504,730	578,100
1,201,438	--	1,262,832	153,750	3,352,538	--	3,414,023	369,000	5,504,731	--	5,566,224	584,250
1,262,833	--	1,324,236	159,900	3,414,024	--	3,475,509	375,150	5,566,225	--	5,627,719	590,400
1,324,237	--	1,385,648	166,050	3,475,510	--	3,536,996	381,300	5,627,720	--	5,689,214	596,550
1,385,649	--	1,447,068	172,200	3,536,997	--	3,598,483	387,450	5,689,215	--	5,750,709	602,700
1,447,069	--	1,508,495	178,350	3,598,484	--	3,659,971	393,600	5,750,710	--	5,812,204	608,850
1,508,496	--	1,569,927	184,500	3,659,972	--	3,721,459	399,750	5,812,205	--	5,873,250	615,000
1,569,928	--	1,631,364	190,650	3,721,460	--	3,782,948	405,900				
1,631,365	--	1,692,806	196,800	3,782,949	--	3,844,437	412,050				
1,692,807	--	1,754,251	202,950	3,844,438	--	3,905,926	418,200				
1,754,252	--	1,815,701	209,100	3,905,927	--	3,967,415	424,350				
1,815,702	--	1,877,153	215,250	3,967,416	--	4,028,905	430,500				
1,877,154	--	1,938,609	221,400	4,028,906	--	4,090,395	436,650				
1,938,610	--	2,000,068	227,550	4,090,396	--	4,151,886	442,800				
2,000,069	--	2,061,528	233,700	4,151,887	--	4,213,377	448,950				
2,061,529	--	2,122,992	239,850	4,213,378	--	4,274,868	455,100				

For Expected Losses greater than \$5,873,250, the Ballast Value can be calculated using the following formula (rounded to the nearest 1):

$$\text{Ballast} = (0.10)(\text{Expected Losses}) + 2500(\text{Expected Losses})(12.30) / (\text{Expected Losses} + (700)(12.30))$$

G = 12.30

# NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

## IOWA—UPDATE TO EXPERIENCE RATING PREMIUM ELIGIBILITY AMOUNTS

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### 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>7/1/22 and after</u>	<u>9,000</u>	<u>4,500</u>
	<u>7/1/21 - 6/30/22</u>	8,500	4,250
	7/1/20 - 6/30/21	8,500	4,250

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, 2022

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

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

- Average Cost per Case
- Average Cost per Case including ALAE
- 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

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

**IOWA**

*Effective January 1, 2022*

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

A	B	C	D	E	F	G
7,947	10,699	16,138	19,310	27,825	42,912	49,906

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

A	B	C	D	E	F	G
8,686	11,679	17,595	21,040	30,255	46,608	54,179

**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 1.057

**3. Countrywide Expected Loss Ratio**  
0.595

**Countrywide Expected Loss and Allocated Expense Ratio**  
0.660

**4. Table of Expense Ratios**  
Type A: 2021-01  
Type B: 2021-01

**5.**

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

Per Accident Limitation	Hazard Groups						
	A	B	C	D	E	F	G
\$10,000	0.427	0.461	0.487	0.504	0.525	0.543	0.551
\$15,000	0.395	0.431	0.460	0.479	0.503	0.524	0.534
\$20,000	0.369	0.407	0.437	0.457	0.485	0.508	0.520
\$25,000	0.348	0.386	0.417	0.439	0.469	0.493	0.506
\$30,000	0.330	0.367	0.400	0.422	0.454	0.479	0.494
\$35,000	0.314	0.351	0.385	0.407	0.440	0.467	0.483
\$40,000	0.299	0.337	0.371	0.394	0.428	0.456	0.473
\$50,000	0.275	0.312	0.347	0.370	0.406	0.435	0.454
\$75,000	0.231	0.266	0.301	0.324	0.364	0.394	0.415
\$100,000	0.201	0.234	0.268	0.290	0.332	0.362	0.385
\$125,000	0.178	0.209	0.243	0.265	0.307	0.337	0.361
\$150,000	0.161	0.190	0.223	0.244	0.286	0.317	0.340
\$175,000	0.147	0.175	0.207	0.227	0.269	0.299	0.323
\$200,000	0.135	0.162	0.193	0.212	0.255	0.284	0.308
\$225,000	0.125	0.151	0.182	0.200	0.242	0.271	0.295
\$250,000	0.116	0.141	0.171	0.189	0.231	0.260	0.283
\$275,000	0.109	0.133	0.162	0.179	0.221	0.249	0.272
\$300,000	0.102	0.125	0.154	0.171	0.212	0.240	0.263
\$325,000	0.097	0.119	0.147	0.163	0.204	0.232	0.254
\$350,000	0.091	0.113	0.141	0.156	0.197	0.224	0.246
\$375,000	0.087	0.108	0.135	0.150	0.190	0.217	0.239
\$400,000	0.083	0.103	0.130	0.144	0.184	0.210	0.232
\$425,000	0.079	0.099	0.125	0.139	0.179	0.204	0.225
\$450,000	0.076	0.095	0.121	0.134	0.174	0.199	0.219
\$475,000	0.073	0.091	0.117	0.130	0.169	0.193	0.214
\$500,000	0.070	0.088	0.113	0.126	0.164	0.189	0.209
\$600,000	0.060	0.077	0.100	0.112	0.149	0.172	0.191
\$700,000	0.053	0.069	0.090	0.101	0.137	0.158	0.176
\$800,000	0.048	0.062	0.083	0.092	0.127	0.147	0.164
\$900,000	0.043	0.057	0.076	0.085	0.118	0.138	0.154
\$1,000,000	0.040	0.052	0.071	0.079	0.111	0.130	0.145
\$2,000,000	0.022	0.030	0.043	0.048	0.072	0.086	0.096
\$3,000,000	0.015	0.022	0.032	0.036	0.055	0.066	0.074
\$4,000,000	0.012	0.017	0.026	0.028	0.045	0.054	0.061
\$5,000,000	0.009	0.014	0.021	0.024	0.038	0.046	0.052
\$6,000,000	0.008	0.011	0.018	0.020	0.033	0.040	0.045
\$7,000,000	0.007	0.010	0.015	0.017	0.028	0.035	0.040
\$8,000,000	0.006	0.008	0.013	0.015	0.025	0.031	0.036
\$9,000,000	0.005	0.007	0.012	0.013	0.022	0.028	0.032
\$10,000,000	0.004	0.006	0.010	0.012	0.020	0.025	0.029

Effective January 1, 2022

**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	0.472	0.507	0.535	0.552	0.574	0.593	0.601
\$15,000	0.437	0.476	0.506	0.526	0.551	0.573	0.584
\$20,000	0.410	0.450	0.482	0.504	0.532	0.556	0.568
\$25,000	0.388	0.428	0.461	0.484	0.515	0.541	0.555
\$30,000	0.368	0.408	0.443	0.467	0.500	0.526	0.542
\$35,000	0.351	0.391	0.427	0.451	0.485	0.513	0.530
\$40,000	0.336	0.376	0.412	0.436	0.473	0.501	0.520
\$50,000	0.310	0.349	0.386	0.411	0.449	0.480	0.500
\$75,000	0.262	0.300	0.337	0.362	0.404	0.436	0.459
\$100,000	0.230	0.265	0.302	0.326	0.370	0.402	0.427
\$125,000	0.205	0.239	0.275	0.298	0.343	0.376	0.401
\$150,000	0.186	0.218	0.253	0.276	0.321	0.353	0.379
\$175,000	0.170	0.201	0.236	0.257	0.302	0.335	0.360
\$200,000	0.157	0.187	0.221	0.241	0.286	0.318	0.344
\$225,000	0.146	0.174	0.208	0.228	0.273	0.304	0.329
\$250,000	0.137	0.164	0.197	0.216	0.261	0.292	0.317
\$275,000	0.128	0.155	0.187	0.206	0.250	0.280	0.305
\$300,000	0.121	0.147	0.178	0.196	0.240	0.270	0.295
\$325,000	0.115	0.139	0.170	0.188	0.232	0.261	0.285
\$350,000	0.109	0.133	0.163	0.180	0.224	0.253	0.277
\$375,000	0.104	0.127	0.157	0.173	0.216	0.245	0.268
\$400,000	0.099	0.122	0.151	0.167	0.210	0.238	0.261
\$425,000	0.095	0.117	0.145	0.161	0.203	0.231	0.254
\$450,000	0.091	0.112	0.140	0.156	0.198	0.225	0.248
\$475,000	0.087	0.108	0.136	0.151	0.192	0.219	0.242
\$500,000	0.084	0.104	0.132	0.146	0.187	0.214	0.236
\$600,000	0.073	0.092	0.117	0.130	0.170	0.195	0.216
\$700,000	0.065	0.082	0.106	0.118	0.156	0.180	0.200
\$800,000	0.058	0.074	0.097	0.108	0.145	0.168	0.187
\$900,000	0.053	0.068	0.090	0.100	0.136	0.157	0.175
\$1,000,000	0.048	0.063	0.083	0.093	0.128	0.148	0.166
\$2,000,000	0.027	0.036	0.051	0.057	0.083	0.098	0.110
\$3,000,000	0.018	0.026	0.037	0.041	0.063	0.075	0.085
\$4,000,000	0.014	0.020	0.030	0.033	0.051	0.062	0.070
\$5,000,000	0.011	0.016	0.024	0.027	0.043	0.052	0.059
\$6,000,000	0.009	0.013	0.021	0.023	0.037	0.045	0.052
\$7,000,000	0.008	0.011	0.018	0.020	0.032	0.040	0.045
\$8,000,000	0.007	0.010	0.016	0.017	0.029	0.035	0.040
\$9,000,000	0.006	0.009	0.014	0.015	0.025	0.031	0.036
\$10,000,000	0.005	0.008	0.012	0.014	0.023	0.028	0.033

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	0.01	0.13	0.08	0.05	0.00



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

Type A: 2021-01

WC Premium Range From      To	Expense Ratio	WC Premium Range From      To	Expense Ratio	WC Premium Range From      To	Expense Ratio
0 - 10,055	0.371	21,928 - 22,469	0.323	393,334 - 424,799	0.274
10,056 - 10,167	0.370	22,470 - 23,037	0.322	424,800 - 461,739	0.273
10,168 - 10,282	0.369	23,038 - 23,636	0.321	461,740 - 505,714	0.272
10,283 - 10,399	0.368	23,637 - 24,266	0.320	505,715 - 558,947	0.271
10,400 - 10,520	0.367	24,267 - 24,931	0.319	558,948 - 624,705	0.270
10,521 - 10,643	0.366	24,932 - 25,633	0.318	624,706 - 707,999	0.269
10,644 - 10,769	0.365	25,634 - 26,376	0.317	708,000 - 816,923	0.268
10,770 - 10,898	0.364	26,377 - 27,164	0.316	816,924 - 965,454	0.267
10,899 - 11,030	0.363	27,165 - 27,999	0.315	965,455 - 1,179,999	0.266
11,031 - 11,165	0.362	28,000 - 28,888	0.314	1,180,000 - 1,517,142	0.266
11,166 - 11,304	0.361	28,889 - 29,836	0.313	1,517,143 - 1,824,799	0.265
11,305 - 11,446	0.360	29,837 - 30,847	0.312	1,824,800 - 1,983,478	0.264
11,447 - 11,592	0.359	30,848 - 31,929	0.311	1,983,479 - 2,172,380	0.263
11,593 - 11,741	0.358	31,930 - 33,090	0.310	2,172,381 - 2,401,052	0.262
11,742 - 11,895	0.357	33,091 - 34,339	0.309	2,401,053 - 2,683,529	0.261
11,896 - 12,052	0.356	34,340 - 35,686	0.308	2,683,530 - 3,041,333	0.260
12,053 - 12,214	0.355	35,687 - 37,142	0.307	3,041,334 - 3,509,230	0.259
12,215 - 12,380	0.354	37,143 - 38,723	0.306	3,509,231 - 4,147,272	0.258
12,381 - 12,551	0.353	38,724 - 40,444	0.305	4,147,273 - 5,068,888	0.257
12,552 - 12,727	0.352	40,445 - 42,325	0.304	5,068,889 - 6,517,142	0.256
12,728 - 12,907	0.352	42,326 - 44,390	0.303	6,517,143 - 9,123,999	0.255
12,908 - 13,093	0.351	44,391 - 46,666	0.302	9,124,000 - 15,206,666	0.254
13,094 - 13,284	0.350	46,667 - 49,189	0.301	15,206,667 - 45,619,999	0.253
13,285 - 13,481	0.349	49,190 - 51,999	0.300	45,620,000 - And Above	0.252
13,482 - 13,684	0.348	52,000 - 55,151	0.299		
13,685 - 13,893	0.347	55,152 - 58,709	0.298		
13,894 - 14,108	0.346	58,710 - 62,758	0.297		
14,109 - 14,330	0.345	62,759 - 67,407	0.296		
14,331 - 14,559	0.344	67,408 - 72,799	0.295		
14,560 - 14,796	0.343	72,800 - 79,130	0.295		
14,797 - 15,041	0.342	79,131 - 86,666	0.294		
15,042 - 15,294	0.341	86,667 - 95,789	0.293		
15,295 - 15,555	0.340	95,790 - 107,058	0.292		
15,556 - 15,826	0.339	107,059 - 121,333	0.291		
15,827 - 16,106	0.338	121,334 - 139,999	0.290		
16,107 - 16,396	0.337	140,000 - 165,454	0.289		
16,397 - 16,697	0.336	165,455 - 200,377	0.288		
16,698 - 17,009	0.335	200,378 - 208,235	0.287		
17,010 - 17,333	0.334	208,236 - 216,734	0.286		
17,334 - 17,669	0.333	216,735 - 225,957	0.285		
17,670 - 18,019	0.332	225,958 - 235,999	0.284		
18,020 - 18,383	0.331	236,000 - 246,976	0.283		
18,384 - 18,762	0.330	246,977 - 259,024	0.282		
18,763 - 19,157	0.329	259,025 - 272,307	0.281		
19,158 - 19,569	0.328	272,308 - 287,027	0.280		
19,570 - 19,999	0.327	287,028 - 303,428	0.279		
20,000 - 20,449	0.326	303,429 - 321,818	0.278	First - 10,000	0.0%
20,450 - 20,919	0.325	321,819 - 342,580	0.277	Next - 190,000	9.1%
20,920 - 21,411	0.324	342,581 - 366,206	0.276	Next - 1,550,000	11.3%
21,412 - 21,927	0.323	366,207 - 393,333	0.275	Over - 1,750,000	12.3%
				Expected Loss Ratio:	0.595
				Tax Multiplier:	1.035



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

Type B: 2021-01

WC Premium Range		Expense Ratio
From	To	
0	- 10,099	0.371
10,100	- 10,303	0.370
10,304	- 10,515	0.369
10,516	- 10,736	0.368
10,737	- 10,967	0.367
10,968	- 11,208	0.366
11,209	- 11,460	0.365
11,461	- 11,724	0.364
11,725	- 11,999	0.363
12,000	- 12,289	0.362
12,290	- 12,592	0.361
12,593	- 12,911	0.360
12,912	- 13,246	0.359
13,247	- 13,599	0.358
13,600	- 13,972	0.357
13,973	- 14,366	0.356
14,367	- 14,782	0.355
14,783	- 15,223	0.354
15,224	- 15,692	0.353
15,693	- 16,190	0.352
16,191	- 16,721	0.352
16,722	- 17,288	0.351
17,289	- 17,894	0.350
17,895	- 18,545	0.349
18,546	- 19,245	0.348

WC Premium Range		Expense Ratio
From	To	
19,246	- 19,999	0.347
20,000	- 20,816	0.346
20,817	- 21,702	0.345
21,703	- 22,666	0.344
22,667	- 23,720	0.343
23,721	- 24,878	0.342
24,879	- 26,153	0.341
26,154	- 27,567	0.340
27,568	- 29,142	0.339
29,143	- 30,909	0.338
30,910	- 32,903	0.337
32,904	- 35,172	0.336
35,173	- 37,777	0.335
37,778	- 40,799	0.334
40,800	- 44,347	0.333
44,348	- 48,571	0.332
48,572	- 53,684	0.331
53,685	- 59,999	0.330
60,000	- 67,999	0.329
68,000	- 78,461	0.328
78,462	- 92,727	0.327
92,728	- 113,333	0.326
113,334	- 145,714	0.325
145,715	- 200,606	0.324
200,607	- 213,548	0.323

WC Premium Range		Expense Ratio
From	To	
213,549	- 228,275	0.323
228,276	- 245,185	0.322
245,186	- 264,799	0.321
264,800	- 287,826	0.320
287,827	- 315,238	0.319
315,239	- 348,421	0.318
348,422	- 389,411	0.317
389,412	- 441,333	0.316
441,334	- 509,230	0.315
509,231	- 601,818	0.314
601,819	- 735,555	0.313
735,556	- 945,714	0.312
945,715	- 1,323,999	0.311
1,324,000	- 1,809,565	0.310
1,809,566	- 1,981,904	0.309
1,981,905	- 2,190,526	0.308
2,190,527	- 2,448,235	0.307
2,448,236	- 2,774,666	0.306
2,774,667	- 3,201,538	0.305
3,201,539	- 3,783,636	0.304
3,783,637	- 4,624,444	0.303
4,624,445	- 5,945,714	0.302
5,945,715	- 8,323,999	0.301
8,324,000	- 13,873,333	0.300
13,873,334	- 41,619,999	0.299
41,620,000	- And Above	0.298
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:		0.595
Tax Multiplier:		1.035



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

Type A: 2021-01

WC Premium Range From      To	Expense Ratio	WC Premium Range From      To	Expense Ratio	WC Premium Range From      To	Expense Ratio
0 - 10,055	0.307	21,928 - 22,469	0.258	393,334 - 424,799	0.210
10,056 - 10,167	0.306	22,470 - 23,037	0.257	424,800 - 461,739	0.209
10,168 - 10,282	0.305	23,038 - 23,636	0.256	461,740 - 505,714	0.208
10,283 - 10,399	0.304	23,637 - 24,266	0.255	505,715 - 558,947	0.207
10,400 - 10,520	0.303	24,267 - 24,931	0.254	558,948 - 624,705	0.206
10,521 - 10,643	0.302	24,932 - 25,633	0.253	624,706 - 707,999	0.205
10,644 - 10,769	0.301	25,634 - 26,376	0.252	708,000 - 816,923	0.204
10,770 - 10,898	0.300	26,377 - 27,164	0.251	816,924 - 965,454	0.203
10,899 - 11,030	0.299	27,165 - 27,999	0.250	965,455 - 1,179,999	0.202
11,031 - 11,165	0.298	28,000 - 28,888	0.250	1,180,000 - 1,517,142	0.201
11,166 - 11,304	0.297	28,889 - 29,836	0.249	1,517,143 - 1,824,799	0.200
11,305 - 11,446	0.296	29,837 - 30,847	0.248	1,824,800 - 1,983,478	0.199
11,447 - 11,592	0.295	30,848 - 31,929	0.247	1,983,479 - 2,172,380	0.198
11,593 - 11,741	0.294	31,930 - 33,090	0.246	2,172,381 - 2,401,052	0.197
11,742 - 11,895	0.293	33,091 - 34,339	0.245	2,401,053 - 2,683,529	0.196
11,896 - 12,052	0.292	34,340 - 35,686	0.244	2,683,530 - 3,041,333	0.195
12,053 - 12,214	0.291	35,687 - 37,142	0.243	3,041,334 - 3,509,230	0.194
12,215 - 12,380	0.290	37,143 - 38,723	0.242	3,509,231 - 4,147,272	0.193
12,381 - 12,551	0.289	38,724 - 40,444	0.241	4,147,273 - 5,068,888	0.193
12,552 - 12,727	0.288	40,445 - 42,325	0.240	5,068,889 - 6,517,142	0.192
12,728 - 12,907	0.287	42,326 - 44,390	0.239	6,517,143 - 9,123,999	0.191
12,908 - 13,093	0.286	44,391 - 46,666	0.238	9,124,000 - 15,206,666	0.190
13,094 - 13,284	0.285	46,667 - 49,189	0.237	15,206,667 - 45,619,999	0.189
13,285 - 13,481	0.284	49,190 - 51,999	0.236	45,620,000 - And Above	0.188
13,482 - 13,684	0.283	52,000 - 55,151	0.235		
13,685 - 13,893	0.282	55,152 - 58,709	0.234		
13,894 - 14,108	0.281	58,710 - 62,758	0.233		
14,109 - 14,330	0.280	62,759 - 67,407	0.232		
14,331 - 14,559	0.279	67,408 - 72,799	0.231		
14,560 - 14,796	0.279	72,800 - 79,130	0.230		
14,797 - 15,041	0.278	79,131 - 86,666	0.229		
15,042 - 15,294	0.277	86,667 - 95,789	0.228		
15,295 - 15,555	0.276	95,790 - 107,058	0.227		
15,556 - 15,826	0.275	107,059 - 121,333	0.226		
15,827 - 16,106	0.274	121,334 - 139,999	0.225		
16,107 - 16,396	0.273	140,000 - 165,454	0.224		
16,397 - 16,697	0.272	165,455 - 200,377	0.223		
16,698 - 17,009	0.271	200,378 - 208,235	0.222		
17,010 - 17,333	0.270	208,236 - 216,734	0.222		
17,334 - 17,669	0.269	216,735 - 225,957	0.221		
17,670 - 18,019	0.268	225,958 - 235,999	0.220		
18,020 - 18,383	0.267	236,000 - 246,976	0.219		
18,384 - 18,762	0.266	246,977 - 259,024	0.218		
18,763 - 19,157	0.265	259,025 - 272,307	0.217		
19,158 - 19,569	0.264	272,308 - 287,027	0.216		
19,570 - 19,999	0.263	287,028 - 303,428	0.215		
20,000 - 20,449	0.262	303,429 - 321,818	0.214	First - 10,000	0.0%
20,450 - 20,919	0.261	321,819 - 342,580	0.213	Next - 190,000	9.1%
20,920 - 21,411	0.260	342,581 - 366,206	0.212	Next - 1,550,000	11.3%
21,412 - 21,927	0.259	366,207 - 393,333	0.211	Over - 1,750,000	12.3%
				Expected Loss and ALAE Ratio:	0.660
				Tax Multiplier:	1.035



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

Type B: 2021-01

WC Premium Range		Expense
From	To	Ratio
0	- 10,099	0.307
10,100	- 10,303	0.306
10,304	- 10,515	0.305
10,516	- 10,736	0.304
10,737	- 10,967	0.303
10,968	- 11,208	0.302
11,209	- 11,460	0.301
11,461	- 11,724	0.300
11,725	- 11,999	0.299
12,000	- 12,289	0.298
12,290	- 12,592	0.297
12,593	- 12,911	0.296
12,912	- 13,246	0.295
13,247	- 13,599	0.294
13,600	- 13,972	0.293
13,973	- 14,366	0.292
14,367	- 14,782	0.291
14,783	- 15,223	0.290
15,224	- 15,692	0.289
15,693	- 16,190	0.288
16,191	- 16,721	0.287
16,722	- 17,288	0.286
17,289	- 17,894	0.285
17,895	- 18,545	0.284
18,546	- 19,245	0.283

WC Premium Range		Expense
From	To	Ratio
19,246	- 19,999	0.282
20,000	- 20,816	0.281
20,817	- 21,702	0.280
21,703	- 22,666	0.279
22,667	- 23,720	0.279
23,721	- 24,878	0.278
24,879	- 26,153	0.277
26,154	- 27,567	0.276
27,568	- 29,142	0.275
29,143	- 30,909	0.274
30,910	- 32,903	0.273
32,904	- 35,172	0.272
35,173	- 37,777	0.271
37,778	- 40,799	0.270
40,800	- 44,347	0.269
44,348	- 48,571	0.268
48,572	- 53,684	0.267
53,685	- 59,999	0.266
60,000	- 67,999	0.265
68,000	- 78,461	0.264
78,462	- 92,727	0.263
92,728	- 113,333	0.262
113,334	- 145,714	0.261
145,715	- 200,606	0.260
200,607	- 213,548	0.259

WC Premium Range		Expense
From	To	Ratio
213,549	- 228,275	0.258
228,276	- 245,185	0.257
245,186	- 264,799	0.256
264,800	- 287,826	0.255
287,827	- 315,238	0.254
315,239	- 348,421	0.253
348,422	- 389,411	0.252
389,412	- 441,333	0.251
441,334	- 509,230	0.250
509,231	- 601,818	0.250
601,819	- 735,555	0.249
735,556	- 945,714	0.248
945,715	- 1,323,999	0.247
1,324,000	- 1,809,565	0.246
1,809,566	- 1,981,904	0.245
1,981,905	- 2,190,526	0.244
2,190,527	- 2,448,235	0.243
2,448,236	- 2,774,666	0.242
2,774,667	- 3,201,538	0.241
3,201,539	- 3,783,636	0.240
3,783,637	- 4,624,444	0.239
4,624,445	- 5,945,714	0.238
5,945,715	- 8,323,999	0.237
8,324,000	- 13,873,333	0.236
13,873,334	- 41,619,999	0.235
41,620,000	- And Above	0.234
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:		0.660
Tax Multiplier:		1.035



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### 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, 2022

### 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. Limited losses are adjusted to an unlimited basis via a non-catastrophe excess ratio (with excess ratios at limits beyond \$50 million set equal to zero)
6. A factor is applied to reflect the impact of proposed indemnity and medical benefit changes
7. The projected unlimited indemnity and medical cost ratios including benefit changes are added to yield the indicated change based on experience, trend, and benefits

The indicated change based on experience, trend, and benefits for this filing is calculated as the average of the indicated changes for each of the individual policy years in the experience period. Lastly, the impact of the change in loss-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.



## IOWA

### EXHIBIT I

#### Determination of Indicated Rate Level Change

##### Section A - Policy Year 2019 Experience

###### Premium:

(1) Standard Earned Premium Developed to Ultimate (Appendix A-II)	\$631,179,316
(2) Premium On-level Factor (Appendix A-I)	0.594
(3) Pure Premium Available for Benefit Costs = (1) x (2)	\$374,920,514

###### Indemnity Benefit Cost:

(4) Limited Indemnity Losses Developed to Ultimate (Appendix A-II)	\$147,626,542
(5) Indemnity Loss On-level Factor (Appendix A-I)	1.000
(6) Adjusted Limited Indemnity Losses = (4) x (5)	\$147,626,542
(7) Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.394
(8) Factor to Reflect Indemnity Trend (Appendix A-III)	0.899
(9) Projected Limited Indemnity Cost Ratio = (7) x (8)	0.354
(10) Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis (Appendix A-II)	1.031
(11) Projected Indemnity Cost Ratio = (9) x (10)	0.365
(12) Factor to Reflect Proposed Changes in Indemnity Benefits (Appendix C)	1.000
(13) Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.365

###### Medical Benefit Cost:

(14) Limited Medical Losses Developed to Ultimate (Appendix A-II)	\$207,494,298
(15) Medical Loss On-level Factor (Appendix A-I)	1.000
(16) Adjusted Limited Medical Losses = (14) x (15)	\$207,494,298
(17) Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.553
(18) Factor to Reflect Medical Trend (Appendix A-III)	0.956
(19) Projected Limited Medical Cost Ratio = (17) x (18)	0.529
(20) Factor to Adjust Medical Cost Ratio to an Unlimited Basis (Appendix A-II)	1.031
(21) Projected Medical Cost Ratio = (19) x (20)	0.545
(22) Factor to Reflect Proposed Changes in Medical Benefits (Appendix C)	1.000
(23) Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.545

###### Total Benefit Cost:

(24) Indicated Change Based on Experience, Trend and Benefits = (13) + (23)	0.910
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## IOWA

### EXHIBIT I

#### Determination of Indicated Rate Level Change

##### Section B - Policy Year 2018 Experience

##### Premium:

(1) Standard Earned Premium Developed to Ultimate (Appendix A-II)	\$696,009,039
(2) Premium On-level Factor (Appendix A-I)	0.524
(3) Pure Premium Available for Benefit Costs = (1) x (2)	\$364,708,736

##### Indemnity Benefit Cost:

(4) Limited Indemnity Losses Developed to Ultimate (Appendix A-II)	\$147,815,266
(5) Indemnity Loss On-level Factor (Appendix A-I)	1.003
(6) Adjusted Limited Indemnity Losses = (4) x (5)	\$148,258,712
(7) Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.407
(8) Factor to Reflect Indemnity Trend (Appendix A-III)	0.867
(9) Projected Limited Indemnity Cost Ratio = (7) x (8)	0.353
(10) Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis (Appendix A-II)	1.031
(11) Projected Indemnity Cost Ratio = (9) x (10)	0.364
(12) Factor to Reflect Proposed Changes in Indemnity Benefits (Appendix C)	1.000
(13) Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.364

##### Medical Benefit Cost:

(14) Limited Medical Losses Developed to Ultimate (Appendix A-II)	\$211,287,825
(15) Medical Loss On-level Factor (Appendix A-I)	1.000
(16) Adjusted Limited Medical Losses = (14) x (15)	\$211,287,825
(17) Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.579
(18) Factor to Reflect Medical Trend (Appendix A-III)	0.941
(19) Projected Limited Medical Cost Ratio = (17) x (18)	0.545
(20) Factor to Adjust Medical Cost Ratio to an Unlimited Basis (Appendix A-II)	1.031
(21) Projected Medical Cost Ratio = (19) x (20)	0.562
(22) Factor to Reflect Proposed Changes in Medical Benefits (Appendix C)	1.000
(23) Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.562

##### Total Benefit Cost:

(24) Indicated Change Based on Experience, Trend and Benefits = (13) + (23)	0.926
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IOWA

EXHIBIT I

**Determination of Indicated Rate Level Change**

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

(1) Policy Year 2019 Indicated Change Based on Experience, Trend, and Benefits	0.910
(2) Policy Year 2018 Indicated Change Based on Experience, Trend, and Benefits	0.926
(3) Indicated Change Based on Experience, Trend, and Benefits = $[(1)+(2)] / 2$	0.918

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

(1) Indicated Rate Level Change	0.918
(2) Effect of the Change in Production and General Expenses (Exhibit II)	1.006
(3) Indicated Change Modified to Reflect the Change in Production and General Expenses = (1) x (2)	0.924

**Section E - Application of the Change in Taxes**

(1) Indicated Rate Level Change	0.924
(2) Effect of the Change in Taxes (Exhibit II)	1.000
(3) Indicated Change Modified to Reflect the Change in Taxes = (1) x (2)	0.924

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

(1) Indicated Rate Level Change	0.924
(2) Effect of the Change in the Profit and Contingency Provision (Exhibit II)	1.014
(3) Indicated Change Modified to Reflect the Change in the Profit and Contingency Provision = (1) x (2)	0.937

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

(1) Indicated Rate Level Change	0.937
(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)	0.945



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EXHIBIT I

Determination of Indicated Rate Level Change

Section H - Distribution of Overall Rate Level Change to Industry Groups

Industry Group Differentials (Appendix A-IV):

Manufacturing	0.997
Contracting	1.011
Office & Clerical	0.989
Goods & Services	0.999
Miscellaneous	1.001

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

Industry Group	(1) Final Overall Rate Level Change	(2) Industry Group Differential	(3) = (1) x (2) Final Rate Level Change by Industry Group	
Manufacturing	0.945	0.997	0.942	(-5.8%)
Contracting	0.945	1.011	0.955	(-4.5%)
Office & Clerical	0.945	0.989	0.935	(-6.5%)
Goods & Services	0.945	0.999	0.944	(-5.6%)
Miscellaneous	0.945	1.001	0.946	(-5.4%)
Overall	0.945	1.000	0.945	(-5.5%)



## Iowa

### Workers Compensation Rate Filing – January 1, 2022

#### 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 after removing the reported COVID-19-related losses.

The reported DCCE and losses from COVID-19-related claims have been excluded from the underlying data in this year's analysis to better reflect the conditions likely to prevail in the proposed effective period. NCCI used the following general methodology to determine the proposed DCCE provision based on 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 19<sup>th</sup> report using DCCE ratio development factors.
- A 19<sup>th</sup>-to-ultimate tail factor is applied to reflect expected development beyond a 19<sup>th</sup> report.
- The proposed DCCE provision is selected based on the ultimate projected DCCE ratios by policy year.

The calculation of the loss adjustment expense provision is shown in Section 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 Section A for more information.



Iowa

**Workers Compensation Rate Filing – January 1, 2022**

**Exhibit II – Workers Compensation Expense Program**

Profit and Contingency Provision

NCCI is proposing to increase the current approved profit and contingency provision of 1.0% to 2.0%. See Appendix D for more information.



**IOWA**  
**EXHIBIT II**

**Section A - 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	18.3%	18.3%
(3) General Expense	5.5%	5.9%
(4) Taxes, Licenses and Fees (other than Federal Income Tax)		
Premium Tax	1.0%	1.0%
Miscellaneous	0.3%	0.3%
Second Injury Fund	1.1%	1.1%
<b>Total</b>	<b>2.4%</b>	<b>2.4%</b>
(5) Profit and Contingency Provision	1.0%	2.0%
(6) Total Overhead Provisions (2)+(3)+(4)+(5)	27.2%	28.6%
(7) Target Cost Ratio [100% - (6)]	72.8%	71.4%
(8) Loss Adjustment Expense	16.9%	17.9%
(9) Loss-based Assessment	0.0%	0.0%
(10) Permissible Loss Ratio (7) / [1+(8)+(9)]	62.3%	60.6%



**IOWA**  
**EXHIBIT II**

**Section B - Calculation of Change in Expense Provisions**

	A Current Expenses	B Col. A with Proposed Prod & Gen Exp	C Col. B with Proposed Taxes	D Col. C with Proposed Profit and Contingency
(1) Production Expense	18.3%	18.3%	18.3%	18.3%
(2) General Expense	5.5%	5.9%	5.9%	5.9%
(3) Taxes	2.4%	2.4%	2.4%	2.4%
(4) Profit and Contingency Provision	<u>1.0%</u>	<u>1.0%</u>	<u>1.0%</u>	<u>2.0%</u>
(5) Total Provisions (1)+(2)+(3)+(4)	27.2%	27.6%	27.6%	28.6%
(6) TCR (100%-(5))	72.8%	72.4%	72.4%	71.4%
(7) Loss Based Expenses	16.9%	17.9%	17.9%	17.9%
(8) Change in Production and General Expense (6A) / (6B)			1.006	+0.6%
(9) Change in Taxes and Assessments (6B) / (6C)			1.000	0.0%
(10) Change in Profit and Contingency Provision (6C) / (6D)			1.014	+1.4%
(11) Change in Loss Based Expenses [1.0 + (7B)]/[1.0 + (7A)]			1.009	+0.9%



## IOWA

### EXHIBIT II

#### **Section C - 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**

**Section D - Derivation of General Expense Provisions**

The data below (amounts in thousands) illustrates that the combination of a 5.9% 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>2018</u>	<u>2019</u>	<u>2020</u>
(1) Direct Earned Premium <i>(NAIC Insurance Expense Exhibit Data)</i>	50,055,106	48,715,850	44,697,279
(1a) Effect of Premium Discounts	0.9283	0.9287	0.9287
(1b) Effect of Schedule Rating	0.9519	0.9542	0.9563
(1c) Effect of Carrier Deviations	1.0361	1.0603	1.0736
(1d) Effect of Deductibles	0.7341	0.7479	0.7615
(1e) Expense Constant Offset	0.9914	0.9906	0.9906
(2) Gross Adjusted Premium <i>(STD Premium @ NCCI Level Excl. Expense Constant)</i> $\{(1) / [(1a) \times (1b) \times (1c) \times (1d)]\} \times (1e)$	73,834,736	68,672,278	60,981,401
(3) Direct General Expenses Incurred <i>(NAIC Insurance Expense Exhibit Data)</i>	3,291,102	3,444,654	3,322,341
(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> $(3) - (2) \times [1 - (1e)] / (1e) \times (3a)$	3,030,872	3,179,891	3,087,230
(5) Ratio of General Expense to Premium <i>(Excluding Expense Constant Revenue)</i> $(4) / (2)$	4.10%	4.63%	5.06%
(6) General Expense Gradations <i>(General Expenses in Average Premium Discount)</i>	1.27%	1.25%	1.23%
(7) General Expense Provision $(5) + (6)$	5.37%	5.88%	6.29%
(8) Selected General Expense Provision			<b>5.9%</b>



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**EXHIBIT II**

**Section E - 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>2018</u>	<u>2019</u>	<u>2020</u>
(1) Direct Written Premium <i>(NAIC Insurance Expense Exhibit Data)</i>	49,778,219	48,542,793	44,395,749
(1a) Effect of Premium Discounts	0.9286	0.9287	0.9287
(1b) Effect of Schedule Rating	0.9532	0.9550	0.9573
(1c) Effect of Carrier Deviations	1.0461	1.0706	1.0758
(1d) Effect of Deductibles	0.7348	0.7615	0.7615
(1e) Expense Constant Offset	0.9911	0.9900	0.9900
(2) Pool Written Premium <i>(Summary of NCCI Managed Pools - Combined Stock and Mutual Company Data)</i>	1,096,491	973,698	900,966
(3) Adjusted Direct Written Premium <i>(STD Premium Excl. Pool Written Premium)</i> [(1)-(2)] / (1a) x (1e)	51,958,282	50,708,952	46,365,710
(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)	72,510,645	66,463,620	60,346,437
(5) Direct Commission & Brokerage Incurred <i>(NAIC Insurance Expense Exhibit Data)</i>	4,460,371	4,366,984	3,982,263
(6) Pool Producer Fees <i>(Summary of NCCI Managed Pools - Combined Stock and Mutual Company Data)</i>	39,215	33,836	29,463
(7) Direct Other Acquisition Expenses Incurred <i>(NAIC Insurance Expense Exhibit Data)</i>	2,580,093	2,417,343	2,212,876
(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)	2,234,142	2,060,655	1,889,017
(9) Ratio of Other Acq. Expenses to Premium <i>(Excluding Expense Constant Revenue)</i> (8)/(4)	3.08%	3.10%	3.13%
(10) Direct Commission & Brokerage Provision [(5)-(6)]/(3)	8.51%	8.55%	8.53%
(11) Production Expense Gradations <i>(Production Expenses in Average Premium Discount)</i>	6.74%	6.65%	6.65%
(12) Production Expense Provision (9)+(10)+(11)	18.33%	18.30%	18.31%
(13) Selected Production Expense Provision			<b>18.3%</b>



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EXHIBIT II

Workers Compensation Loss Adjustment Expense Provision

Section F (a) - Determination of Loss Adjustment Expense Provision

In this filing, NCCI proposes a 17.9% loss adjustment expense allowance as a percentage of 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>Developed DCCE Ratio</u>	<u>Accident Year</u>	<u>Developed AOE Ratio</u>	
2015	7.5%	2016	8.5%	
2016	8.2%	2017	9.1%	
2017	8.1%	2018	9.1%	
2018	8.8%	2019	9.4%	
2019	<u>8.7%</u>	2020	<u>9.8%</u>	
Countrywide selected:			9.4%	
Iowa selected:	8.5%	+	9.4%	= <b>17.9%</b>

Section F (b) - Defense and Cost Containment Expense (DCCE) Ratio

(1) <u>Policy Year</u>	(2) Reported Ratio of Paid DCCE to <u>Paid Losses</u>	(3) Age-to-Ultimate Development <u>Factor</u>	(4) = (2) x (3) <u>Ultimate DCCE Ratio</u>
2015	7.7%	0.971	7.5%
2016	8.4%	0.981	8.2%
2017	8.0%	1.008	8.1%
2018	7.9%	1.111	8.8%
2019	6.7%	1.295	<u>8.7%</u>
		Iowa selected:	8.5%

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

	(5) <u>Current</u>	(6) <u>Proposed</u>
Iowa LAE Provision	16.9%	17.9%
Proposed Change in LAE Provision = [1.000 + (6)] / [1.000 + (5)] - 1		1.009 (+0.9%)



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EXHIBIT II

**Section G - 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**

**Section H - Average Expense Provisions**

Reproduced below are the graduated expense provisions by policy size.

Gradation of Standard Premium

Division of Premium		Expense Gradations		
		Production*	General	Discounts
First	\$10,000	18.3%	5.9%	---
Next	\$190,000	10.8%	4.9%	9.1%
Next	\$1,550,000	9.3%	4.3%	11.3%
Over	\$1,750,000	9.3%	3.4%	12.3%
Proposed Average:		11.6%	4.6%	
Proposed Average Expense Gradation: <i>(Expense for 1st \$10,000 - Avg Expense)</i>		6.7%	1.3%	

Average Premium Discount:  
 $[Avg\ Exp\ Grad] / [1 - Taxes - P\&C] = [6.7\% + 1.3\%] / [1 - 2.4\% - 2.0\%] = 8.4\%$

Composition of Standard Premium:

Benefit & Loss Adj. Cost	Production (18.3%)	General (5.9%)	Profit (2.0%)	Taxes (2.4%)		
71.4%	11.6%	4.6%	1.8%	2.2%	} -- Premium After Discounts (91.6%)	} Standard Premium -- Excluding Expense Constant (100.0%)
	6.7%	1.3%	0.2%	0.2%		
	0.6%	0.4%	0.0%	0.0%	} -- Premium from \$160 expense constant. (1.0% = 1/0.990 - 1)^	

**Notes**

\* The production expense gradations shown are based on Type A gradations.  
 ^ The 0.990 offset is for the \$160 expense constant.

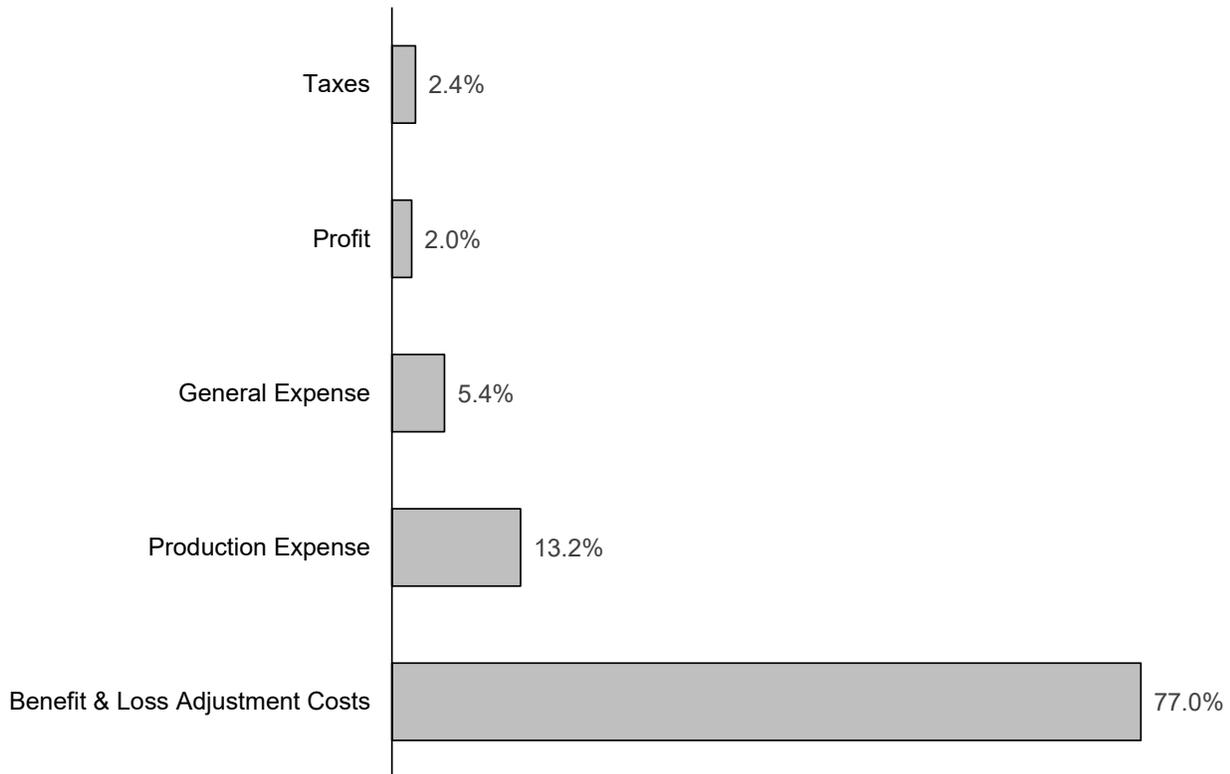


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**EXHIBIT II**

**Section I - 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**

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Benefit & Loss Adjustment Costs	77.0%	=	(71.4% / 92.6%
Production Expense	13.2%	=	(11.6% + 0.6%) / 92.6%
General Expense	5.4%	=	(4.6% + 0.4%) / 92.6%
Profit	2.0%	=	(1.8% + 0.0%) / 92.6%
Taxes	<u>2.4%</u>	=	(2.2% + 0.0%) / 92.6%
<b>Total</b>	<b>100.0%</b>		



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### 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 2019 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 01/01/19	Base	1.000	1.000	1.000	0.973	0.976	0.623	0.592
NR 01/01/20	0.970	0.970						
NR 01/01/21	1.003	0.973						
				1.000				

Section B - Factor Adjusting 2019 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 01/01/19	Base	1.000	1.000	1.000	0.973	0.987	0.623	0.598
NR 01/01/20	0.970	0.970						
NR 01/01/21	1.003	0.973						
				1.000				

Section C - Factor Adjusting 2019 Policy Year Assigned Risk Premium and Voluntary Premium to Present Statewide Level

(1) Assigned Risk Market Share PY 2019	0.040
(2) Voluntary Market Share PY 2019	0.960
(3) Assigned Risk Standard Premium Adjustment Factor (See Sec. A)	0.592
(4) Voluntary Standard Premium Adjustment Factor (See Sec. B)	0.598
(5) Premium Adjustment Factor = [(1)x(3)]/1.398+(2)x(4) #	0.591
(6) Experience Rating Off-balance Adjustment Factor*	1.005
(7) Final Premium Adjustment Factor = (5)x(6)	0.594

NR New and renewal business.

@ Eliminates premium derived from expense constants.

# Current premium index (assigned risk-to-voluntary) = 1.398

\* = 1.005 = 0.948 / 0.943 = (Targeted Off-balance) / (Off-balance for Policy Year 2019)



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APPENDIX A-I

Determination of Policy Year On-level Factors

Section D - Factor Adjusting 2019 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)
01/01/19	Base	1.000	1.000	<u>1.000</u> 1.000	1.000

Section E - Factor Adjusting 2019 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)
01/01/19	Base	1.000	1.000	<u>1.000</u> 1.000	1.000



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APPENDIX A-I

Determination of Policy Year On-level Factors

Section F - 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	0.467	0.467	0.854	0.977	0.623	0.520
NR 06/01/18	0.981	0.981	0.533	0.523				
NR 01/01/19	0.885	0.868						
NR 01/01/20	0.970	0.842						
NR 01/01/21	1.003	0.845						
				0.990				

Section G - 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	0.467	0.467	0.854	0.987	0.623	0.525
NR 06/01/18	0.981	0.981	0.533	0.523				
NR 01/01/19	0.885	0.868						
NR 01/01/20	0.970	0.842						
NR 01/01/21	1.003	0.845						
				0.990				

Section H - 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. F)	0.520
(4) Voluntary Standard Premium Adjustment Factor (See Sec. G)	0.525
(5) Premium Adjustment Factor = [(1)x(3)]/1.398+(2)x(4) #	0.519
(6) Experience Rating Off-balance Adjustment Factor*	1.009
(7) Final Premium Adjustment Factor = (5)x(6)	0.524

NR New and renewal business.

@ Eliminates premium derived from expense constants.

# Current premium index (assigned risk-to-voluntary) = 1.398

\* = 1.009 = 0.948 / 0.940 = (Targeted Off-balance) / (Off-balance for Policy Year 2018)



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APPENDIX A-I

Determination of Policy Year On-level Factors

Section I - 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	0.589	0.589	1.003
01/01/19	1.005	1.005	0.411	0.413	
				<u>1.002</u>	

Section J - 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	0.589	0.589	1.000
01/01/19	1.000	1.000	0.411	0.411	
				<u>1.000</u>	



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### 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 \$7,421,321, based on the volume of premium in policy years 2017 and 2018 underlying the currently approved filing that utilizes data valued as of 12/31/2019. 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, non-catastrophe excess ratio at the base threshold is used to adjust the limited losses to an unlimited basis. The excess ratios are non-catastrophe because excess ratios at limits beyond \$50 million are set equal to zero. The proposed excess ratio in this filing is 3.0%, 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 1<sup>st</sup> report through the 19<sup>th</sup> report.

For indemnity and medical loss development past the 19<sup>th</sup> report, a “tail” factor is used to reflect all future expected emergence. The calculation of indemnity and medical paid + case 19<sup>th</sup>-to-ultimate tail factors utilize all available experience for the years prior to the tail attachment point.



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### Appendix A – Factors Underlying the Proposed Rate Level Change

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 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 12/31/2020

###### Policy Year 2019

(1) Standard Earned Premium	\$628,039,120
(2) Factor to Develop Premium to Ultimate	1.005
(3) Standard Earned Premium Developed to Ultimate = (1)x(2)	\$631,179,316
(4) Limited Indemnity Paid Losses	\$42,650,651
(5) Limited Indemnity Paid Development Factor to Ultimate	3.519
(6) Limited Indemnity Paid Losses Developed to Ultimate = (4)x(5)	\$150,087,641
(7) Limited Indemnity Paid+Case Losses	\$110,475,983
(8) Limited Indemnity Paid+Case Development Factor to Ultimate	1.314
(9) Limited Indemnity Paid+Case Losses Developed to Ultimate = (7)x(8)	\$145,165,442
(10) Policy Year 2019 Limited Indemnity Losses Developed to Ultimate = [(6)+(9)]/2	\$147,626,542
(11) Limited Medical Paid Losses	\$136,912,710
(12) Limited Medical Paid Development Factor to Ultimate	1.504
(13) Limited Medical Paid Losses Developed to Ultimate = (11)x(12)	\$205,916,716
(14) Limited Medical Paid+Case Losses	\$206,388,824
(15) Limited Medical Paid+Case Development Factor to Ultimate	1.013
(16) Limited Medical Paid+Case Losses Developed to Ultimate = (14)x(15)	\$209,071,879
(17) Policy Year 2019 Limited Medical Losses Developed to Ultimate = [(13)+(16)]/2	\$207,494,298



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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 12/31/2020

###### Policy Year 2018

(1) Standard Earned Premium	\$696,705,745
(2) Factor to Develop Premium to Ultimate	0.999
(3) Standard Earned Premium Developed to Ultimate = (1)x(2)	\$696,009,039
(4) Limited Indemnity Paid Losses	\$81,668,265
(5) Limited Indemnity Paid Development Factor to Ultimate	1.848
(6) Limited Indemnity Paid Losses Developed to Ultimate = (4)x(5)	\$150,922,954
(7) Limited Indemnity Paid+Case Losses	\$126,382,164
(8) Limited Indemnity Paid+Case Development Factor to Ultimate	1.145
(9) Limited Indemnity Paid+Case Losses Developed to Ultimate = (7)x(8)	\$144,707,578
(10) Policy Year 2018 Limited Indemnity Losses Developed to Ultimate = [(6)+(9)]/2	\$147,815,266
(11) Limited Medical Paid Losses	\$175,284,572
(12) Limited Medical Paid Development Factor to Ultimate	1.236
(13) Limited Medical Paid Losses Developed to Ultimate = (11)x(12)	\$216,651,731
(14) Limited Medical Paid+Case Losses	\$204,087,135
(15) Limited Medical Paid+Case Development Factor to Ultimate	1.009
(16) Limited Medical Paid+Case Losses Developed to Ultimate = (14)x(15)	\$205,923,919
(17) Policy Year 2018 Limited Medical Losses Developed to Ultimate = [(13)+(16)]/2	\$211,287,825



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APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section B - Premium Development Factors

<u>Policy Year</u>	<u>1st/2nd</u>	<u>Policy Year</u>	<u>2nd/3rd</u>	<u>Policy Year</u>	<u>3rd/4th</u>	<u>Policy Year</u>	<u>4th/5th</u>
2016	1.005	2015	0.999	2014	1.000	2013	1.000
2017	1.007	2016	1.000	2015	1.000	2014	1.000
2018	1.006	2017	0.999	2016	1.000	2015	1.000
Average	1.006	Average	0.999	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>
1.005	0.999	1.000	1.000



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APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section C - Limited Indemnity Paid Loss Development Factors

Policy Year	<u>1st/2nd</u>	Policy Year	<u>2nd/3rd</u>	Policy Year	<u>3rd/4th</u>	Policy Year	<u>4th/5th</u>
2016	1.888	2015	1.379	2014	1.161	2013	1.071
2017	1.867	2016	1.331	2015	1.127	2014	1.049
2018	1.958	2017	1.350	2016	1.126	2015	1.051
Average	1.904	Average	1.353	Average	1.138	Average	1.057
Policy Year	<u>5th/6th</u>	Policy Year	<u>6th/7th</u>	Policy Year	<u>7th/8th</u>	Policy Year	<u>8th/9th</u>
2012	1.031	2011	1.019	2010	1.010	2009	1.009
2013	1.027	2012	1.016	2011	1.010	2010	1.010
2014	1.027	2013	1.013	2012	1.010	2011	1.003
Average	1.028	Average	1.016	Average	1.010	Average	1.007
Policy Year	<u>9th/10th</u>	Policy Year	<u>10th/11th</u>	Policy Year	<u>11th/12th</u>	Policy Year	<u>12th/13th</u>
2008	1.006	2007	1.005	2006	1.010	2005	1.007
2009	1.008	2008	1.004	2007	1.005	2006	1.009
2010	1.007	2009	1.002	2008	1.008	2007	1.002
Average	1.007	Average	1.004	Average	1.008	Average	1.006
Policy Year	<u>13th/14th</u>	Policy Year	<u>14th/15th</u>	Policy Year	<u>15th/16th</u>	Policy Year	<u>16th/17th</u>
2004	1.011	2003	1.003	2002	1.002	2001	1.004
2005	1.005	2004	1.002	2003	1.001	2002	1.002
2006	1.005	2005	1.002	2004	1.005	2003	1.004
Average	1.007	Average	1.002	Average	1.003	Average	1.003
Policy Year	<u>17th/18th</u>	Policy Year	<u>18th/19th</u>				
2000	1.003	1999	1.005				
2001	1.005	2000	1.003				
2002	1.002	2001	1.004				
Average	1.003	Average	1.004				



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APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section D - Limited Medical Paid Loss Development Factors

Policy Year	<u>1st/2nd</u>	Policy Year	<u>2nd/3rd</u>	Policy Year	<u>3rd/4th</u>	Policy Year	<u>4th/5th</u>
2016	1.214	2015	1.065	2014	1.036	2013	1.018
2017	1.204	2016	1.050	2015	1.027	2014	1.022
2018	1.232	2017	1.053	2016	1.024	2015	1.014
Average	1.217	Average	1.056	Average	1.029	Average	1.018
Policy Year	<u>5th/6th</u>	Policy Year	<u>6th/7th</u>	Policy Year	<u>7th/8th</u>	Policy Year	<u>8th/9th</u>
2012	1.009	2011	1.008	2010	1.007	2009	1.009
2013	1.011	2012	1.008	2011	1.007	2010	1.009
2014	1.011	2013	1.007	2012	1.005	2011	1.004
Average	1.010	Average	1.008	Average	1.006	Average	1.007
Policy Year	<u>9th/10th</u>	Policy Year	<u>10th/11th</u>	Policy Year	<u>11th/12th</u>	Policy Year	<u>12th/13th</u>
2008	1.010	2007	1.004	2006	1.005	2005	1.005
2009	1.009	2008	1.004	2007	1.004	2006	1.003
2010	1.006	2009	1.005	2008	1.004	2007	1.002
Average	1.008	Average	1.004	Average	1.004	Average	1.003
Policy Year	<u>13th/14th</u>	Policy Year	<u>14th/15th</u>	Policy Year	<u>15th/16th</u>	Policy Year	<u>16th/17th</u>
2004	1.004	2003	1.003	2002	1.003	2001	1.003
2005	1.004	2004	1.002	2003	1.003	2002	1.004
2006	1.004	2005	1.004	2004	1.003	2003	1.002
Average	1.004	Average	1.003	Average	1.003	Average	1.003
Policy Year	<u>17th/18th</u>	Policy Year	<u>18th/19th</u>				
2000	1.003	1999	1.001				
2001	1.003	2000	1.002				
2002	1.002	2001	1.001				
Average	1.003	Average	1.001				



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APPENDIX A-II

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>
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	1.118	2015	1.062	2014	1.013	2013	1.017
2017	1.100	2016	1.069	2015	1.000	2014	1.013
2018	1.156	2017	1.050	2016	1.029	2015	1.013
Average	1.148	Average	1.072	Average	1.024	Average	1.018
Policy Year	<u>5th/6th</u>	Policy Year	<u>6th/7th</u>	Policy Year	<u>7th/8th</u>	Policy Year	<u>8th/9th</u>
2010	1.007	2009	1.004	2008	1.006	2007	0.999
2011	1.006	2010	1.001	2009	0.996	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
2014	1.000	2013	1.002	2012	1.002	2011	1.000
Average	1.002	Average	1.004	Average	1.002	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>
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	1.000	2005	1.001
2009	0.997	2008	0.998	2007	0.998	2006	0.997
2010	1.001	2009	1.003	2008	1.006	2007	1.000
Average	1.002	Average	1.002	Average	1.001	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>
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	1.003	2003	0.999	2002	1.001
2006	1.014	2005	1.001	2004	0.997	2003	1.001
Average	1.002	Average	1.001	Average	1.000	Average	1.000
Policy Year	<u>17th/18th</u>	Policy Year	<u>18th/19th</u>				
1998	1.002	1997	0.999				
1999	1.002	1998	1.000				
2000	0.999	1999	1.000				
2001	1.001	2000	1.001				
2002	1.000	2001	1.001				
Average	1.001	Average	1.000				



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APPENDIX A-II

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>
2014	1.006	2013	0.989	2012	0.985	2011	0.985
2015	1.022	2014	1.000	2013	0.999	2012	0.997
2016	1.013	2015	0.982	2014	1.010	2013	1.004
2017	1.000	2016	0.992	2015	0.992	2014	1.004
2018	0.980	2017	0.967	2016	0.984	2015	1.003
Average	1.004	Average	0.986	Average	0.994	Average	0.999
Policy Year	<u>5th/6th</u>	Policy Year	<u>6th/7th</u>	Policy Year	<u>7th/8th</u>	Policy Year	<u>8th/9th</u>
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
2014	1.005	2013	0.999	2012	1.004	2011	1.002
Average	0.999	Average	1.007	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>
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	1.003	2006	1.001
2010	0.998	2009	0.996	2008	0.994	2007	1.000
Average	0.999	Average	0.999	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>
2002	1.002	2001	1.005	2000	1.005	1999	1.005
2003	1.004	2002	0.995	2001	1.000	2000	1.000
2004	1.003	2003	0.998	2002	0.997	2001	1.000
2005	1.001	2004	1.001	2003	1.001	2002	1.003
2006	1.002	2005	0.999	2004	1.004	2003	0.993
Average	1.002	Average	1.000	Average	1.001	Average	1.000
Policy Year	<u>17th/18th</u>	Policy Year	<u>18th/19th</u>				
1998	1.008	1997	1.001				
1999	0.998	1998	1.000				
2000	1.001	1999	0.995				
2001	1.002	2000	0.998				
2002	1.002	2001	1.001				
Average	1.002	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
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
2000	110,603,320	110,534,374	2,016,747,056	2,017,835,597	0.836	1.011
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
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
2000	109,409,124	109,018,981	1,596,936,024	1,595,300,991	0.830	0.978
Selected Medical 19th-to-Ultimate Loss Development Factor						1.020

(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
1997	0.985	0.944
1998	0.974	0.972
1999	0.983	0.982
2000	0.984	0.975
2001	0.989	0.985
Selected	0.985	0.970

	Indemnity	Medical
(1) Paid+Case 19th-to-Ultimate Loss Development Factor (Section G)	1.010	1.020
(2) Factor to Adjust 19th-to-Ultimate Development Factor to a Limited Basis	0.683	0.683
(3) Limited Paid+Case 19th-to-Ultimate Loss Development Factor = [(1)-1]x(2)+1	1.007	1.014
(4) Limited Paid-to-Paid+Case Ratio (Section H)	0.985	0.970
(5) Limited Paid 19th-to-Ultimate Loss Development Factor = (3) / (4)	1.022	1.045

Section I - Summary of Limited Paid Loss Development Factors

Report	(1) Indemnity Paid Loss Development		Report	(3) Medical Paid Loss Development	
	to Next Report	to Ultimate		to Next Report	to Ultimate
1st	1.904	3.519	1st	1.217	1.504
2nd	1.353	1.848	2nd	1.056	1.236
3rd	1.138	1.366	3rd	1.029	1.170
4th	1.057	1.200	4th	1.018	1.137
5th	1.028	1.135	5th	1.010	1.117
6th	1.016	1.104	6th	1.008	1.106
7th	1.010	1.087	7th	1.006	1.097
8th	1.007	1.076	8th	1.007	1.090
9th	1.007	1.069	9th	1.008	1.082
10th	1.004	1.062	10th	1.004	1.073
11th	1.008	1.058	11th	1.004	1.069
12th	1.006	1.050	12th	1.003	1.065
13th	1.007	1.044	13th	1.004	1.062
14th	1.002	1.037	14th	1.003	1.058
15th	1.003	1.035	15th	1.003	1.055
16th	1.003	1.032	16th	1.003	1.052
17th	1.003	1.029	17th	1.003	1.049
18th	1.004	1.026	18th	1.001	1.046
19th		1.022	19th		1.045

(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	1.148	1.314	1st	1.004	1.013
2nd	1.072	1.145	2nd	0.986	1.009
3rd	1.024	1.068	3rd	0.994	1.023
4th	1.018	1.043	4th	0.999	1.029
5th	1.002	1.025	5th	0.999	1.030
6th	1.004	1.023	6th	1.007	1.031
7th	1.002	1.019	7th	1.006	1.024
8th	1.002	1.017	8th	1.002	1.018
9th	1.002	1.015	9th	0.999	1.016
10th	1.002	1.013	10th	0.999	1.017
11th	1.001	1.011	11th	1.000	1.018
12th	0.999	1.010	12th	1.000	1.018
13th	1.002	1.011	13th	1.002	1.018
14th	1.001	1.009	14th	1.000	1.016
15th	1.000	1.008	15th	1.001	1.016
16th	1.000	1.008	16th	1.000	1.015
17th	1.001	1.008	17th	1.002	1.015
18th	1.000	1.007	18th	0.999	1.013
19th		1.007	19th		1.014

(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 Rate Effective Period*	7,421,321
(2) Statewide Excess Ratio for (1)	0.030
(3) Market Share for Carriers Missing from Large Loss and Catastrophe Call	0.000
(4) Factor to Adjust Limited Losses to an Unlimited Basis = $1.0 / \{1.0 - [(2) \times (1.0 - (3))]\}$	1.031

Section L - Policy Year Large Loss Limits

Experience Year	Policy Year Detrended Limit
2019	6,576,429
2018	6,336,564
2017	6,149,098
2016	5,972,870
2015	5,842,440
2014	5,675,340
2013	5,475,909
2012	5,339,871
2011	5,203,848
2010	5,051,035
2009	4,900,378
2008	4,839,617
2007	4,755,862
2006	4,589,647
2005	4,418,049
2004	4,273,068
2003	4,105,485
2002	3,943,657
2001	3,825,980
2000	3,714,880
1999	3,593,624
1998	3,464,339
1997	3,312,231

\* November 28, 2022 is the midpoint of the effective period for which the revised rates are being proposed.



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### 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 2005 through 2019 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 Avg Cost Per Case*^	Loss Ratio^	Medical Avg Cost Per Case*^	Loss Ratio^
2005	23.569	23,697	0.559	26,253	0.619
2006	23.274	24,297	0.579	28,399	0.660
2007	23.382	26,045	0.610	29,638	0.694
2008	22.429	27,012	0.604	32,191	0.721
2009	21.532	28,214	0.608	35,579	0.766
2010	21.816	27,713	0.605	33,886	0.739
2011	20.169	26,410	0.532	32,542	0.656
2012	19.649	26,463	0.520	34,103	0.671
2013	19.818	27,770	0.550	34,330	0.680
2014	18.612	27,129	0.505	33,900	0.631
2015	17.133	27,706	0.475	36,132	0.619
2016	15.897	24,551	0.390	33,956	0.539
2017	15.539	26,177	0.407	38,451	0.598
2018	15.381	26,446	0.407	37,692	0.579
2019	14.568	27,028	0.394	37,989	0.553

\* Figures have been adjusted to the common wage level.

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

Section B - Summary of Annual Trend Factors

	<u>Indemnity</u>	<u>Medical</u>
(1) Current Approved Annual Loss Ratio Trend Factor	0.970	0.990
(2) Selected Annual Loss Ratio Trend Factor	<b>0.965</b>	<b>0.985</b>
(3) Length of Trend Period from Midpoint of Policy Year to Midpoint of Effective Period:		
		<u>Years</u>
	Policy Year 2018	3.998
	Policy Year 2019	2.998
(4) Trend Factor Applied to Experience Year = (2) ^ (3)	<u>Indemnity</u>	<u>Medical</u>
	Policy Year 2018	0.941
	Policy Year 2019	0.956



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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	148,465,426	676,947,719	626,853,588	1.177	1.182
Contracting	120,050,568	570,796,995	528,558,018	1.147	1.148
Office & Clerical	64,652,559	303,152,496	280,719,212	1.110	1.119
Goods & Services	208,452,784	983,118,178	910,367,432	1.077	1.086
Miscellaneous	107,615,553	486,625,101	450,614,843	1.117	1.125
Statewide	649,236,891	3,020,640,489	2,797,113,093		

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	147,837,399	674,084,150	624,201,923	1.080	1.000
Contracting	119,945,995	570,299,785	528,097,601	1.080	1.000
Office & Clerical	64,132,565	300,714,273	278,461,416	1.080	1.000
Goods & Services	206,725,275	974,970,789	902,822,951	1.080	1.000
Miscellaneous	106,850,287	483,164,656	447,410,471	1.080	1.000
Statewide	645,491,521	3,003,233,653	2,780,994,362	1.080	



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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 expected excess loss provisions are non-catastrophe and the excess ratios at a loss limit of \$50 million are set equal to zero. The proposed experience change, applicable loss-based expenses and any miscellaneous premium adjustments are applied to calculate the indicated losses. These indicated losses are then balanced to the expected losses using the factors shown in Appendix B-I, Section A-3.

Industry Group	(11) Converted Indicated Balanced Losses	(12) Indicated/ Expected Ratio (11)/[(8)x(10)]	(13) Indicated Differential (12)IG/(12)SW	(14) Lost-Time Claim Counts
Manufacturing	621,482,246	0.996	0.997	11,867
Contracting	535,518,697	1.014	1.015	6,548
Office & Clerical	273,544,884	0.982	0.983	4,699
Goods & Services	901,085,855	0.998	0.999	20,034
Miscellaneous	447,913,209	1.001	1.002	6,423
Statewide	2,779,544,891	0.999		

Industry Group	(15) Full Credibility Standard for Lost-Time Claim Counts	(16) Credibility Minimum of 1.000 and ((14)/(15))^0.5	(17) Credibility Weighted Indicated/Expected Ratio [(16)IGx(12)IG] + [1-(16)IG]x(12)SW*	(18) Final Industry Group Differential (17)IG/(17)SW
Manufacturing	12,000	0.99	0.996	0.997
Contracting	12,000	0.74	1.010	1.011
Office & Clerical	12,000	0.63	0.988	0.989
Goods & Services	12,000	1.00	0.998	0.999
Miscellaneous	12,000	0.73	1.000	1.001
Statewide			0.999	1.000

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



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### 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
3/14-2/15	1.048	1.014	1.079	1.003
3/15-2/16	1.068	1.035	1.084	1.004
3/16-2/17	1.122	1.072	1.094	1.007
3/17-2/18	1.284	1.178	1.092	1.010
3/18-2/19	1.767	1.358	1.136	1.022

**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
3/14-2/15	0.757	0.889
3/15-2/16	0.785	0.902
3/16-2/17	0.813	0.916
3/17-2/18	0.843	0.930
3/18-2/19	0.873	0.944

**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
3/14-2/15	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	1.002	1.013	1.000
3/18-2/19	1.002	1.002	1.002	1.002	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)
3/14-2/15	0.800	0.775	0.813	0.714	0.691	0.813	0.787	0.959	0.892
3/15-2/16	0.846	0.820	0.859	0.755	0.731	0.859	0.833	0.978	0.906
3/16-2/17	0.920	0.879	0.935	0.840	0.803	0.935	0.893	1.002	0.922
3/17-2/18	1.090	1.000	1.096	1.085	0.995	1.096	1.006	1.016	0.939
3/18-2/19	1.546	1.188	1.546	1.546	1.188	1.546	1.188	1.072	0.965

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

**Section A-2 – Expected Excess Provision and Redistribution**

After the application of the primary conversion factors, the limited losses are brought to an expected unlimited level through the application of excess loss factors by hazard group. The expected excess loss provisions are non-catastrophe and the excess ratios at a loss limit of \$50 million are set equal to zero. These factors are shown below.

Hazard Group	A	B	C	D	E	F	G
(1) Excess Ratios	0.108	0.138	0.179	0.201	0.265	0.305	0.339
(2) Excess Factors 1/(1-(1))	1.121	1.160	1.218	1.252	1.361	1.439	1.513

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



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APPENDIX B-I

**Section A-3 – Calculation of Secondary Conversion Factors**

**1. Factors to Adjust for Proposed Industry Group Differentials**

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

	Manufacturing	Contracting	Office and Clerical	Goods and Services	Miscellaneous
(1) Indicated Differentials*	0.997	1.015	0.983	0.999	1.002
(2) Final Differentials**	0.997	1.011	0.989	0.999	1.001
(3) Adjustment (2)/(1)	1.000	0.996	1.006	1.000	0.999

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

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

**2. Factors to Balance Indicated to Expected Losses**

The expected losses are calculated as the pure premium underlying the current 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)
3/14-2/15	0.813	1.122	1.129	0.994	0.808
3/15-2/16	0.856	1.122	1.131	0.992	0.849
3/16-2/17	0.912	1.122	1.127	0.996	0.908
3/17-2/18	0.874	1.122	1.125	0.997	0.871
3/18-2/19	0.848	1.123	1.133	0.991	0.840

**3. Adjustment for Experience Change**

A factor of 0.935 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 1.179 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
3/14-2/15	0.891	0.887	0.896	0.891	0.890
3/15-2/16	0.936	0.932	0.942	0.936	0.935
3/16-2/17	1.001	0.997	1.007	1.001	1.000
3/17-2/18	0.960	0.956	0.966	0.960	0.959
3/18-2/19	0.926	0.922	0.932	0.926	0.925



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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 0.935 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, 0.982 and 0.982, 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	1.169	1.169	1.179	1.179
(2) Loss-based Assessment	1.000	1.000	1.000	1.000
(3) = (1) + (2) – 1.000	1.169	1.169	1.179	1.179
(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	1.177	1.182	0.996
Contracting	1.147	1.148	0.999
Office & Clerical	1.110	1.119	0.992
Goods & Services	1.077	1.086	0.992
Miscellaneous	1.117	1.125	0.993



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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	0.997	1.000	0.997
Contracting	1.011	1.000	1.011
Office & Clerical	0.989	1.000	0.989
Goods & Services	0.999	1.000	0.999
Miscellaneous	1.001	1.000	1.001

\*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	0.920	0.920
Contracting	0.935	0.935
Office & Clerical	0.908	0.908
Goods & Services	0.918	0.918
Miscellaneous	0.920	0.920



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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: \$36,640,644 for indemnity and \$27,911,472 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	0.9938
Contracting	1.0031
Office & Clerical	0.9978
Goods & Services	1.0015
Miscellaneous	1.0128

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	1.182
Contracting	1.148
Office & Clerical	1.119
Goods & Services	1.086
Miscellaneous	1.125

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 0.714 (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 19% above to 31% below
Contracting	from 21% above to 29% below
Office & Clerical	from 19% above to 31% below
Goods & Services	from 19% above to 31% below
Miscellaneous	from 20% above to 30% 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

6045 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
03/01/14 - 02/28/15	0	181,412	0	928,772	2,612,524	763,517	641,874	2,211,735	5,379,488
03/01/15 - 02/29/16	0	500,000	0	1,180,509	1,901,612	374,962	424,530	945,333	5,327,835
03/01/16 - 02/28/17	0	0	0	993,601	1,886,724	297,532	776,338	1,350,798	5,134,633
03/01/17 - 02/28/18	0	0	0	681,220	1,692,915	416,587	1,045,508	1,346,765	7,417,002
03/01/18 - 02/28/19	0	0	0	551,789	1,701,894	826,214	1,016,316	2,574,201	7,439,382

**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
03/01/14 - 02/28/15	0.800	0.775	0.813	0.714	0.691	0.813	0.787	0.959	0.892
03/01/15 - 02/29/16	0.846	0.820	0.859	0.755	0.731	0.859	0.833	0.978	0.906
03/01/16 - 02/28/17	0.920	0.879	0.935	0.840	0.803	0.935	0.893	1.002	0.922
03/01/17 - 02/28/18	1.090	1.000	1.096	1.085	0.995	1.096	1.006	1.016	0.939
03/01/18 - 02/28/19	1.546	1.188	1.546	1.546	1.188	1.546	1.188	1.072	0.965

**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	1.218

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
03/01/14 - 02/28/15	0	158,986	0	749,893	2,041,410	701,942	571,237	2,695,469	6,058,459
03/01/15 - 02/29/16	0	463,635	0	1,007,878	1,571,922	364,227	399,894	1,231,930	6,067,264
03/01/16 - 02/28/17	0	0	0	943,808	1,713,230	314,584	783,961	1,745,649	5,958,888
03/01/17 - 02/28/18	0	0	0	835,813	1,904,803	516,307	1,189,371	1,770,920	8,721,655
03/01/18 - 02/28/19	0	0	0	964,661	2,286,340	1,444,422	1,365,328	3,546,990	9,025,843

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

Policy Period	INDUSTRY GROUP: Office and Clerical
03/01/14 - 02/28/15	0.896
03/01/15 - 02/29/16	0.942
03/01/16 - 02/28/17	1.007
03/01/17 - 02/28/18	0.966
03/01/18 - 02/28/19	0.932

**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
03/01/14 - 02/28/15	9,534,295,939	1,300,844	2,483,383	2,415,140	5,428,379	3,784,227	7,843,519	11,627,746
03/01/15 - 02/29/16	9,775,040,168	1,292,523	2,294,195	1,160,478	5,715,363	3,586,718	6,875,841	10,462,559
03/01/16 - 02/28/17	10,091,927,115	1,267,201	2,514,671	1,757,869	6,000,600	3,781,872	7,758,469	11,540,341
03/01/17 - 02/28/18	10,208,913,342	1,306,148	2,988,972	1,710,709	8,425,119	4,295,120	10,135,828	14,430,948
03/01/18 - 02/28/19	10,683,305,373	2,245,265	3,403,355	3,305,795	8,412,086	5,648,620	11,717,881	17,366,501
Total	50,293,481,937	7,411,981	13,684,576	10,349,991	33,981,547	21,096,557	44,331,538	65,428,095
<b>INDICATED PURE PREMIUM</b>						<b>0.042</b>	<b>0.088</b>	<b>0.13</b>

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

The present on rate level pure premiums are developed by adjusting the pure premiums underlying the current 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	0.050	0.090	0.14
Conversion Factors (App. B-I, Section B)	0.908	0.908	xxx
<b>PURE PREMIUMS PRESENT ON RATE LEVEL (Underlying Pure Premiums) x (Conversion Factor)</b>	<b>0.045</b>	<b>0.082</b>	<b>0.13</b>



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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	0.042	0.088	0.13
2. Pure Premium Indicated by National Relativity	0.036	0.067	0.10
3. Pure Premium Present on Rate Level	0.045	0.082	0.13
4. State Credibilities	80%	100%	xxx
5. National Credibilities	10%	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)	0.042	0.088	0.13
8. Test Correction Factor	0.9978	0.9978	xxx
9. Underlying Pure Premiums = (7) x (8) *	0.042	0.088	0.13
10. Ratio of Manual to Standard Premium			1.119
11. Target Cost Ratio			0.714
12. Rate = (9) x (10) / (11)			0.20
13. Rate Within Swing Limits			0.20
Current Rate x Swing Limits			
a) Lower bound = 0.21 x 0.690 = 0.15			
b) Upper bound = 0.21 x 1.190 = 0.24			
14. Pure Premiums Underlying Proposed Rate* = ((14TOT) / (9TOT)) x (9) ; (14TOT) = (13) x (11) / (10)	0.042	0.088	0.13
15. Disease, Catastrophe and/or Miscellaneous Loadings			0.00
16. Final Loaded Rate			0.20

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



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Ten years of Workers Compensation Statistical Plan (WCSP) data is used to determine the F-classification (F-class) rates. An F-class countrywide pure premium is brought to Iowa's proposed level, and F-class code countrywide relativities are applied to determine indicated rates. The latest year of payroll is extended by both the current and proposed rates. Based on \$2,810,087 of payroll, the overall indicated rate change in Iowa is -25.0%.

**I. Calculation of F-Class Countrywide Pure Premium and F-Class Code Relativities**

Ten years of F-class losses\* across all states for which the National Council on Compensation Insurance compiles workers compensation ratemaking data are converted and adjusted to a countrywide level and used with ten years of F-class countrywide payroll to determine the F-class countrywide pure premiums at both an overall and individual classification level. The F-class code countrywide relativities are then calculated using these pure premiums.

\*Losses are limited to \$500,000 for a single claim occurrence and \$1,500,000 for each multiple claim occurrence.

Note: Texas data is included for policies effective 1/1/2013 and subsequent.

**A. Calculation of Primary Conversion Factors**

Each state's losses are adjusted by its state-specific benefit and trend factors and countrywide development. Below are the adjustments made to Iowa's losses:

**1. Factors to Adjust to a Current Benefit Level**

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

Policy Period	Fatal	State Act			Medical
		Permanent Total (P.T.)	Permanent Partial (P.P.)	Temporary Total (T.T.)	
1/08 - 12/08	1.009	1.025	0.900	1.025	1.000
1/09 - 12/09	1.009	1.025	0.900	1.025	1.000
1/10 - 12/10	1.009	1.025	0.900	1.025	1.000
1/11 - 12/11	1.009	1.025	0.900	1.025	1.000
1/12 - 12/12	1.009	1.025	0.900	1.025	1.000
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

Policy Period	Fatal	Federal Act			Medical
		Permanent Total (P.T.)	Permanent Partial (P.P.)	Temporary Total (T.T.)	
1/08 - 12/08	1.000	1.000	1.000	1.000	1.000
1/09 - 12/09	1.000	1.000	1.000	1.000	1.000
1/10 - 12/10	1.000	1.000	1.000	1.000	1.000
1/11 - 12/11	1.000	1.000	1.000	1.000	1.000
1/12 - 12/12	1.000	1.000	1.000	1.000	1.000
1/13 - 12/13	1.000	1.000	1.000	1.000	1.000
1/14 - 12/14	1.000	1.000	1.000	1.000	1.000
1/15 - 12/15	1.000	1.000	1.000	1.000	1.000
1/16 - 12/16	1.000	1.000	1.000	1.000	1.000
1/17 - 12/17	1.000	1.000	1.000	1.000	1.000

**2. Factors to Trend to 1/1/2022**

The losses are trended from the midpoint of each policy year to 1/1/2022 using the current annual trends of 0.970 and 0.990 for indemnity and medical, respectively.

Policy Period	Indemnity	Medical
1/08 - 12/08	0.671	0.877
1/09 - 12/09	0.692	0.886
1/10 - 12/10	0.713	0.895
1/11 - 12/11	0.735	0.904
1/12 - 12/12	0.758	0.913
1/13 - 12/13	0.782	0.922
1/14 - 12/14	0.806	0.931
1/15 - 12/15	0.831	0.941
1/16 - 12/16	0.856	0.950
1/17 - 12/17	0.883	0.960



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**3. Limited Loss Development Factors**

The losses are developed to an ultimate basis using loss development factors based on countrywide data.\*

Policy Period	Indemnity		Medical	
	Likely-to-Develop	Not-Likely-to-Develop	Likely-to-Develop	Not-Likely-to-Develop
1/08 - 12/08	1.045	1.006	1.111	1.012
1/09 - 12/09	1.048	1.013	1.119	1.028
1/10 - 12/10	1.057	1.020	1.128	1.027
1/11 - 12/11	1.067	1.031	1.127	1.020
1/12 - 12/12	1.058	1.029	1.132	1.010
1/13 - 12/13	1.088	1.040	1.134	1.024
1/14 - 12/14	1.113	1.054	1.176	1.023
1/15 - 12/15	1.281	1.109	1.250	1.024
1/16 - 12/16	1.481	1.254	1.316	1.060
1/17 - 12/17	2.325	1.810	1.527	1.135

\*Excludes Texas.

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

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

Policy Period	State Act								Medical (NL)
	Fatal (L)	Fatal (NL)	P.T.*	P.P. (L)	P.P. (NL)	T.T. (L)	T.T. (NL)	Medical (L)	
1/08 - 12/08	0.708	0.681	0.719	0.631	0.608	0.719	0.692	0.974	0.888
1/09 - 12/09	0.732	0.707	0.743	0.653	0.631	0.743	0.719	0.991	0.911
1/10 - 12/10	0.760	0.734	0.772	0.678	0.655	0.772	0.745	1.010	0.919
1/11 - 12/11	0.791	0.765	0.804	0.706	0.682	0.804	0.777	1.019	0.922
1/12 - 12/12	0.809	0.787	0.822	0.722	0.702	0.822	0.799	1.034	0.922
1/13 - 12/13	0.858	0.821	0.872	0.766	0.732	0.872	0.834	1.046	0.944
1/14 - 12/14	0.905	0.857	0.920	0.807	0.765	0.920	0.871	1.095	0.952
1/15 - 12/15	1.074	0.930	1.091	0.958	0.829	1.091	0.945	1.176	0.964
1/16 - 12/16	1.279	1.083	1.299	1.154	0.977	1.299	1.100	1.250	1.007
1/17 - 12/17	2.067	1.609	2.086	2.039	1.587	2.086	1.624	1.466	1.090

Policy Period	Federal Act								Medical (NL)
	Fatal (L)	Fatal (NL)	P.T.*	P.P. (L)	P.P. (NL)	T.T. (L)	T.T. (NL)	Medical (L)	
1/08 - 12/08	0.701	0.675	0.701	0.701	0.675	0.701	0.675	0.974	0.888
1/09 - 12/09	0.725	0.701	0.725	0.725	0.701	0.725	0.701	0.991	0.911
1/10 - 12/10	0.754	0.727	0.754	0.754	0.727	0.754	0.727	1.010	0.919
1/11 - 12/11	0.784	0.758	0.784	0.784	0.758	0.784	0.758	1.019	0.922
1/12 - 12/12	0.802	0.780	0.802	0.802	0.780	0.802	0.780	1.034	0.922
1/13 - 12/13	0.851	0.813	0.851	0.851	0.813	0.851	0.813	1.046	0.944
1/14 - 12/14	0.897	0.850	0.897	0.897	0.850	0.897	0.850	1.095	0.952
1/15 - 12/15	1.065	0.922	1.065	1.065	0.922	1.065	0.922	1.176	0.964
1/16 - 12/16	1.268	1.073	1.268	1.268	1.073	1.268	1.073	1.250	1.007
1/17 - 12/17	2.053	1.598	2.053	2.053	1.598	2.053	1.598	1.466	1.090

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

**B. Expected Excess Provision and Redistribution**

After the application of the primary conversion factors, each state's limited losses are brought to an expected unlimited level through the application of countrywide excess loss factors by hazard group. The expected excess loss provisions are non-catastrophe and the excess ratios at a loss limit of \$50 million are set equal to zero. The countrywide excess loss factors are shown below:

Hazard Group	A	B	C	D	E	F	G
(1) Excess Ratios	0.079	0.101	0.134	0.151	0.207	0.240	0.274
(2) = 1/(1-(1)) Excess Factors	1.086	1.112	1.155	1.178	1.261	1.316	1.377

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 the primary loss conversion factors.



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**C. Calculation of Total Expected Unlimited Losses**

Using expected unlimited losses, each state's total losses at the countrywide level are a combination of its federal act losses and its state act losses adjusted to the countrywide level.

State act losses are adjusted to a common countrywide level for each state using its state-specific index to countrywide factor by using the steps below:

1. Each state's Hazard Group E average pure premium is calculated by payroll weighting the pure premiums of the industrial codes in Hazard Group E. The average pure premium for Hazard Groups F and G are calculated in a similar manner.
2. Each state's industrial average pure premium is calculated by weighting together the state's hazard group average pure premiums (step 1) by the F-class countrywide payroll distribution of Hazard Groups E, F, and G.
3. The countrywide industrial average pure premium is calculated by payroll weighting each state's industrial average pure premium (step 2) by its respective F-class payroll.
4. Each state's index to countrywide factor is the ratio of the industrial countrywide average pure premium (step 3) to its respective industrial average pure premium (step 2).
5. The adjusted state act losses for each state are calculated by applying the state-specific index to countrywide factor to its state act expected unlimited losses. Iowa's index to countrywide factor is 0.798.

**D. F-Class Countrywide Pure Premium and F-Class Code Relativities**

All states' expected unlimited losses at the countrywide level are summed to determine the F-class overall countrywide pure premium, F-class code countrywide pure premiums, and F-class code countrywide relativities.

Class Code	10-Year Countrywide Payroll	10-Year Expected Unlimited Countrywide Losses	= (2) / ((1)/100) = (3) / (3)CW	
			Countrywide Pure Premium	Countrywide Relativity
6006	285,475,380	13,842,243	4.85	1.410
6801*	24,801,350	385,828	1.56	1.000
6824	474,818,380	18,772,950	3.95	1.148
6825	289,698,605	3,107,916	1.07	0.311
6826	130,250,844	2,914,882	2.24	0.651
6828*	42,894,518	577,268	1.35	1.000
6829*	17,179,079	557,027	3.24	1.000
6843	1,356,336,819	64,095,958	4.73	1.375
6845	248,031,406	6,194,045	2.50	0.727
6872	1,556,953,017	70,722,752	4.54	1.320
6873*	33,450,087	1,693,252	5.06	1.000
6874	113,627,635	6,175,783	5.44	1.581
7309	901,526,126	37,208,286	4.13	1.201
7313	670,874,776	11,325,737	1.69	0.491
7317	1,159,322,995	36,038,706	3.11	0.904
7327	55,654,194	5,073,036	9.12	2.651
7350	644,701,195	20,158,860	3.13	0.910
8709	381,840,788	5,825,272	1.53	0.445
8726	678,866,423	6,787,249	1.00	0.291
9077*	1,120,828	436,201	38.92	1.000
<b>Overall</b>	<b>9,067,424,445</b>	<b>311,893,251</b>	<b>3.44</b>	

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



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**APPENDIX B-IV**

**II. Calculation of Iowa's F-Class Base Pure Premiums and Rate**

Iowa's primary and secondary base pure premiums and final base rate are calculated to bring the F-class overall countrywide pure premium to Iowa's proposed level.

**A. Primary Base Pure Premium Factors**

Using the factors below, Iowa's primary base pure premium is calculated to bring the F-class overall countrywide pure premium to Iowa's level:

**1. State Act Pure Premium Relativity Factor** 1.253  
Calculated as 1 / Iowa's index to countrywide factor (Section I.C)

**2. Countrywide State and Federal Weights**  
Countrywide state and federal losses are used to determine the weights.

i.	State Act Weight (St%)	24%
ii.	Federal Act Weight (Fed%)	76%

**B. Secondary Base Pure Premium Factors**

Using the factors below, Iowa's secondary base pure premium is calculated to incorporate Iowa's proposed trends, benefits, and loss-based expenses on an indemnity and medical basis:

**1. Countrywide Indemnity and Medical Weights**  
Countrywide indemnity and medical losses are used to determine the weights.

i.	Indemnity Weight	49%
ii.	Medical Weight	51%

**2. Indemnity and Medical Trend Factors**  
Iowa's primary base pure premium is trended from 1/1/2022 to the midpoint of the proposed period using the proposed annual trends of 0.965 and 0.985 for indemnity and medical, respectively.

i.	Indemnity Trend Factor	0.968
ii.	Medical Trend Factor	0.986

**3. Indemnity and Medical Benefits**  
Iowa's primary base pure premium is adjusted to proposed state and federal benefit levels using countrywide state and federal weights (Section A.2).

	Indemnity	Medical
(a) State Benefits	1.000	1.000
(b) Federal Benefits	1.000	1.000
Weighted Benefits	1.000	1.000
= [(a) x St%] + [(b) x Fed%]		

**4. Loss-Based Expenses**  
Iowa's primary base pure premium is adjusted by the weighted impact of the proposed state and federal loss-based expenses. The countrywide state and federal weights (Section A.2) are used to determine the weighted effects.

	Indemnity	Medical
(a) State Act Loss Adjustment Expense	1.179	1.179
(b) State Act Loss-Based Assessment	1.000	1.000
(c) Federal Act Loss Adjustment Expense	1.179	1.179
(d) Federal Act Loss-Based Assessment	1.115	1.000
(e) State Act Total = (a) + (b) - 1	1.179	1.179
(f) Federal Act Total = (c) + (d) - 1	1.294	1.179
Weighted Loss-Based Expenses	1.266	1.179
= [(e) x St%] + [(f) x Fed%]		

**C. Final Base Rate Factors**

The following factors are applied to determine Iowa's final base rate:

**1. Additional Offsets** 1.000  
There are no additional offsets applicable in Iowa.

**2. Expense Allowance** 0.714  
The expense allowance (Exhibit II-A) is introduced into the rate by dividing the product of the proposed base pure premiums and the appropriate factors above by the proposed target cost ratio.



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**III. Calculation of Iowa's Proposed Rates by Class Code**

The proposed rates are calculated by applying the items below to Iowa's final base rate.

**A. Application of F-Class Code Relativities**

Rates are calculated for each of Iowa's F-class codes by applying the respective F-class code countrywide relativity factor (Section I.D) to Iowa's final base rate.

**B. Class Code 9077**

Class Code 9077 is calculated as described in Sections I and II but using non-appropriated benefit changes and federal loss-based expenses.

**C. Swing Limits**

The proposed rates are limited to the swing limits based on 25% above and 25% below the current rates.

Classifications Limited by the Upper Swing  
None

Classifications Limited by the Lower Swing  
6824 6826 6843 6845 6872 6874 7309  
7313 7317 7327 7350 8709 8726



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APPENDIX B-IV

Derivation of State Base Rate

	<u>Indemnity</u>	<u>Medical</u>	<u>Total</u>
1. Overall Countrywide Pure Premium (Section I.D)			3.44
2. State Act Pure Premium Relativity Factor (Section II.A.1)			1.253
3. Countrywide State Act Weight (Section II.A.2)			24%
<b>4. Primary Base Pure Premium</b> = [(1) x (2) x (3)] + [(1) x (1 - (3))]			<b>3.65</b>
5. Countrywide Weights (Section II.B.1)	49%	51%	100%
6. Trend Factors (Section II.B.2)	0.968	0.986	xx
7. Weighted Benefits (Section II.B.3)	1.000	1.000	xx
8. Weighted Loss-Based Expenses (Section II.B.4)	1.266	1.179	xx
<b>9. Secondary Base Pure Premium</b> = (4tot) x (5) x (6) x (7) x (8)	2.192	2.164	<b>4.36</b>
10. Additional Offsets (Section II.C.1)			1.000
11. Expense Allowance (Section II.C.2)			0.714
<b>12. Final Base Rate</b> = (9) x (10) / (11)			<b>6.11</b>



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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:

1. Iowa's Final Base Rate	6.11
2. Countrywide Class Code 6872 Relativity (Section I.D)	1.320
3. Rate = (1) x (2)	8.07
4. Rate Within Swing Limits	10.60
Current Rate x Swing Limits	
a) Lower bound = $14.13 \times 0.75 = 10.60$	
a) Upper bound = $14.13 \times 1.25 = 17.66$	
5. Disease, Catastrophe and/or Miscellaneous Loadings	0.00
6. Final Loaded Rate	10.60



Iowa

## **Workers Compensation Rate Filing – January 1, 2022**

### **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



**IOWA**

**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 2020 *	94,000,000
2.) Compensation Payments Reported (on indemnity only) in 2019 *	820,509,290
3.) Assessment Rate on Indemnity Losses (1) / (2)	11.5%

**Breakdown of Losses Under the Longshore and Harbor Workers Act**

4.) Indemnity Losses (Combination of 1st through 3rd reports) #	39,408,883
5.) Medical Losses (Combination of 1st through 3rd reports) #	33,568,865
6.) Total Losses (4) + (5)	72,977,748
7.) Assessment Rate on Total Losses { (3) x (4) } / (6)	6.2%

\* Source: U.S. Department of Labor

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



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### 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  
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**Overview**

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

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

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

**IRR Model Inputs and Results**

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

- The "Static" estimate of the P&C provision assumes that the return on investment and the WACC do not change over time. Static estimates of the return on investment and the WACC are derived using data through the first quarter of 2021.
- 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 2021, with forecasts from April of that year. The starting point for the Dynamic estimates is January 1, 2022.

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 . . . . .		21.00%
(2)	Reserve-to-Surplus Ratio . . . . .		1.84
(3)	Cash Flow Patterns . . . . .		See Table 2
(4)	Return on Investments . . . . .	<u>Static</u>	<u>Dynamic*</u>
		1.74%	2.40% - 4.07%
(5)	Weighted Average Cost of Capital . . . . .	7.93%	8.87% - 10.68%
<u>Results</u>			
(6)	<b>Indicated Profit and Contingency Provision . . . . .</b>	<b>5.17%</b>	<b>3.65%</b>
(7)	Loss and Loss Adjustment Expense Provision [100% - (6) - (1)] . . . . .	73.83%	75.35%

**Table Notes:**

It is assumed that no policyholders dividends are paid and that there are no rate departures (deviations or schedule rating). Note that last year's Profit and Contingency indications inadvertently used an investment portfolio assumption including 2018 assets for Commercial Lines Composite rather than Commercial Casualty Composite in the 3-year average. The updated indications were not materially different than those included in last year's filing: 0.1% difference for the static estimate, and 0.2% different for the dynamic estimate. NCCI's currently approved Profit and Contingency provision was not impacted by the difference in the investment portfolio assumptions used. The indications for the current filing are not impacted.

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

(2) Calculated from Best's 2020 Aggregates & Averages, for Commercial Casualty Composite, as the weighted average of Loss, LAE, and Unearned Premium Reserves to Policyholder Surplus, for years 2015 - 2019.

\* 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	12.46%	3.53%	28.20%	12.56%	0.87%
0.50	29.35%	13.73%	53.40%	28.96%	3.40%
0.75	52.65%	30.38%	79.80%	51.19%	7.53%
1.00	75.98%	52.85%	100.00%	73.14%	13.10%
1.25	89.39%	74.33%		85.21%	22.35%
1.50	97.13%	89.13%		92.18%	31.60%
1.75	100.00%	97.48%		100.00%	40.85%
2.00		100.00%		100.00%	50.10%
2.25				100.00%	54.88%
2.50				100.00%	59.65%
2.75				100.00%	64.43%
3.00				100.00%	69.20%
3.25				100.00%	71.78%
3.50				100.00%	74.35%
3.75				100.00%	76.93%
4.00				100.00%	79.50%
4.25				100.00%	80.88%
4.50				100.00%	82.25%
4.75				100.00%	83.63%
5.00				100.00%	85.00%
6.00				100.00%	87.90%
7.00				100.00%	89.40%
8.00				100.00%	90.40%
9.00				100.00%	91.10%
10.00				100.00%	91.90%
11.00				100.00%	92.70%
12.00				100.00%	93.00%
13.00				100.00%	93.70%
14.00				100.00%	94.00%
15.00				100.00%	94.60%
16.00				100.00%	94.90%
17.00				100.00%	95.20%
18.00				100.00%	95.40%
19.00				100.00%	95.80%
20.00				100.00%	96.10%
21.00				100.00%	96.50%
22.00				100.00%	96.60%
23.00				100.00%	97.00%
24.00				100.00%	97.10%
25.00				100.00%	97.60%
26.00				100.00%	97.70%
27.00				100.00%	98.00%
28.00				100.00%	98.20%
29.00				100.00%	98.30%
30.00				100.00%	98.40%
31.00				100.00%	98.70%
32.00				100.00%	99.08%
33.00				100.00%	99.42%
34.00				100.00%	99.72%
35.00					100.00%

TABLE 3: DYNAMIC ESTIMATE  
INPUTS

Time	(1) Return on Investments	(2) Weighted Average Cost of Capital
0.00	-	-
0.25	2.40%	8.87%
0.50	2.41%	8.93%
0.75	2.43%	9.03%
1.00	2.44%	9.07%
1.25	2.46%	9.19%
1.50	2.49%	9.38%
1.75	2.55%	9.59%
2.00	2.57%	9.75%
2.25	2.63%	9.92%
2.50	2.66%	10.06%
2.75	3.11%	10.20%
3.00	3.14%	10.33%
3.25	3.19%	10.44%
3.50	3.21%	10.54%
3.75	3.25%	10.62%
4.00	3.26%	10.69%
4.25	3.27%	10.75%
4.50	3.28%	10.79%
4.75	3.28%	10.83%
5.00	3.28%	10.87%
6.00	3.50%	10.89%
7.00	3.49%	10.86%
8.00	3.67%	10.80%
9.00	3.86%	10.75%
10.00	3.86%	10.73%
11.00	3.86%	10.72%
12.00	3.86%	10.71%
13.00	3.87%	10.71%
14.00	3.88%	10.70%
15.00	3.88%	10.70%
16.00	4.01%	10.70%
17.00	4.01%	10.69%
18.00	4.01%	10.69%
19.00	4.01%	10.70%
20.00	4.02%	10.71%
21.00	4.09%	10.72%
22.00	4.09%	10.71%
23.00	4.09%	10.70%
24.00	4.08%	10.70%
25.00	4.08%	10.69%
26.00	4.08%	10.69%
27.00	4.08%	10.68%
28.00	4.07%	10.68%
29.00	4.07%	10.68%
30.00	4.07%	10.68%
31.00	4.07%	10.68%
32.00	4.07%	10.68%
33.00	4.07%	10.68%
34.00	4.07%	10.68%
35.00	4.07%	10.68%

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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**Calculation Details**

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

List of Tables

Static Estimate

Table 4: Derivation of Insurance Cash Flows

Table 5: Derivation of Cash Flows to the Capital Providers

Dynamic Estimate

Table 6: Derivation of Insurance Cash Flows

Table 7: Derivation of Cash Flows to the Capital Providers

Appendices

Appendix A: Calculation of Weighted Average Cost of Capital and Return on Investments

Table A.1: Calculation of Weighted Average Cost of Capital

Table A.2: Calculation of Return on Investments

Appendix B: Federal Income Tax Incurred from Insurance Operations

Table B.1: Federal Income Tax Calculation (Static Estimate)

Table B.2: Federal Income Tax Calculation (Dynamic Estimate)

Appendix C: Reserve-to-Surplus Ratio

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



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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	0.1246	0.0264	0.0065	0.0070	0.0847
0.50	0.2935	0.0608	0.0251	0.0141	0.1935
0.75	0.5265	0.1075	0.0556	0.0211	0.3423
1.00	0.7598	0.1536	0.0967	0.0281	0.4814
1.25	0.8939	0.1789	0.1650	0.0263	0.5236
1.50	0.9713	0.1936	0.2333	0.0245	0.5199
1.75	1.0000	0.2100	0.3016	0.0227	0.4657
2.00	1.0000	0.2100	0.3699	0.0209	0.3992
2.25	1.0000	0.2100	0.4051	0.0202	0.3647
2.50	1.0000	0.2100	0.4404	0.0194	0.3302
2.75	1.0000	0.2100	0.4756	0.0186	0.2958
3.00	1.0000	0.2100	0.5109	0.0178	0.2613
3.25	1.0000	0.2100	0.5299	0.0173	0.2428
3.50	1.0000	0.2100	0.5489	0.0168	0.2242
3.75	1.0000	0.2100	0.5679	0.0164	0.2057
4.00	1.0000	0.2100	0.5869	0.0159	0.1872
4.25	1.0000	0.2100	0.5971	0.0156	0.1773
4.50	1.0000	0.2100	0.6072	0.0153	0.1674
4.75	1.0000	0.2100	0.6174	0.0151	0.1575
5.00	1.0000	0.2100	0.6275	0.0148	0.1476
6.00	1.0000	0.2100	0.6490	0.0141	0.1269
7.00	1.0000	0.2100	0.6600	0.0138	0.1162
8.00	1.0000	0.2100	0.6674	0.0134	0.1092
9.00	1.0000	0.2100	0.6726	0.0131	0.1043
10.00	1.0000	0.2100	0.6785	0.0127	0.0988
11.00	1.0000	0.2100	0.6844	0.0124	0.0932
12.00	1.0000	0.2100	0.6866	0.0122	0.0912
13.00	1.0000	0.2100	0.6918	0.0119	0.0863
14.00	1.0000	0.2100	0.6940	0.0117	0.0843
15.00	1.0000	0.2100	0.6984	0.0115	0.0800
16.00	1.0000	0.2100	0.7006	0.0114	0.0780
17.00	1.0000	0.2100	0.7029	0.0113	0.0759
18.00	1.0000	0.2100	0.7043	0.0111	0.0745
19.00	1.0000	0.2100	0.7073	0.0110	0.0717
20.00	1.0000	0.2100	0.7095	0.0110	0.0695
21.00	1.0000	0.2100	0.7125	0.0109	0.0666
22.00	1.0000	0.2100	0.7132	0.0109	0.0659
23.00	1.0000	0.2100	0.7161	0.0109	0.0629
24.00	1.0000	0.2100	0.7169	0.0109	0.0622
25.00	1.0000	0.2100	0.7206	0.0109	0.0585
26.00	1.0000	0.2100	0.7213	0.0109	0.0578
27.00	1.0000	0.2100	0.7235	0.0109	0.0556
28.00	1.0000	0.2100	0.7250	0.0109	0.0541
29.00	1.0000	0.2100	0.7257	0.0109	0.0534
30.00	1.0000	0.2100	0.7265	0.0109	0.0526
31.00	1.0000	0.2100	0.7287	0.0109	0.0504
32.00	1.0000	0.2100	0.7315	0.0109	0.0476
33.00	1.0000	0.2100	0.7340	0.0109	0.0451
34.00	1.0000	0.2100	0.7363	0.0109	0.0429
35.00	1.0000	0.2100	0.7383	0.0109	0.0408

**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	0.2663	0.1447	0.2537	0.0005	(0.1684)	(0.1684)	(0.1668)
0.50	0.4730	0.2570	0.4895	0.0021	(0.2939)	(0.1255)	(0.1219)
0.75	0.6629	0.3603	0.7517	0.0048	(0.4045)	(0.1107)	(0.1055)
1.00	0.7650	0.4157	0.9405	0.0085	(0.4507)	(0.0461)	(0.0432)
1.25	0.6405	0.3481	0.8825	0.0124	(0.3464)	0.1042	0.0957
1.50	0.5335	0.2899	0.7947	0.0160	(0.2588)	0.0877	0.0789
1.75	0.4433	0.2409	0.6842	0.0192	(0.1994)	0.0594	0.0525
2.00	0.3684	0.2002	0.5686	0.0219	(0.1475)	0.0518	0.0449
2.25	0.3332	0.1811	0.5142	0.0242	(0.1253)	0.0223	0.0189
2.50	0.2979	0.1619	0.4598	0.0263	(0.1032)	0.0221	0.0184
2.75	0.2626	0.1427	0.4054	0.0282	(0.0814)	0.0218	0.0179
3.00	0.2274	0.1236	0.3510	0.0298	(0.0598)	0.0216	0.0173
3.25	0.2084	0.1133	0.3216	0.0313	(0.0476)	0.0123	0.0097
3.50	0.1894	0.1029	0.2923	0.0326	(0.0354)	0.0121	0.0094
3.75	0.1704	0.0926	0.2629	0.0338	(0.0234)	0.0120	0.0091
4.00	0.1514	0.0823	0.2336	0.0349	(0.0115)	0.0119	0.0088
4.25	0.1412	0.0767	0.2179	0.0359	(0.0048)	0.0068	0.0049
4.50	0.1310	0.0712	0.2023	0.0368	0.0019	0.0067	0.0048
4.75	0.1209	0.0657	0.1866	0.0376	0.0085	0.0066	0.0047
5.00	0.1107	0.0602	0.1709	0.0384	0.0151	0.0066	0.0045
6.00	0.0893	0.0486	0.1379	0.0411	0.0301	0.0150	0.0098
7.00	0.0783	0.0425	0.1208	0.0433	0.0387	0.0087	0.0053
8.00	0.0709	0.0385	0.1094	0.0453	0.0451	0.0064	0.0036
9.00	0.0657	0.0357	0.1014	0.0471	0.0500	0.0049	0.0026
10.00	0.0598	0.0325	0.0923	0.0488	0.0553	0.0053	0.0025
11.00	0.0539	0.0293	0.0832	0.0503	0.0604	0.0051	0.0023
12.00	0.0517	0.0281	0.0798	0.0518	0.0632	0.0028	0.0012
13.00	0.0465	0.0253	0.0718	0.0531	0.0676	0.0044	0.0017
14.00	0.0443	0.0241	0.0684	0.0543	0.0702	0.0026	0.0009
15.00	0.0399	0.0217	0.0615	0.0554	0.0739	0.0037	0.0012
16.00	0.0377	0.0205	0.0581	0.0565	0.0763	0.0024	0.0007
17.00	0.0354	0.0193	0.0547	0.0574	0.0786	0.0023	0.0007
18.00	0.0340	0.0185	0.0524	0.0584	0.0805	0.0019	0.0005
19.00	0.0310	0.0169	0.0479	0.0592	0.0831	0.0026	0.0006
20.00	0.0288	0.0156	0.0444	0.0600	0.0851	0.0021	0.0005
21.00	0.0258	0.0140	0.0399	0.0608	0.0875	0.0024	0.0005
22.00	0.0251	0.0136	0.0387	0.0614	0.0886	0.0011	0.0002
23.00	0.0221	0.0120	0.0342	0.0621	0.0908	0.0022	0.0004
24.00	0.0214	0.0116	0.0330	0.0627	0.0918	0.0010	0.0002
25.00	0.0177	0.0096	0.0273	0.0632	0.0944	0.0025	0.0004
26.00	0.0170	0.0092	0.0262	0.0637	0.0952	0.0009	0.0001
27.00	0.0148	0.0080	0.0228	0.0641	0.0969	0.0016	0.0002
28.00	0.0133	0.0072	0.0205	0.0645	0.0980	0.0012	0.0001
29.00	0.0126	0.0068	0.0194	0.0648	0.0988	0.0007	0.0001
30.00	0.0118	0.0064	0.0182	0.0651	0.0995	0.0007	0.0001
31.00	0.0096	0.0052	0.0148	0.0654	0.1010	0.0015	0.0001
32.00	0.0068	0.0037	0.0105	0.0656	0.1028	0.0017	0.0002
33.00	0.0043	0.0023	0.0066	0.0658	0.1043	0.0015	0.0001
34.00	0.0020	0.0011	0.0031	0.0659	0.1056	0.0013	0.0001
35.00	-	-	-	0.0659	0.1067	0.0011	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	0.1246	0.0264	0.0066	0.0067	0.0850
0.50	0.2935	0.0608	0.0256	0.0133	0.1937
0.75	0.5265	0.1075	0.0567	0.0200	0.3423
1.00	0.7598	0.1536	0.0987	0.0267	0.4808
1.25	0.8939	0.1789	0.1684	0.0245	0.5220
1.50	0.9713	0.1936	0.2381	0.0223	0.5173
1.75	1.0000	0.2100	0.3078	0.0201	0.4620
2.00	1.0000	0.2100	0.3775	0.0180	0.3945
2.25	1.0000	0.2100	0.4135	0.0171	0.3593
2.50	1.0000	0.2100	0.4495	0.0163	0.3242
2.75	1.0000	0.2100	0.4855	0.0155	0.2890
3.00	1.0000	0.2100	0.5215	0.0147	0.2538
3.25	1.0000	0.2100	0.5409	0.0142	0.2349
3.50	1.0000	0.2100	0.5603	0.0137	0.2160
3.75	1.0000	0.2100	0.5797	0.0133	0.1971
4.00	1.0000	0.2100	0.5991	0.0128	0.1782
4.25	1.0000	0.2100	0.6094	0.0125	0.1681
4.50	1.0000	0.2100	0.6198	0.0122	0.1580
4.75	1.0000	0.2100	0.6302	0.0120	0.1479
5.00	1.0000	0.2100	0.6405	0.0117	0.1378
6.00	1.0000	0.2100	0.6624	0.0110	0.1166
7.00	1.0000	0.2100	0.6737	0.0106	0.1057
8.00	1.0000	0.2100	0.6812	0.0102	0.0986
9.00	1.0000	0.2100	0.6865	0.0099	0.0936
10.00	1.0000	0.2100	0.6925	0.0096	0.0879
11.00	1.0000	0.2100	0.6985	0.0092	0.0823
12.00	1.0000	0.2100	0.7008	0.0090	0.0802
13.00	1.0000	0.2100	0.7061	0.0087	0.0752
14.00	1.0000	0.2100	0.7083	0.0086	0.0731
15.00	1.0000	0.2100	0.7129	0.0084	0.0688
16.00	1.0000	0.2100	0.7151	0.0082	0.0667
17.00	1.0000	0.2100	0.7174	0.0081	0.0646
18.00	1.0000	0.2100	0.7189	0.0079	0.0632
19.00	1.0000	0.2100	0.7219	0.0078	0.0603
20.00	1.0000	0.2100	0.7242	0.0078	0.0581
21.00	1.0000	0.2100	0.7272	0.0077	0.0551
22.00	1.0000	0.2100	0.7279	0.0077	0.0543
23.00	1.0000	0.2100	0.7309	0.0077	0.0513
24.00	1.0000	0.2100	0.7317	0.0077	0.0506
25.00	1.0000	0.2100	0.7355	0.0077	0.0468
26.00	1.0000	0.2100	0.7362	0.0077	0.0461
27.00	1.0000	0.2100	0.7385	0.0077	0.0438
28.00	1.0000	0.2100	0.7400	0.0077	0.0423
29.00	1.0000	0.2100	0.7407	0.0077	0.0416
30.00	1.0000	0.2100	0.7415	0.0077	0.0408
31.00	1.0000	0.2100	0.7437	0.0077	0.0386
32.00	1.0000	0.2100	0.7466	0.0077	0.0357
33.00	1.0000	0.2100	0.7492	0.0077	0.0332
34.00	1.0000	0.2100	0.7515	0.0077	0.0309
35.00	1.0000	0.2100	0.7535	0.0077	0.0288

**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	0.2667	0.1450	0.2543	0.0008	(0.1686)	(0.1686)	0.9894	(0.1668)
0.50	0.4745	0.2579	0.4919	0.0030	(0.2952)	(0.1267)	0.9685	(0.1227)
0.75	0.6664	0.3622	0.7571	0.0067	(0.4081)	(0.1128)	0.9478	(0.1069)
1.00	0.7710	0.4190	0.9499	0.0119	(0.4572)	(0.0491)	0.9274	(0.0455)
1.25	0.6484	0.3524	0.8947	0.0175	(0.3551)	0.1020	0.9073	0.0926
1.50	0.5422	0.2947	0.8082	0.0228	(0.2682)	0.0870	0.8872	0.0772
1.75	0.4519	0.2456	0.6976	0.0275	(0.2080)	0.0602	0.8671	0.0522
2.00	0.3760	0.2044	0.5804	0.0316	(0.1543)	0.0537	0.8472	0.0455
2.25	0.3400	0.1848	0.5248	0.0352	(0.1303)	0.0240	0.8274	0.0198
2.50	0.3041	0.1652	0.4693	0.0385	(0.1067)	0.0236	0.8078	0.0191
2.75	0.2681	0.1457	0.4138	0.0419	(0.0829)	0.0238	0.7884	0.0187
3.00	0.2321	0.1261	0.3582	0.0449	(0.0595)	0.0234	0.7693	0.0180
3.25	0.2127	0.1156	0.3283	0.0476	(0.0458)	0.0137	0.7504	0.0103
3.50	0.1933	0.1050	0.2983	0.0500	(0.0323)	0.0135	0.7318	0.0099
3.75	0.1739	0.0945	0.2684	0.0523	(0.0190)	0.0133	0.7136	0.0095
4.00	0.1545	0.0840	0.2384	0.0544	(0.0059)	0.0131	0.6957	0.0091
4.25	0.1441	0.0783	0.2224	0.0562	0.0019	0.0078	0.6782	0.0053
4.50	0.1338	0.0727	0.2064	0.0580	0.0095	0.0076	0.6610	0.0051
4.75	0.1234	0.0671	0.1905	0.0596	0.0170	0.0075	0.6442	0.0048
5.00	0.1130	0.0614	0.1745	0.0611	0.0244	0.0074	0.6278	0.0046
6.00	0.0912	0.0496	0.1407	0.0666	0.0425	0.0181	0.5885	0.0106
7.00	0.0799	0.0434	0.1233	0.0712	0.0536	0.0112	0.5309	0.0059
8.00	0.0723	0.0393	0.1117	0.0755	0.0624	0.0088	0.4791	0.0042
9.00	0.0671	0.0364	0.1035	0.0796	0.0697	0.0073	0.4326	0.0032
10.00	0.0610	0.0332	0.0942	0.0835	0.0772	0.0075	0.3907	0.0029
11.00	0.0550	0.0299	0.0849	0.0869	0.0843	0.0071	0.3529	0.0025
12.00	0.0527	0.0287	0.0814	0.0901	0.0889	0.0046	0.3187	0.0015
13.00	0.0475	0.0258	0.0733	0.0931	0.0950	0.0061	0.2879	0.0018
14.00	0.0452	0.0246	0.0698	0.0959	0.0992	0.0042	0.2601	0.0011
15.00	0.0407	0.0221	0.0628	0.0985	0.1045	0.0052	0.2349	0.0012
16.00	0.0384	0.0209	0.0593	0.1009	0.1083	0.0038	0.2122	0.0008
17.00	0.0362	0.0197	0.0558	0.1032	0.1120	0.0037	0.1917	0.0007
18.00	0.0347	0.0188	0.0535	0.1054	0.1151	0.0031	0.1732	0.0005
19.00	0.0316	0.0172	0.0488	0.1075	0.1189	0.0038	0.1565	0.0006
20.00	0.0294	0.0160	0.0454	0.1094	0.1221	0.0032	0.1413	0.0005
21.00	0.0264	0.0143	0.0407	0.1111	0.1255	0.0034	0.1276	0.0004
22.00	0.0256	0.0139	0.0395	0.1128	0.1276	0.0021	0.1153	0.0002
23.00	0.0226	0.0123	0.0349	0.1143	0.1307	0.0032	0.1041	0.0003
24.00	0.0219	0.0119	0.0337	0.1157	0.1325	0.0018	0.0941	0.0002
25.00	0.0181	0.0098	0.0279	0.1170	0.1359	0.0033	0.0850	0.0003
26.00	0.0173	0.0094	0.0268	0.1181	0.1374	0.0015	0.0768	0.0001
27.00	0.0151	0.0082	0.0233	0.1191	0.1396	0.0023	0.0694	0.0002
28.00	0.0136	0.0074	0.0209	0.1200	0.1414	0.0017	0.0627	0.0001
29.00	0.0128	0.0070	0.0198	0.1208	0.1426	0.0012	0.0566	0.0001
30.00	0.0121	0.0066	0.0186	0.1216	0.1438	0.0012	0.0512	0.0001
31.00	0.0098	0.0053	0.0151	0.1223	0.1457	0.0019	0.0462	0.0001
32.00	0.0069	0.0038	0.0107	0.1228	0.1478	0.0021	0.0418	0.0001
33.00	0.0044	0.0024	0.0068	0.1232	0.1496	0.0018	0.0377	0.0001
34.00	0.0021	0.0011	0.0032	0.1234	0.1510	0.0015	0.0341	0.0000
35.00	-	-	-	0.1234	0.1522	0.0012	0.0308	0.0000

**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	0.62%	1.82%	2.52%	3.70%
(2) US Equity Market Risk Premium	8.50%			
(3) Beta for Property/Casualty (P/C) Insurers	0.99			
(4) Equity Cost of Capital for P/C Insurers	9.03%	10.24%	10.93%	12.11%
(5) Share of Equity Capital for P/C Insurers	84%			
(6) Debt Cost of Capital for P/C Insurers	2.16%	2.95%	3.52%	4.33%
(7) Weighted Average Cost of Capital (WACC)	7.93%	9.07%	9.75%	10.87%

Column Notes:

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



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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	74.3%							
Government Direct Obligations	6.7%							
< 1yr	2.0%	6 mo US T-bill	0.50 yrs	21.00%	0.05%	0.29%	0.72%	2.11%
1 – 5 yrs	2.9%	2.5 yr US T-note	2.50 yrs	21.00%	0.15%	0.81%	0.81%	2.01%
5 – 10 yrs	1.1%	7.5 yr US T-note	7.50 yrs	21.00%	0.84%	1.57%	1.57%	1.57%
10 – 20 yrs	0.2%	15 yr US T-note	15.00 yrs	21.00%	1.29%	1.98%	1.98%	1.98%
> 20 yrs	0.4%	20 yr US T-note	20.00 yrs	21.00%	1.53%	2.28%	2.28%	2.28%
Collateralized Securities	8.0%							
< 1yr	1.0%	6 mo US T-bill + 50 basis points	0.50 yrs	21.00%	0.45%	0.68%	1.12%	2.51%
1 – 5 yrs	2.9%	2.5 yr US T-note + 50 basis points	2.50 yrs	21.00%	0.55%	1.20%	1.20%	2.41%
5 – 10 yrs	2.3%	7.5 yr US T-note + 50 basis points	7.50 yrs	21.00%	1.23%	1.97%	1.97%	1.97%
10 – 20 yrs	1.4%	15 yr US T-note + 50 basis points	15.00 yrs	21.00%	1.69%	2.37%	2.37%	2.37%
> 20 yrs	0.4%	20 yr US T-note + 50 basis points	20.00 yrs	21.00%	1.93%	2.67%	2.67%	2.67%
Tax-exempt Bonds	22.0%							
< 1yr	1.4%	6 mo US T-bill + Tax-exempt spread	0.50 yrs	5.25%	0.21%	0.49%	1.02%	2.69%
1 – 5 yrs	6.3%	2.5 yr US T-note + Tax-exempt spread	2.50 yrs	5.25%	0.37%	1.16%	1.16%	2.61%
5 – 10 yrs	6.8%	7.5 yr US T-note + Tax-exempt spread	7.50 yrs	5.25%	1.20%	2.08%	2.08%	2.08%
10 – 20 yrs	5.8%	15 yr US T-note + Tax-exempt spread	15.00 yrs	5.25%	1.86%	2.68%	2.68%	2.68%
> 20 yrs	1.7%	20 yr US T-note + Tax-exempt spread	20.00 yrs	5.25%	2.26%	3.14%	3.14%	3.14%
Industrial and Hybrid Securities (unaffiliated)	37.4%							
< 1yr	4.0%	6 mo US T-bill + Corp spread	0.50 yrs	21.00%	0.57%	0.80%	1.24%	2.63%
1 – 5 yrs	16.1%	2.5 yr US T-note + Corp spread	2.50 yrs	21.00%	0.90%	1.56%	1.56%	2.77%
5 – 10 yrs	13.5%	7.5 yr US T-note + Corp spread	7.50 yrs	21.00%	1.89%	2.62%	2.62%	2.62%
10 – 20 yrs	2.1%	15 yr US T-note + Corp spread	15.00 yrs	21.00%	2.45%	3.13%	3.13%	3.13%
> 20 yrs	1.7%	20 yr US T-note + Corp spread	20.00 yrs	21.00%	2.70%	3.43%	3.43%	3.43%
Industrial and Hybrid Securities (affiliated)	0.2%							
< 1yr	0.0%	6 mo US T-bill + Corp spread	0.50 yrs	5.25%	0.68%	0.97%	1.49%	3.16%
1 – 5 yrs	0.1%	2.5 yr US T-note + Corp spread	2.50 yrs	5.25%	1.08%	1.87%	1.87%	3.32%
5 – 10 yrs	0.0%	7.5 yr US T-note + Corp spread	7.50 yrs	5.25%	2.26%	3.15%	3.15%	3.15%
10 – 20 yrs	0.0%	15 yr US T-note + Corp spread	15.00 yrs	5.25%	2.94%	3.76%	3.76%	3.76%
> 20 yrs	0.0%	20 yr US T-note + Corp spread	20.00 yrs	5.25%	3.23%	4.11%	4.11%	4.11%
Stocks, of which	11.4%							
Preferred Stock	0.5%	5 year US T-note + 425 basis points	0.25 yrs	13.13%	4.23%	5.28%	5.88%	6.91%
Common Stock	10.9%	5 year US T-note + 850 basis points	0.25 yrs	18.42%	7.44%	8.42%	8.99%	9.95%
Mortgage Loans	2.4%							
Real Estate	0.5%							
Cash & Short-Term Investment	3.7%	3 month US T-bill	0.25 yrs	21.00%	0.04%	0.20%	0.75%	2.00%
All Other Assets*	7.6%							
Post-Tax Return on Invested Funds, pre-Expense:					1.92%	2.62%	2.75%	3.46%
Investment Expense**:					-0.18%	-0.18%	-0.18%	-0.18%
Post-Tax Return on Invested Funds:					<b>1.74%</b>	<b>2.44%</b>	<b>2.57%</b>	<b>3.28%</b>

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 2017-2019, calculated from annual editions of Best's Aggregates & Averages (Property-Casualty), Assets for Commercial Casualty Composite, page number varies by edition, Column 3, Net Admitted Assets.  
For each year 2017-2019, 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 2021.
- (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 2019 is from the Annual Statement, Exhibit of Net Investment Income.

Average cash and invested assets for 2018 and 2019 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	0.4715	0.1536	0.8756	0.0967	0.0967	-	0.2385	-	0.0281
2.00	1.0000	-	0.2100	0.8600	0.3699	0.2291	0.1408	0.1205	0.1999	0.0209
3.00	1.0000	-	0.2100	0.8487	0.5109	0.2686	0.2423	0.0853	0.1091	0.0178
4.00	1.0000	-	0.2100	0.8332	0.5869	0.3059	0.2811	0.0527	0.0748	0.0159
5.00	1.0000	-	0.2100	0.8274	0.6275	0.3177	0.3098	0.0425	0.0494	0.0148
6.00	1.0000	-	0.2100	0.8219	0.6490	0.3279	0.3211	0.0339	0.0398	0.0141
7.00	1.0000	-	0.2100	0.8256	0.6600	0.3311	0.3289	0.0314	0.0330	0.0138
8.00	1.0000	-	0.2100	0.8344	0.6674	0.3350	0.3324	0.0285	0.0303	0.0134
9.00	1.0000	-	0.2100	0.8407	0.6726	0.3369	0.3357	0.0271	0.0279	0.0131
10.00	1.0000	-	0.2100	0.8602	0.6785	0.3404	0.3381	0.0247	0.0261	0.0127
11.00	1.0000	-	0.2100	0.8728	0.6844	0.3431	0.3413	0.0227	0.0240	0.0124
12.00	1.0000	-	0.2100	0.8856	0.6866	0.3434	0.3432	0.0228	0.0226	0.0122
13.00	1.0000	-	0.2100	0.8987	0.6918	0.3471	0.3447	0.0198	0.0217	0.0119
14.00	1.0000	-	0.2100	0.9121	0.6940	0.3469	0.3471	0.0203	0.0198	0.0117
15.00	1.0000	-	0.2100	0.9257	0.6984	0.3504	0.3481	0.0174	0.0192	0.0115
16.00	1.0000	-	0.2100	0.9395	0.7006	0.3503	0.3503	0.0177	0.0174	0.0114
17.00	1.0000	-	0.2100	0.9536	0.7029	0.3520	0.3509	0.0164	0.0172	0.0113
18.00	1.0000	-	0.2100	0.9679	0.7043	0.3523	0.3521	0.0164	0.0163	0.0111
19.00	1.0000	-	0.2100	0.9821	0.7073	0.3543	0.3529	0.0145	0.0157	0.0110
20.00	1.0000	-	0.2100	0.9848	0.7095	0.3550	0.3545	0.0140	0.0143	0.0110
21.00	1.0000	-	0.2100	0.9848	0.7125	0.3569	0.3556	0.0121	0.0133	0.0109
22.00	1.0000	-	0.2100	0.9848	0.7132	0.3565	0.3567	0.0125	0.0122	0.0109
23.00	1.0000	-	0.2100	0.9848	0.7161	0.3589	0.3573	0.0101	0.0117	0.0109
24.00	1.0000	-	0.2100	0.9848	0.7169	0.3582	0.3587	0.0108	0.0103	0.0109
25.00	1.0000	-	0.2100	0.9848	0.7206	0.3613	0.3593	0.0077	0.0097	0.0109
26.00	1.0000	-	0.2100	0.9848	0.7213	0.3603	0.3610	0.0087	0.0080	0.0109
27.00	1.0000	-	0.2100	0.9848	0.7235	0.3625	0.3610	0.0066	0.0080	0.0109
28.00	1.0000	-	0.2100	0.9848	0.7250	0.3625	0.3625	0.0065	0.0066	0.0109
29.00	1.0000	-	0.2100	0.9848	0.7257	0.3631	0.3627	0.0060	0.0064	0.0109
30.00	1.0000	-	0.2100	0.9848	0.7265	0.3633	0.3631	0.0057	0.0059	0.0109
31.00	1.0000	-	0.2100	0.9848	0.7287	0.3649	0.3638	0.0042	0.0052	0.0109
32.00	1.0000	-	0.2100	0.9848	0.7315	0.3662	0.3653	0.0029	0.0038	0.0109
33.00	1.0000	-	0.2100	0.9848	0.7340	0.3674	0.3666	0.0017	0.0025	0.0109
34.00	1.0000	-	0.2100	0.9848	0.7363	0.3685	0.3678	0.0006	0.0014	0.0109
35.00	1.0000	-	0.2100	0.9848	0.7383	0.3691	0.3691	-	-	0.0109

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 2020-49, Rev. Proc. 2020-48, dated November 30, 2020
- (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	0.4715	0.1536	0.8756	0.0987	0.0987	-	0.2435	-	0.0267
2.00	1.0000	-	0.2100	0.8600	0.3775	0.2338	0.1437	0.1230	0.2040	0.0180
3.00	1.0000	-	0.2100	0.8487	0.5215	0.2742	0.2473	0.0871	0.1114	0.0147
4.00	1.0000	-	0.2100	0.8332	0.5991	0.3122	0.2869	0.0538	0.0763	0.0128
5.00	1.0000	-	0.2100	0.8274	0.6405	0.3243	0.3162	0.0434	0.0504	0.0117
6.00	1.0000	-	0.2100	0.8219	0.6624	0.3346	0.3277	0.0346	0.0406	0.0110
7.00	1.0000	-	0.2100	0.8256	0.6737	0.3379	0.3357	0.0321	0.0337	0.0106
8.00	1.0000	-	0.2100	0.8344	0.6812	0.3419	0.3393	0.0291	0.0310	0.0102
9.00	1.0000	-	0.2100	0.8407	0.6865	0.3439	0.3426	0.0276	0.0285	0.0099
10.00	1.0000	-	0.2100	0.8602	0.6925	0.3474	0.3451	0.0252	0.0266	0.0096
11.00	1.0000	-	0.2100	0.8728	0.6985	0.3502	0.3484	0.0232	0.0244	0.0092
12.00	1.0000	-	0.2100	0.8856	0.7008	0.3505	0.3503	0.0233	0.0231	0.0090
13.00	1.0000	-	0.2100	0.8987	0.7061	0.3543	0.3518	0.0202	0.0221	0.0087
14.00	1.0000	-	0.2100	0.9121	0.7083	0.3541	0.3542	0.0207	0.0203	0.0086
15.00	1.0000	-	0.2100	0.9257	0.7129	0.3576	0.3553	0.0178	0.0196	0.0084
16.00	1.0000	-	0.2100	0.9395	0.7151	0.3575	0.3576	0.0181	0.0178	0.0082
17.00	1.0000	-	0.2100	0.9536	0.7174	0.3593	0.3581	0.0167	0.0175	0.0081
18.00	1.0000	-	0.2100	0.9679	0.7189	0.3595	0.3594	0.0167	0.0166	0.0079
19.00	1.0000	-	0.2100	0.9821	0.7219	0.3617	0.3602	0.0148	0.0160	0.0078
20.00	1.0000	-	0.2100	0.9848	0.7242	0.3623	0.3619	0.0143	0.0146	0.0078
21.00	1.0000	-	0.2100	0.9848	0.7272	0.3642	0.3629	0.0123	0.0136	0.0077
22.00	1.0000	-	0.2100	0.9848	0.7279	0.3638	0.3641	0.0127	0.0125	0.0077
23.00	1.0000	-	0.2100	0.9848	0.7309	0.3663	0.3646	0.0103	0.0119	0.0077
24.00	1.0000	-	0.2100	0.9848	0.7317	0.3656	0.3661	0.0110	0.0105	0.0077
25.00	1.0000	-	0.2100	0.9848	0.7355	0.3688	0.3667	0.0079	0.0099	0.0077
26.00	1.0000	-	0.2100	0.9848	0.7362	0.3678	0.3684	0.0089	0.0082	0.0077
27.00	1.0000	-	0.2100	0.9848	0.7385	0.3700	0.3685	0.0067	0.0081	0.0077
28.00	1.0000	-	0.2100	0.9848	0.7400	0.3700	0.3700	0.0067	0.0067	0.0077
29.00	1.0000	-	0.2100	0.9848	0.7407	0.3706	0.3702	0.0061	0.0065	0.0077
30.00	1.0000	-	0.2100	0.9848	0.7415	0.3708	0.3706	0.0058	0.0060	0.0077
31.00	1.0000	-	0.2100	0.9848	0.7437	0.3724	0.3714	0.0043	0.0053	0.0077
32.00	1.0000	-	0.2100	0.9848	0.7466	0.3738	0.3728	0.0030	0.0039	0.0077
33.00	1.0000	-	0.2100	0.9848	0.7492	0.3750	0.3742	0.0017	0.0026	0.0077
34.00	1.0000	-	0.2100	0.9848	0.7515	0.3761	0.3754	0.0007	0.0014	0.0077
35.00	1.0000	-	0.2100	0.9848	0.7535	0.3768	0.3768	-	-	0.0077

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 2020-49, Rev. Proc. 2020-48, dated November 30, 2020
- (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)
2019	201,634,477	45,253,873	88,025,958	177,424,154	1.39	1.89
2018	198,071,343	43,050,172	84,424,740	169,657,802	1.42	1.92
2017	194,692,095	42,696,647	77,537,150	171,664,964	1.38	1.83
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
2015 - 2019	966,741,578	215,557,976	396,174,322	857,595,428	1.38	1.84

Selected Ratio including Unearned Premium: 1.84

Source: Columns (1) - (4) for the latest year are taken from Liabilities, Surplus and Other Funds in Best's 2020 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 1.250 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 E

Determination of Assigned Risk Rates

Section A - Derivation of Assigned Risk Differential  
Experience Valued as of 12/31/2020

Policy Year	(1)	(2)	(3)	(4)
	Standard Pure Premium Assigned Risk	Statewide	Unlimited Undeveloped Paid+Case Losses Assigned Risk	Statewide
2005	16,125,760	243,819,202	23,637,935	278,503,571
2006	12,482,780	263,184,908	20,718,664	322,510,291
2007	10,267,915	277,208,835	21,206,212	348,405,769
2008	9,493,170	277,510,628	21,068,944	354,948,196
2009	8,398,565	273,402,351	16,767,098	380,643,566
2010	7,351,626	288,664,295	20,783,756	371,128,322
2011	8,304,376	306,993,516	14,746,310	341,534,687
2012	10,740,033	309,103,589	22,011,305	349,536,498
2013	14,138,008	317,570,727	19,666,609	370,561,382
2014	13,951,472	322,835,742	21,176,715	355,306,657
2015	13,769,673	333,156,685	19,662,412	356,688,805
2016	11,560,499	343,156,753	10,101,253	309,303,472
2017	10,154,997	356,261,837	11,853,304	351,596,433
2018	9,997,063	361,549,703	7,776,794	343,005,888
2019	10,888,147	373,479,514	10,271,075	325,223,341

(5) = (3) / (1)                      (6) = (4) / (2)                      (7) = (5) / (6)                      (8) = (7) / Impact of AR Programs^

Policy Year	Pure Premium Ratio		Assigned Risk to Statewide Relativity	Indicated Assigned Risk Differential
	Assigned Risk	Statewide		
2005	1.466	1.142	1.284	1.144
2006	1.660	1.225	1.355	1.208
2007	2.065	1.257	1.643	1.464
2008	2.219	1.279	1.735	1.546
2009	1.996	1.392	1.434	1.278
2010	2.827	1.286	2.198	1.959
2011	1.776	1.113	1.596	1.422
2012	2.049	1.131	1.812	1.615
2013	1.391	1.167	1.192	1.062
2014	1.518	1.101	1.379	1.229
2015	1.428	1.071	1.333	1.188
2016	0.874	0.901	0.970	0.865
2017	1.167	0.987	1.182	1.053
2018	0.778	0.949	0.820	0.731
2019	0.943	0.871	1.083	0.965

Current Assigned Risk Differential 1.300

**Proposed Assigned Risk Differential 1.250**

Proposed Change in Assigned Risk Differential 0.962 -3.8%

**^Assigned Risk Programs in Addition to the Differential**

(a) Removal of Premium Discounts	1.044
(b) ARAP	1.075
<b>Total impact of programs = (a) x (b)</b>	<b>1.122</b>



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### 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). Although considered, no explicit adjustment was applied to account for possible indirect effects of the COVID-19 pandemic.

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.

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



## Iowa

### Workers Compensation Rate Filing – January 1, 2022

#### Appendix F – Derivation of Experience Rating Values

hazard group A to hazard group G. If they do not, an adjustment is made by averaging the D-ratios over adjacent hazard groups.

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

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

#### 3. Additional experience rating values

##### *Table of Weighting Values*

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

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

##### *Table of Ballast Values*

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

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



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### Part 4 Additional Information

- Definitions
- NCCI Affiliate List
- Key Contacts



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### 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.



Iowa

## Workers Compensation Rate Filing – January 1, 2022

### 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.



## Iowa

### Workers Compensation Rate Filing – January 1, 2022

#### 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  
ASSOCIATED INDEMNITY CORP  
ASSOCIATION CASUALTY INS CO  
ATLANTIC SPECIALTY INS CO (INTACT )  
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  
CAPITOL INDEMNITY CORP  
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  
CLARENDON NATIONAL INSURANCE CO (SUSSEX INS CO)  
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  
COREPOINTE 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  
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EMPLOYERS INS CO OF WAUSAU  
EMPLOYERS INSURANCE COMPANY OF NEVADA  
EMPLOYERS MUTUAL CASUALTY CO  
EMPLOYERS PREFERRED INS CO



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### Workers Compensation Rate Filing – January 1, 2022

#### NCCI Affiliate List

ENDURANCE AMERICAN INS CO  
ENDURANCE ASSURANCE CORPORATION  
EVEREST DENALI INSURANCE COMPANY  
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  
FOREMOST INS CO GRAND RAPIDS MICHIGAN  
FOREMOST PROPERTY & CAS INS  
FOREMOST SIGNATURE INS CO  
FRANK WINSTON CRUM INSURANCE CO  
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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 INSURANCE COMPANY  
GUIDEONE SPECIALTY INSURANCE COMPANY  
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  
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HARTFORD UNDERWRITERS INS CO  
HASTINGS MUTUAL INS CO  
HAWKEYE-SECURITY INS CO  
HDI GLOBAL INSURANCE COMPANY  
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ILLINOIS CASUALTY COMPANY  
ILLINOIS INSURANCE COMPANY  
ILLINOIS NATIONAL INSURANCE COMPANY  
IMPERIUM INSURANCE COMPANY  
IMT INS CO  
INCLINE CASUALTY COMPANY  
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  
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LACKAWANNA CASUALTY CO  
LACKAWANNA NATIONAL INS CO  
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LIBERTY INS CORP  
LIBERTY INSURANCE UNDERWRITERS INC  
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LIBERTY MUTUAL INS CO  
LM INS CORP  
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MAG MUTUAL INS CO  
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MIDWEST FAMILY MUTUAL INS CO  
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#### NCCI Affiliate List

MITSUI SUMITOMO INS CO OF AMERICA  
MITSUI SUMITOMO INS USA INC  
MOTORISTS COMMERCIAL MUTUAL INSURANCE COMPANY  
NATIONAL AMERICAN INS CO  
NATIONAL CASUALTY CO  
NATIONAL FIRE INS CO OF HARTFORD  
NATIONAL INTERSTATE INS CO  
NATIONAL LIABILITY & FIRE INSURANCE CO  
NATIONAL SPECIALTY INS CO  
NATIONAL SURETY CORP  
NATIONAL UNION FIRE INS CO OF PITTSBURGH PA  
NATIONWIDE AGRIBUSINESS INS CO  
NATIONWIDE ASSURANCE CO  
NATIONWIDE GENERAL INSURANCE CO  
NATIONWIDE INS CO OF AMERICA  
NATIONWIDE MUTUAL FIRE INS CO  
NATIONWIDE MUTUAL INS CO  
NATIONWIDE PROPERTY AND CASUALTY INS CO  
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NEW HAMPSHIRE INSURANCE COMPANY  
NEW YORK MARINE AND GENERAL INSURANCE CO  
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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  
PA NATIONAL MUTUAL CAS INS CO  
PACIFIC EMPLOYERS INS CO  
PACIFIC INDEMNITY CO  
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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  
PINNACLE NATIONAL INSURANCE COMPANY  
PINNACLEPOINT INSURANCE COMPANY  
PIONEER SPECIALTY INSURANCE COMPANY  
PLAZA INSURANCE CO  
PRAETORIAN INSURANCE COMPANY  
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PREFERRED PROFESSIONAL INSURANCE COMPANY  
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PROPERTY AND CASUALTY INS CO OF HARTFORD  
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PROTECTIVE INS CO  
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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 COMPANY  
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 INS CO  
SENTRY SELECT INSURANCE COMPANY  
SEQUOIA INSURANCE CO  
SERVICE AMERICAN INDEMNITY COMPANY  
SERVICE LLOYDS INSURANCE CO  
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  
SPARTA INSURANCE COMPANY  
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



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## Workers Compensation Rate Filing – January 1, 2022

### NCCI Affiliate List

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  
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  
UNIVERSAL UNDERWRITERS 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  
WAUSAU BUSINESS INSURANCE COMPANY  
WAUSAU UNDERWRITERS 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  
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



Iowa

**Workers Compensation Rate Filing – January 1, 2022**

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