Iowa

Advisory Rates,
Assigned Risk Rates,
and Rating Values Filing

Proposed Effective January 1, 2020

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Regulatory Division

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August 30, 2019

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

Re: Iowa Advisory Rates, Assigned Risk Rates, and Rating Values Filing
Proposed Effective January 1, 2020

Dear Commissioner Ommen:

In accordance with the applicable statutes and regulations of the state of Iowa, we are filing for your consideration and approval advisory prospective rates and rating values for the Iowa voluntary and assigned risk markets to become effective January 1, 2020 for new and renewal policies.

This filing proposes an overall average decrease of 3.0% to the voluntary and assigned risk rate levels. The advisory prospective rates of the voluntary market are used as a basis for the rates in the assigned risk market.

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

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

- 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-1436, effective January 1, 2019:
  - Class Codes 8825 and 8826 are combined to reflect the final year of a two-year transition program, and Class Code 8825 is discontinued.
  - Class Code 8829 is discontinued and the rate for Class Code 8824 is payroll-weighted to reflect the combined experience of Class Codes 8824 and 8829.
- As a result of Item B-1437, effective January 1, 2020:
  - Class Codes 2286 and 2220 are combined to reflect the first year of a two-year transition program. In the second year of the transition, Class Code 2286 will be discontinued.
  - Class Codes 2670 and 2688 are combined to reflect the first year of a two-year transition program. In the second year of the transition, Class Code 2670 will be discontinued.

- Class Code 4360 is discontinued and the rate for Class Code 7610 is payroll-weighted to reflect the combined experience of Class Codes 4360 and 7610.
- Class Code 4670 is discontinued and the rate for Class Code 4683 is payroll-weighted to reflect the combined experience of Class Codes 4670 and 4683.
- Class Code 5508 is discontinued and the rate for Class Code 5507 is payroll-weighted to reflect the combined experience of Class Codes 5508 and 5507.

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 (303) 200-6728.

Respectfully submitted,

Stephanie Paswaters

Stephanie Paswaters
State Relations Executive
Regulatory Division

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Actuarial Certification

I, Dan Benzshawel, am an Associate 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.

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

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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, 2020. 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 3, 2019 were not considered for inclusion in the analysis.

Advisory rate level changes at the classification code level are based on Unit Statistical Data, which is the audited exposure, premium and loss information reported to NCCI on a policy level. In this filing, Unit Statistical Data submissions received after May 23, 2019 were not considered for inclusion in the analysis.

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Disclosures

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 July 19, 2019. Therefore, events that occurred after this date that may have a material impact on workers compensation costs in this jurisdiction have not been considered in the analysis.

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

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

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.

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Workers Compensation Rate Filing – January 1, 2020

Executive Summary

Based on its review of the most recently available data, NCCI has proposed an overall average workers compensation voluntary and assigned risk rate level change of –3.0% to become effective January 1, 2020.

Key Components	Percentage Change
Experience, Trend and Benefit Change	– 3.3%
Production and General Expense Change	+ 0.1%
Taxes & Fee Change	+ 0.1%
Loss-based Expense Change	+ 0.1%
Profit & Contingency Change	0.0%
Proposed Change in Overall Voluntary Rate Level	**– 3.0%**
Assigned Risk Differential Change	0.0%
Proposed Change in Overall Assigned Risk Rate Level	**– 3.0%**

Key Observations:

- The filing is based on premium and loss experience for policy years 2016 and 2017. The financial data experience period evaluated as of December 31, 2018 shows improvement when compared with the experience period evaluated as of December 31, 2017 on which the previous filing was based.
- Iowa's claim frequency has declined in recent years.
- After adjusting to a common wage level, indemnity and medical average cost per case figures continue to show a long-term upward trend.

Proposed Changes in Voluntary Rate Level by Industry Group:

Industry Group	Average Change	Maximum Increase	Maximum Decrease
Manufacturing	–2.5%	+23%	–27%
Contracting	–3.6%	+21%	–29%
Office and Clerical	–3.5%	+22%	–28%
Goods and Services	–3.5%	+22%	–28%
Miscellaneous	–1.4%	+24%	–26%

Additional Notable Change(s) Proposed in the Filing:

- Removal of Automatics
- DCCE Methodology Change
- USL&HW Factor Change
- Swing Limit Bound Calculation Modification

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Overview of Methodology

Aggregate Ratemaking

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

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

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

Class Ratemaking

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

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

Assigned Risk Rates

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

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

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Summary of Selections

The following is a summary of selections underlying the voluntary and assigned risk rates proposed to be effective January 1, 2020, along with the selections underlying the filing effective January 1, 2019.

Voluntary and Assigned Risk Rates	Approved January 1, 2019	Proposed Effective January 1, 2020
Experience Period	Policy Years 2015 and 2016	Policy Years 2016 and 2017
Premium Development	3-year average	3-year average
Basis of Loss Experience	Average of Paid and Paid+Case losses	Average of Paid and Paid+Case losses
Paid Loss Development	3-year average	3-year average
Paid+Case Loss Development	5-year average	5-year average
Tail Factors	Selected	Selected
Indemnity Annual Loss Ratio Trend Factor	0.985	0.980
Medical Annual Loss Ratio Trend Factor	0.990	0.990
Loss Adjustment Expense Provision	15.7%	15.8%
Base Threshold for Limiting Losses	$8,510,109	$8,219,242
Large Loss Excess Ratio	1.3%	2.7%
Production and General Expenses	23.5%	23.6%
Premium Taxes and Assessments	2.2%	2.3%
Profit and Contingencies Provision	-0.5%	-0.5%
Maximum Minimum Premium*	$1,000	$1,000
Assigned Risk Differential	1.300	1.300
Classification Swing Limits (applied by Industry Group)	+/-25%	+/-25%

* MMP varies for Farming and Agricultural class codes

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Selections Underlying the Proposed Changes

Experience and Development

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

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

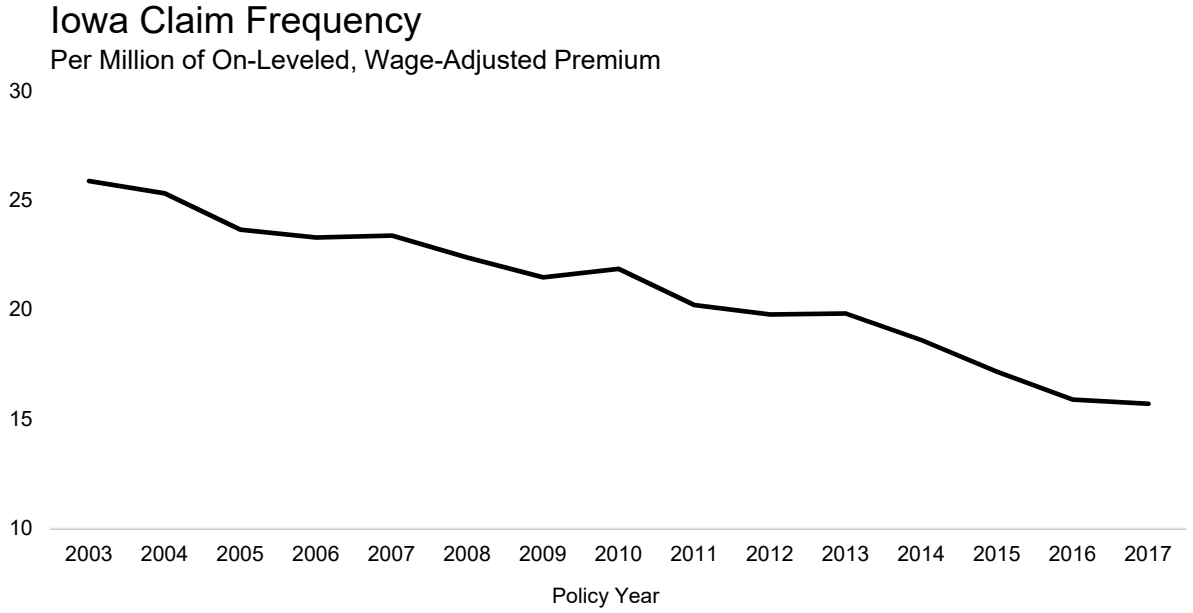
Trend

This filing relies primarily on the experience from policy years 2016 and 2017. However, the proposed voluntary and assigned risk rates are intended for use with policies with effective dates starting on January 1, 2020. It is necessary to use trend factors that forecast how much the future 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.

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.

Selections Underlying the Proposed Changes

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



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

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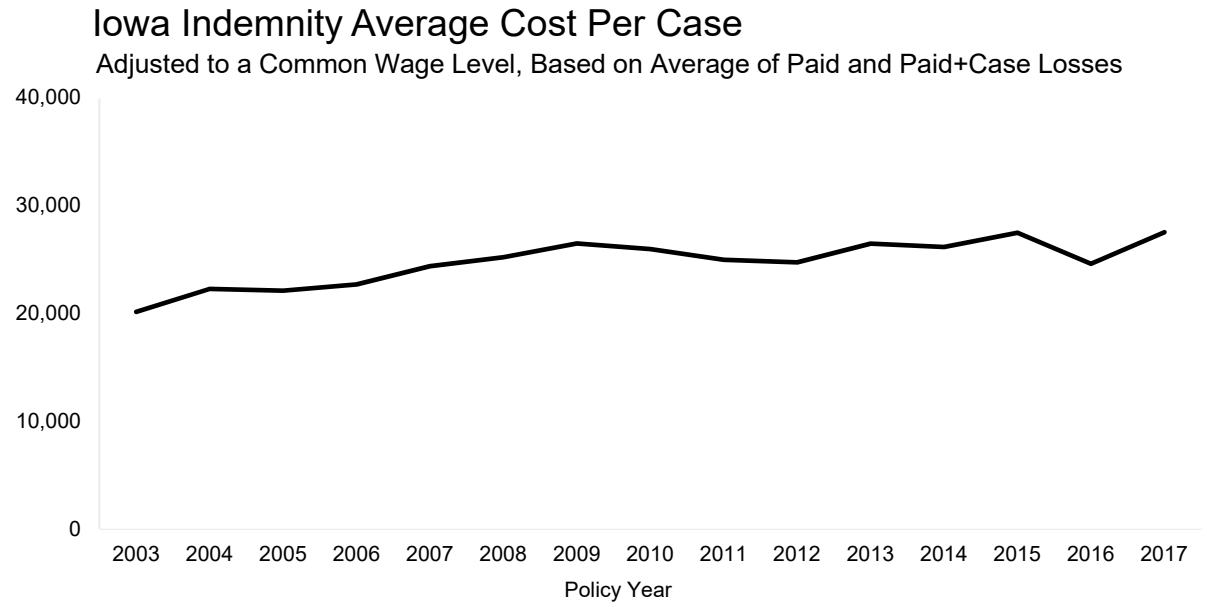
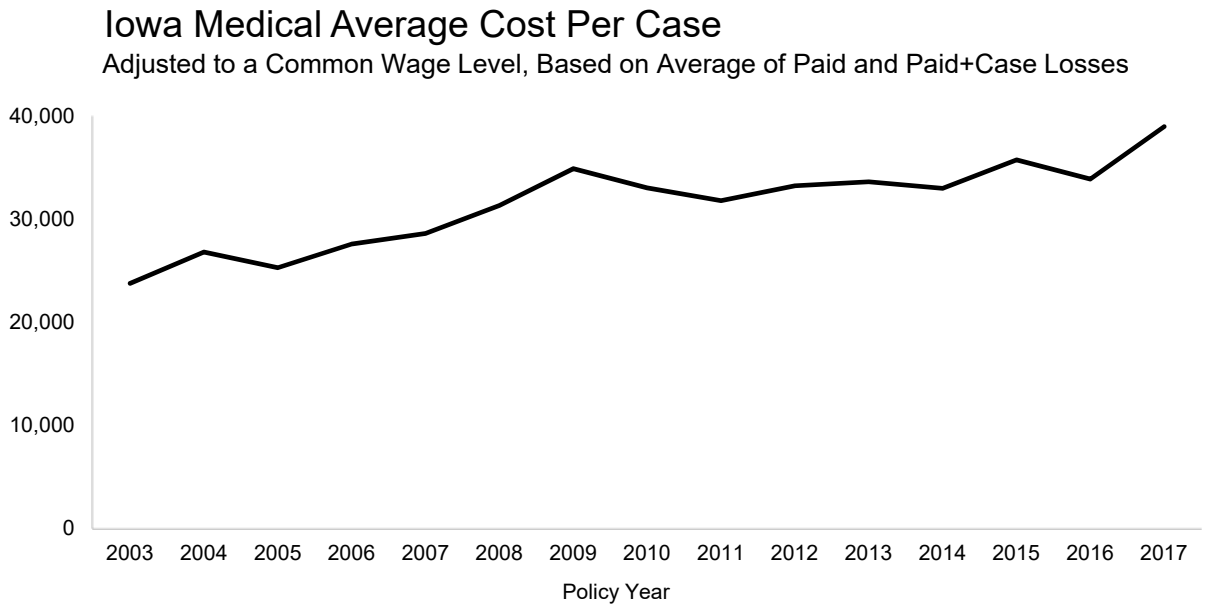
Selections Underlying the Proposed Changes





As these two charts illustrate, Iowa's average indemnity and medical costs per case in excess of wage growth have generally trended upward over time for the period shown.

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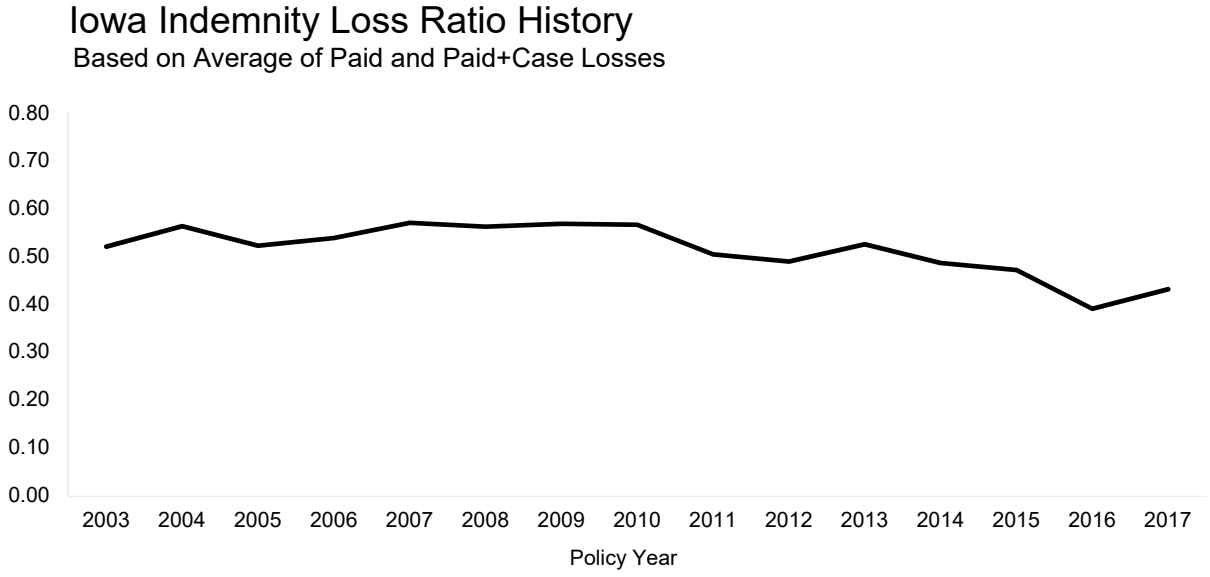
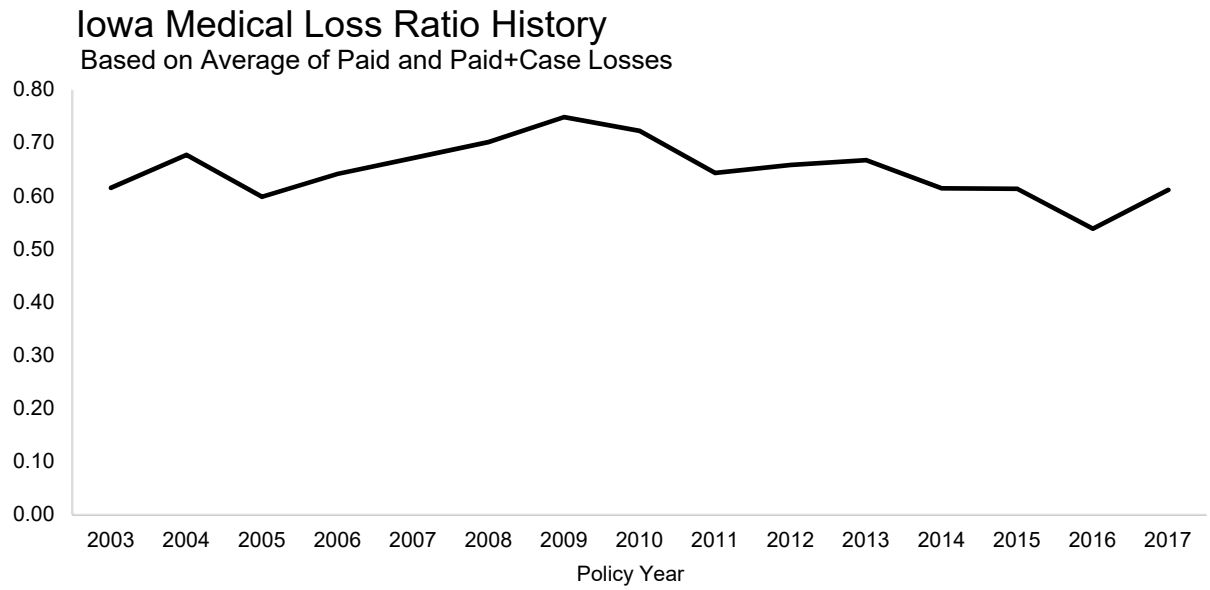
Selections Underlying the Proposed Changes

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





Based on our analysis this year, we are proposing to decrease the annual indemnity loss ratio trend from –1.5% to –2.0% and maintain the current annual medical loss ratio trend of –1.0%.

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Selections Underlying the Proposed Changes

Benefit Changes

In accordance with enacted Senate File 2417, most individual state income tax rates were lowered beginning in tax year 2019, causing an increase to spendable wages and workers compensation benefits. This filing reflects the change in benefits for policies effective January 1, 2020 and subsequent, please see Appendix C-I for additional detail.

Expenses

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

Loss-Based Expenses

The proposed advisory rates include a provision for loss adjustment expenses (LAE). These are expenses associated with the handling of workers compensation claims. LAE is included in the rates by using a ratio of loss adjustment expense dollars to loss dollars (called the LAE provision). In this filing, NCCI is proposing to increase the current LAE provision from 15.7% to 15.8% of losses. Please see Exhibit II for additional detail.

Production and General Expense

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

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

The current provision in the advisory rates for general expenses is 5.0% of premium. This filing proposes to increase the provision to 5.1%.

The overall advisory rate change due to the proposed production and general expense provisions is an increase of 0.1%.

Premium Taxes and Assessments

This filing proposes an increase to the current approved provisions for taxes and assessments. The current provision in the rates for taxes and assessments is 2.2% of premium; the proposed provision is 2.3% of premium. The breakdown of the proposed provision is shown below:

Premium Tax	1.0%
Second Injury Fund	1.0%
Miscellaneous	0.3%
Taxes and Assessments	2.3%

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Selections Underlying the Proposed Changes

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.

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

Assigned Risk Market

As previously mentioned, an overall average decrease of 3.0% to the current assigned risk rate level is being proposed effective January 1, 2020.

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

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

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

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Additional Proposed Changes

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

Summary

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

Background

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

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

Proposed Procedure

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

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

Impact

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

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

Additional Proposed Changes

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

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

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Additional Proposed Changes

Proposed Change to the Defense and Cost Containment Expense Provision Calculation

Background

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

Previously in Iowa, the DCCE portion of the LAE provision has been calculated based on a selected countrywide DCCE provision calculated from the NCCI Call for Loss Adjustment Expenses (Financial Call #19). This countrywide DCCE provision was adjusted by applying a state-specific relativity derived using NAIC Annual Statement payment data.

Proposed Procedure

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

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

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

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Additional Proposed Changes

Swing Limit Bound Calculation Modification

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

NCCI recently evaluated the bound calculations to determine if they are performing optimally, particularly for classifications with significantly low rates. In these cases, the current multiplicative bound calculation can result in an upper and lower bound equal to the current rate for a classification. For example, a classification with a rate of $0.03 in a state with 15% swing limits and an indication of –10% would have upper and lower bounds both equal to $0.03. This restricts a classification's proposed rate to its present rate, eliminating any possible responsiveness to change indicated by the underlying data.

To enhance responsiveness to the data in these scenarios, NCCI is proposing a modification to the calculation of rate bounds by classification when both the upper and lower bounds are equal to the current rate. In these cases, NCCI will review the change indicated by the classification and the corresponding industry group. If the direction of these two indications are aligned, NCCI will adjust the upper or lower bound so that the proposed rate may change by one cent from the present rate in the direction of the change indicated for the classification.

This updated swing limit bound calculation can only impact classifications with rates of three cents or less given the current swing limit of 25%. In future instances where the proposed calculation applies, the classification will exceed the traditional swing of 25% by less than one cent.

In this filing, no adjustments have been made as a result of the proposed methodology. In future filings, if a class code is adjusted per this methodology change, the affected class codes would be listed in Appendix B-II.

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Additional Proposed Changes

Update to the USL&HW Coverage Percentage Factor

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

USL&HW Factor – Benefits Only

Current Approved	Proposed
1.95	1.25

Background

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

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

Methodology

NCCI recently completed a full study of the USL&HW factors using Unit Statistical Data to determine the indicated USL&HW factor. The average cost of claims subject to Iowa's workers compensation (WC) Act was compared to the average cost of claims subject to the USL&HW Act and a ratio, or "relativity," was calculated. Due to the limited number of claims subject to the USL&HW Act within a given state, the average cost for these claims was calculated on a countrywide basis to increase the predictive accuracy. Two adjustments were independently made to the federal severity calculation to reflect additional attributes of the state under review: an injury type (IT) adjustment and a hazard group (HG) adjustment. Prior to calculating the indicated relativity, these adjustments modified the countrywide federal claim cost and the state's industrial claim cost to have matching IT or matching HG distributions. These

adjustments were done two ways: by weighting the federal severity to match the state severity IT or HG distribution, and vice versa. These calculations were done separately for indemnity and medical severities before being combined. The resulting values from the four adjustment combinations were considered in the analysis. Note for medical, the indicated relativity was credibility weighted with the medical relativity assumption of unity underlying the previous (i.e., 2003) review prior to determining the combined indemnity and medical relativity.

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

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

Impact

As a result of its recent study, NCCI is proposing to reduce the currently approved USL&HW factor in this filing. The update to the USL&HW factor is expected to have a negligible impact on the proposed overall average rate level change in this filing.

Note that in NCCI Unit Statistical Data for the latest 5 policy years, the amount of USL&HW payroll reported outside of F-Classes has been approximately $2,518,000 on average per year in Iowa.

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

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Proposed Voluntary Market Advisory Rates and Rating Values

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

- Voluntary market advisory rates, minimum premiums, expected loss rates, and d-ratios by class code, along with associated footnotes

- 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

Effective January 1, 2020

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	3.85	584	2.29	0.32	2016	4.22	624	2.63	0.36	2710	9.86	1000	4.71	0.23
0008	3.15	507	1.76	0.29	2021	2.85	474	1.59	0.29	2714	5.44	758	3.37	0.36
0016	5.80	500	3.01	0.26	2039	3.36	530	2.08	0.36	2731	4.76	684	2.47	0.26
0034	4.98	650	2.97	0.32	2041	5.16	728	3.20	0.36	2735	5.57	773	3.44	0.36
0035	3.21	513	1.98	0.36	2065	2.28	411	1.36	0.32	2759	7.01	931	4.33	0.36
0036	3.85	500	2.30	0.32	2070	5.74	791	3.42	0.32	2790	1.94	373	1.20	0.36
0037	3.94	500	2.20	0.29	2081	3.64	560	2.17	0.32	2797	7.92	1000	4.71	0.32
0042	6.64	650	3.72	0.29	2089	4.88	697	2.91	0.32	2799	6.97	927	3.91	0.30
0050	7.43	977	4.42	0.32	2095	3.79	577	2.26	0.32	2802	5.32	745	2.98	0.29
0059D	0.44	–	0.10	0.26	2105	4.38	642	2.71	0.36	2835	3.25	518	2.13	0.41
0065D	0.11	–	0.03	0.26	2110	2.80	468	1.73	0.36	2836	3.36	530	2.20	0.41
0066D	0.11	–	0.03	0.26	2111	3.83	581	2.37	0.36	2841	5.41	755	3.34	0.36
0067D	0.11	–	0.03	0.26	2112	4.88	697	3.02	0.36	2881	3.60	556	2.36	0.41
0079	3.44	538	1.78	0.26	2114	3.85	584	2.38	0.36	2883	3.68	565	2.19	0.32
0083	5.01	500	2.98	0.32	2121	1.63	339	0.97	0.32	2913	–	–	2.19	0.32
0106	10.70	1000	5.12	0.23	2130	2.05	386	1.22	0.32	2915	4.36	640	2.45	0.30
0113	4.01	601	2.39	0.32	2131	2.44	428	1.46	0.32	2916	4.07	608	1.94	0.23
0170	3.24	516	1.92	0.32	2143	2.71	458	1.68	0.36	2923	2.64	450	1.64	0.36
0251	3.61	557	2.15	0.32	2157	4.77	685	2.85	0.32	2942	–	–	0.95	0.41
0400	–	–	1.30	0.29	2172	2.05	386	1.15	0.30	2960	5.69	786	3.40	0.32
0401	12.11	A	5.79	0.23	2174	3.60	556	2.23	0.36	3004	2.10	391	1.09	0.26
0771N	0.66	–	–	–	2211	9.31	1000	4.84	0.26	3018	3.33	526	1.73	0.26
0908P	177.00	337	105.25	0.32	2220	2.85	474	1.70	0.32	3022	4.74	681	2.94	0.36
0913P	506.00	666	301.84	0.32	2286	2.44	428	1.51	0.36	3027	3.46	541	1.80	0.26
0917	5.25	738	3.25	0.36	2288	4.66	673	2.88	0.36	3028	3.33	526	1.99	0.32
1005	6.72	899	2.92	0.23	2300	–	–	1.87	0.32	3030	7.09	940	3.69	0.26
1016X	14.86	1000	6.45	0.23	2302	2.03	383	1.21	0.32	3040	6.32	855	3.29	0.26
1164D	3.90	589	1.66	0.22	2305	2.80	468	1.57	0.29	3041	5.85	804	3.48	0.32
1165D	3.55	551	1.68	0.23	2361	2.55	441	1.52	0.32	3042	4.87	696	2.73	0.29
1320	1.74	351	0.84	0.23	2362	2.25	408	1.34	0.32	3064	5.48	763	3.26	0.32
1322	7.68	1000	3.68	0.23	2380	2.41	425	1.43	0.32	3069	–	–	2.46	0.32
1430	6.04	824	3.14	0.26	2386	–	–	1.87	0.32	3076	4.13	614	2.46	0.32
1438	6.24	846	2.99	0.23	2388	1.86	365	1.15	0.36	3081D	9.22	1000	4.70	0.26
1452	2.68	455	1.39	0.27	2402	3.46	541	1.80	0.26	3082D	5.44	758	2.79	0.26
1463	19.30	1000	9.25	0.23	2413	3.13	504	1.86	0.32	3085D	6.81	909	3.48	0.26
1472	3.96	596	1.89	0.23	2416	2.39	423	1.43	0.32	3110	6.59	885	3.92	0.32
1624D	4.24	626	2.00	0.23	2417	1.42	316	0.85	0.32	3111	2.80	468	1.67	0.32
1642	2.28	411	1.19	0.26	2501	3.14	505	1.87	0.32	3113	2.16	398	1.29	0.32
1654	4.43	647	2.31	0.26	2503	1.63	339	1.01	0.36	3114	4.22	624	2.51	0.32
1655	–	–	1.19	0.26	2534	–	–	1.87	0.32	3118	2.11	392	1.31	0.36
1699	4.00	600	2.08	0.26	2570	5.48	763	3.39	0.36	3119	1.02	272	0.67	0.41
1701	3.50	545	1.82	0.26	2585	4.21	623	2.61	0.36	3122	2.38	422	1.47	0.36
1710D	4.00	600	2.06	0.26	2586	3.27	520	1.95	0.32	3126	3.05	496	1.82	0.32
1741	–	–	1.82	0.26	2587	2.15	397	1.33	0.36	3131	2.28	411	1.36	0.32
1747	3.52	547	1.83	0.27	2589	3.57	553	2.12	0.32	3132	3.43	537	2.04	0.32
1748	6.35	859	3.29	0.26	2600	4.54	659	2.81	0.36	3145	2.44	428	1.45	0.32
1803D	10.22	1000	4.69	0.23	2623	8.87	1000	4.97	0.29	3146	2.83	471	1.69	0.32
1852	–	–	1.09	0.22	2651	2.50	435	1.55	0.36	3169	3.38	532	2.01	0.32
1853	–	–	1.82	0.26	2660	2.91	480	1.80	0.36	3175	–	–	2.01	0.32
1860	–	–	1.53	0.32	2670	3.16	508	2.07	0.41	3179	2.80	468	1.73	0.36
1924	3.07	498	1.90	0.36	2683	2.89	478	1.79	0.36	3180	2.88	477	1.78	0.36
1925	6.30	853	3.52	0.29	2688	4.22	624	2.61	0.36	3188	2.63	449	1.63	0.36
2002	3.08	499	1.91	0.36	2701	14.07	1000	7.33	0.26	3220	2.17	399	1.30	0.32
2003	4.79	687	2.86	0.32	2702	22.23	1000	9.61	0.22	3223	–	–	1.78	0.36
2014	5.62	778	2.92	0.26	2709	10.43	1000	5.43	0.26	3224	4.00	600	2.48	0.36

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CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO
3227	4.58	664	2.83	0.36	4034	8.67	1000	4.50	0.26	4665	9.12	1000	4.75	0.26
3240	4.51	656	2.78	0.36	4036	3.25	518	1.69	0.26	4670	–	–	2.81	0.32
3241	3.63	559	2.16	0.32	4038	3.02	492	1.98	0.41	4683	4.71	678	2.81	0.32
3255	2.83	471	1.85	0.41	4053	–	–	1.78	0.32	4686	2.60	446	1.35	0.26
3257	3.66	563	2.18	0.32	4061	–	–	1.78	0.32	4692	0.77	245	0.48	0.36
3270	3.21	513	1.91	0.32	4062	2.99	489	1.78	0.32	4693	1.60	336	0.95	0.32
3300	5.07	718	3.01	0.32	4101	4.05	606	2.26	0.29	4703	2.30	413	1.37	0.32
3303	3.16	508	1.95	0.36	4109	0.59	225	0.37	0.36	4717	1.94	373	1.27	0.41
3307	4.18	620	2.49	0.32	4110	0.91	260	0.54	0.32	4720	2.91	480	1.73	0.32
3315	4.26	629	2.64	0.36	4111	1.99	379	1.23	0.36	4740	1.71	348	0.89	0.26
3334	3.08	499	1.84	0.32	4113	–	–	1.23	0.36	4741	3.19	511	1.90	0.32
3336	3.46	541	1.80	0.26	4114	3.03	493	1.81	0.32	4751	6.13	834	3.17	0.25
3365	5.23	735	2.72	0.26	4130	3.79	577	2.26	0.32	4771N	3.75	645	1.62	0.22
3372	5.02	712	2.81	0.29	4131	6.40	864	3.96	0.36	4777	4.05	606	1.75	0.22
3373	5.52	767	3.29	0.32	4133	2.53	438	1.57	0.36	4825	1.20	292	0.63	0.26
3383	1.88	367	1.16	0.36	4149	0.92	261	0.60	0.41	4828	2.41	425	1.35	0.30
3385	0.99	269	0.61	0.36	4206	3.35	529	2.00	0.32	4829	1.31	304	0.63	0.23
3400	2.82	470	1.58	0.30	4207	3.24	516	1.69	0.26	4902	3.13	504	1.93	0.36
3507	4.11	612	2.45	0.32	4239	2.72	459	1.42	0.26	4923	1.36	310	0.81	0.32
3515	3.02	492	1.80	0.32	4240	4.41	645	2.73	0.36	5020	6.88	917	3.58	0.26
3548	1.44	318	0.86	0.32	4243	2.57	443	1.53	0.32	5022	8.86	1000	4.24	0.23
3559	4.77	685	2.84	0.32	4244	3.03	493	1.81	0.32	5037	23.77	1000	10.28	0.22
3574	1.53	328	0.95	0.36	4250	2.39	423	1.42	0.32	5040	10.63	1000	4.61	0.22
3581	1.47	322	0.91	0.36	4251	3.11	502	1.85	0.32	5057	5.37	751	2.33	0.22
3612	2.33	416	1.31	0.29	4263	3.74	571	2.22	0.32	5059	20.54	1000	8.88	0.22
3620	4.38	642	2.28	0.26	4273	3.11	502	1.86	0.32	5069	–	–	8.88	0.22
3629	2.72	459	1.68	0.36	4279	2.57	443	1.53	0.32	5102	6.82	910	3.26	0.23
3632	3.52	547	1.97	0.29	4282	–	–	1.53	0.32	5146	4.62	668	2.40	0.26
3634	2.10	391	1.30	0.36	4283	2.00	380	1.19	0.32	5160	5.61	777	2.70	0.23
3635	3.16	508	1.88	0.32	4299	2.19	401	1.36	0.36	5183	2.77	465	1.44	0.26
3638	2.46	431	1.52	0.36	4304	5.69	786	3.19	0.29	5188	3.96	596	2.06	0.27
3642	2.82	470	1.68	0.32	4307	2.24	406	1.46	0.41	5190	2.78	466	1.45	0.26
3643	2.41	425	1.44	0.32	4351	1.17	289	0.70	0.32	5191	0.90	259	0.54	0.32
3647	3.63	559	2.03	0.29	4352	1.89	368	1.17	0.36	5192	3.05	496	1.82	0.32
3648	2.05	386	1.27	0.36	4360	–	–	0.37	0.29	5213	8.26	1000	3.96	0.23
3681	1.10	281	0.68	0.36	4361	1.11	282	0.69	0.36	5215	6.00	820	3.37	0.30
3685	1.77	355	1.09	0.36	4410	3.19	511	1.90	0.32	5221	5.22	734	2.72	0.26
3719	1.27	300	0.55	0.23	4420	7.48	983	3.59	0.23	5222	15.42	1000	7.37	0.23
3724	5.14	725	2.46	0.23	4431	1.85	364	1.21	0.41	5223	5.95	815	3.10	0.26
3726	4.30	633	1.86	0.22	4432	1.45	320	0.95	0.41	5348	6.04	824	3.15	0.26
3803	3.05	496	1.82	0.32	4439	–	–	1.39	0.32	5402	5.05	716	3.13	0.36
3807	4.10	611	2.54	0.36	4452	3.66	563	2.18	0.32	5403	10.83	1000	5.17	0.23
3808	4.18	620	2.34	0.30	4459	3.32	525	1.98	0.32	5437	6.19	841	3.22	0.26
3821	6.08	829	3.41	0.29	4470	2.78	466	1.66	0.32	5443	4.27	630	2.54	0.32
3822	4.99	709	2.79	0.29	4484	3.86	585	2.30	0.32	5445	6.99	929	3.35	0.23
3824	5.40	754	3.02	0.29	4493	3.50	545	2.09	0.32	5462	7.25	958	3.77	0.26
3826	1.16	288	0.69	0.32	4511	0.89	258	0.50	0.29	5472	6.50	875	2.82	0.22
3827	2.60	446	1.45	0.29	4557	2.50	435	1.55	0.36	5473	8.96	1000	3.88	0.22
3830	1.42	316	0.80	0.30	4558	2.33	416	1.39	0.32	5474	6.33	856	3.03	0.23
3851	2.80	468	1.74	0.36	4568	2.44	428	1.27	0.26	5478	4.83	691	2.52	0.26
3865	1.91	370	1.25	0.41	4581	1.17	289	0.56	0.23	5479	6.00	820	3.36	0.30
3881	5.27	740	3.14	0.32	4583	4.93	702	2.36	0.23	5480	8.64	1000	4.14	0.23
4000	6.43	867	3.07	0.23	4611	1.20	292	0.75	0.36	5491	2.02	382	0.97	0.23
4021	5.65	782	2.94	0.26	4635	3.71	568	1.61	0.22	5506	8.05	1000	3.48	0.22
4024D	8.32	1000	4.28	0.26	4653	1.69	346	1.05	0.36	5507	4.30	633	2.06	0.23

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CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO
5508	–	–	2.06	0.23	7047M	9.81	1000	4.05	0.22	7710	42.28	1000	20.24	0.23
5535	6.30	853	3.27	0.26	7050M	9.20	1000	3.79	0.22	7711	42.28	1000	20.24	0.23
5537	4.60	666	2.40	0.26	7090M	6.63	889	2.86	0.22	7720	3.06	497	1.59	0.26
5551	16.79	1000	7.26	0.22	7098M	13.42	1000	5.81	0.22	7855	3.99	599	2.08	0.26
5606	1.38	312	0.66	0.23	7099M	18.37	1000	7.59	0.22	8001	2.33	416	1.44	0.36
5610	5.52	767	3.29	0.32	7133	2.76	464	1.32	0.23	8002	2.62	448	1.56	0.32
5645	9.90	1000	4.73	0.23	7151M	3.35	529	1.60	0.23	8006	2.46	431	1.47	0.32
5703	12.99	1000	6.75	0.26	7152M	4.69	676	2.14	0.23	8008	1.19	291	0.73	0.36
5705	15.85	1000	8.23	0.26	7153M	3.73	570	1.78	0.23	8010	2.05	386	1.27	0.36
5951	0.86	255	0.53	0.36	7219	7.69	1000	3.69	0.23	8013	0.44	208	0.26	0.32
6003	5.75	793	3.00	0.27	7222	6.92	921	3.61	0.27	8015	0.94	263	0.56	0.32
6005	4.14	615	2.16	0.26	7225	7.72	1000	4.02	0.27	8017	1.92	371	1.19	0.36
6017	–	–	3.96	0.23	7228	–	–	3.69	0.23	8018	3.55	551	2.20	0.36
6018	2.62	448	1.37	0.27	7229	–	–	3.69	0.23	8021	2.53	438	1.51	0.32
6045	3.66	563	1.91	0.27	7230	9.18	1000	5.15	0.30	8031	2.91	480	1.73	0.32
6204	9.74	1000	4.66	0.23	7231	8.53	1000	4.78	0.30	8032	2.05	386	1.27	0.36
6206	2.94	483	1.27	0.22	7232	8.57	1000	4.12	0.23	8033	1.45	320	0.86	0.32
6213	1.64	340	0.78	0.23	7309F	16.04	1000	5.08	0.19	8037	1.82	360	1.12	0.36
6214	2.11	392	0.91	0.22	7313F	5.59	775	1.77	0.19	8039	1.55	331	0.96	0.36
6216	5.83	801	2.53	0.22	7317F	11.84	1000	3.73	0.20	8044	2.75	463	1.54	0.29
6217	4.97	707	2.38	0.23	7327F	29.83	1000	9.48	0.19	8045	0.73	240	0.45	0.36
6229	5.55	771	2.65	0.23	7333M	8.52	1000	3.71	0.23	8046	2.49	434	1.48	0.32
6233	3.24	516	1.55	0.23	7335M	9.47	1000	4.12	0.23	8047	1.06	277	0.66	0.36
6235	5.66	783	2.45	0.22	7337M	14.10	1000	5.86	0.23	8058	2.63	449	1.56	0.32
6236	7.72	1000	4.02	0.26	7350F	13.65	1000	4.61	0.20	8072	0.63	229	0.39	0.36
6237	1.65	342	0.86	0.27	7360	4.08	609	2.12	0.26	8102	1.90	369	1.18	0.36
6251D	9.63	1000	4.60	0.24	7370	4.71	678	2.80	0.32	8103	2.33	416	1.30	0.29
6252D	3.69	566	1.59	0.23	7380	4.90	699	2.75	0.30	8105	–	–	2.20	0.36
6260	–	–	4.60	0.24	7382	4.31	634	2.57	0.32	8106	6.66	893	3.46	0.26
6306	5.86	805	2.80	0.23	7390	4.61	667	2.75	0.32	8107	3.51	546	1.83	0.26
6319	3.59	555	1.72	0.23	7394M	3.83	581	1.66	0.22	8111	2.25	408	1.34	0.32
6325	4.28	631	2.05	0.23	7395M	4.25	628	1.84	0.22	8116	2.66	453	1.59	0.32
6400	6.07	828	3.40	0.29	7398M	5.69	786	2.35	0.22	8203	8.62	1000	5.14	0.32
6503	2.55	441	1.58	0.36	7402	0.30	193	0.18	0.32	8204	5.43	757	2.82	0.26
6504	2.99	489	1.85	0.36	7403	4.41	645	2.30	0.26	8209	4.68	675	2.79	0.32
6702M*	4.85	694	2.52	0.26	7405N	1.30	380	0.68	0.27	8215	3.62	558	1.88	0.26
6703M*	8.36	1000	4.17	0.26	7420	6.72	899	2.93	0.23	8227	3.73	570	1.62	0.22
6704M*	5.39	753	2.81	0.26	7421	0.76	244	0.36	0.23	8232	5.38	752	2.80	0.26
6801F	5.85	804	2.08	0.24	7422	1.73	350	0.75	0.23	8233	2.66	453	1.39	0.27
6811	5.55	771	2.88	0.26	7425	3.22	514	1.40	0.22	8235	5.00	710	2.98	0.32
6824F	9.96	1000	3.39	0.20	7431N	0.92	316	0.40	0.23	8263	5.94	813	3.32	0.29
6826F	9.25	1000	3.23	0.25	7445N	0.70	–	–	–	8264	6.51	876	3.38	0.26
6834	3.89	588	2.18	0.29	7453N	0.50	–	–	–	8265	6.51	876	3.11	0.23
6836	4.65	672	2.42	0.26	7502	1.95	375	1.02	0.26	8279	7.16	948	3.42	0.22
6843F	16.55	1000	5.27	0.19	7515	1.16	288	0.50	0.22	8288	6.64	890	3.44	0.26
6845F	8.15	1000	2.57	0.20	7520	3.71	568	2.21	0.32	8291	4.35	639	2.44	0.29
6854	6.35	859	2.75	0.22	7538	4.65	672	2.01	0.22	8292	4.25	628	2.53	0.32
6872F	15.23	1000	4.81	0.20	7539	2.21	403	1.06	0.23	8293	10.41	1000	5.42	0.26
6874F	25.03	1000	7.88	0.20	7540	2.97	487	1.28	0.22	8304	5.60	776	2.91	0.26
6882	5.22	734	2.26	0.22	7580	2.24	406	1.16	0.26	8350	5.93	812	2.84	0.23
6884	6.75	903	2.94	0.23	7590	3.40	534	1.90	0.29	8380	2.91	480	1.63	0.29
7016M	6.53	878	2.83	0.22	7600	3.86	585	2.01	0.26	8381	2.28	411	1.27	0.29
7024M	7.26	959	3.14	0.22	7605	2.22	404	1.15	0.26	8385	2.43	427	1.27	0.26
7038M	5.97	817	2.57	0.22	7610	0.66	233	0.37	0.29	8392	2.29	412	1.36	0.32
7046M	12.08	1000	5.23	0.22	7705	5.37	751	3.01	0.30	8393	1.82	360	1.09	0.32

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

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CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO
8500	6.06	827	3.15	0.26	9062	1.33	306	0.87	0.41					
8601	0.43	207	0.24	0.30	9063	0.96	266	0.59	0.36					
8602	1.95	375	1.09	0.29	9077F	5.49	764	2.12	0.30					
8603	0.10	171	0.06	0.32	9082	1.25	298	0.81	0.41					
8606	2.15	397	1.03	0.23	9083	1.35	309	0.88	0.41					
8709F	7.62	998	2.41	0.19	9084	1.33	306	0.79	0.32					
8719	2.42	426	1.05	0.22	9088a	a	a	a	a					
8720	1.09	280	0.57	0.26	9089	1.47	322	0.91	0.36					
8721	0.41	205	0.22	0.26	9093	1.59	335	0.98	0.36					
8723	0.18	180	0.11	0.32	9101	4.97	707	3.07	0.36					
8725	2.88	477	1.50	0.26	9102	3.55	551	2.11	0.32					
8726F	3.30	523	1.17	0.24	9154	1.70	347	1.01	0.32					
8734M	0.63	229	0.33	0.26	9156	3.10	501	1.73	0.29					
8737M	0.57	223	0.29	0.26	9170	12.15	1000	5.24	0.22					
8738M	0.86	255	0.44	0.26	9178	5.02	712	3.27	0.41					
8742	0.47	212	0.25	0.26	9179	15.61	1000	9.63	0.36					
8745	4.24	626	2.38	0.30	9180	6.22	844	3.22	0.26					
8748	0.72	239	0.41	0.30	9182	2.27	410	1.35	0.32					
8755	0.44	208	0.23	0.26	9186	14.88	1000	7.09	0.22					
8799	0.55	221	0.32	0.32	9220	4.97	707	2.78	0.29					
8800	1.95	375	1.28	0.41	9402	5.16	728	2.68	0.26					
8803	0.07	168	0.04	0.26	9403	8.62	1000	4.12	0.23					
8805M	0.28	191	0.17	0.32	9410	2.69	456	1.60	0.32					
8810	0.21	183	0.12	0.32	9501	4.36	640	2.44	0.29					
8814M	0.26	189	0.15	0.32	9505	5.22	734	2.92	0.29					
8815M	0.40	204	0.21	0.32	9516	4.52	657	2.36	0.26					
8820	0.21	183	0.12	0.29	9519	3.98	598	2.07	0.26					
8824	2.35	419	1.45	0.36	9521	3.93	592	2.04	0.26					
8825	–	–	1.40	0.32	9522	4.13	614	2.46	0.32					
8826	2.36	420	1.40	0.32	9534	3.87	586	1.86	0.23					
8829	–	–	1.45	0.36	9554	9.39	1000	4.49	0.23					
8831	1.46	321	0.87	0.32	9586	0.50	215	0.33	0.41					
8832	0.38	202	0.23	0.32	9600	3.33	526	2.06	0.36					
8833	0.89	258	0.53	0.32	9620	1.32	305	0.74	0.29					
8835	2.49	434	1.49	0.32										
8842	2.83	471	1.68	0.32										
8855	0.16	178	0.10	0.32										
8856	0.68	235	0.41	0.32										
8864	1.80	358	1.07	0.32										
8868	0.49	214	0.30	0.36										
8869	1.24	296	0.77	0.36										
8871	0.09	170	0.05	0.36										
8901	0.24	186	0.13	0.29										
9012	1.76	354	0.98	0.29										
9014	3.72	569	2.22	0.32										
9015	3.59	555	2.14	0.32										
9016	2.91	480	1.73	0.32										
9019	2.71	458	1.41	0.26										
9033	2.32	415	1.38	0.32										
9040	3.19	511	1.98	0.36										
9044	1.35	309	0.83	0.36										
9052	2.18	400	1.35	0.36										
9058	1.66	343	1.09	0.41										
9060	1.59	335	0.98	0.36										
9061	1.43	317	0.94	0.41										

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

FOOTNOTES

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

A Minimum Premium $100 per ginning location for policy minimum premium computation.

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

Code No.	Disease Loading	Symbol	Code No.	Disease Loading	Symbol	Code No.	Disease Loading	Symbol
0059D	0.44	S	1165D	0.05	S	3082D	0.07	S
0065D	0.11	S	1624D	0.05	S	3085D	0.11	S
0066D	0.11	S	1710D	0.05	S	4024D	0.06	S
0067D	0.11	S	1803D	0.40	S	6251D	0.07	S
1164D	0.07	S	3081D	0.16	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.

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

*** 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 1.7 and elr x 1.623.

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

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MISCELLANEOUS VALUES

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

Employee operated vehicle	$70,900
Leased or rented vehicle	$47,300

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

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

Maximum Weekly Payroll applicable in accordance with ***Basic Manual*** Rule 2-E -- "Executive Officers" including members of limited liability companies, Rule 2-E-3 for Partners and Sole Proprietors, and ***Basic Manual*** footnote instructions for Code 9178 -- "Athletic Sports or Park: Non-Contact Sports", and Code 9179 -- "Athletic Sports or Park: Contact Sports" $3,600

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

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

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

Terrorism (Voluntary) 0.01

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

(Multiply a Non-F classification rate by a factor of 1.32 to adjust for differences in benefits and loss-based expenses. This factor is the product of the adjustment for differences in benefits (1.25) and the adjustment for differences in loss-based expenses (1.056).)

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, 2020

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

Effective January 1, 2020

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	5.01	650	2.29	0.32	2016	5.49	764	2.63	0.36	2710	12.82	1000	4.71	0.23
0008	4.10	611	1.76	0.29	2021	3.71	568	1.59	0.29	2714	7.07	938	3.37	0.36
0016	7.54	500	3.01	0.26	2039	4.37	641	2.08	0.36	2731	6.19	841	2.47	0.26
0034	6.47	650	2.97	0.32	2041	6.71	898	3.20	0.36	2735	7.24	956	3.44	0.36
0035	4.17	619	1.98	0.36	2065	2.96	486	1.36	0.32	2759	9.11	1000	4.33	0.36
0036	5.01	500	2.30	0.32	2070	7.46	981	3.42	0.32	2790	2.52	437	1.20	0.36
0037	5.12	500	2.20	0.29	2081	4.73	680	2.17	0.32	2797	10.30	1000	4.71	0.32
0042	8.63	650	3.72	0.29	2089	6.34	857	2.91	0.32	2799	9.06	1000	3.91	0.30
0050	9.66	1000	4.42	0.32	2095	4.93	702	2.26	0.32	2802	6.92	921	2.98	0.29
0059D	0.57	–	0.10	0.26	2105	5.69	786	2.71	0.36	2835	4.23	625	2.13	0.41
0065D	0.14	–	0.03	0.26	2110	3.64	560	1.73	0.36	2836	4.37	641	2.20	0.41
0066D	0.14	–	0.03	0.26	2111	4.98	708	2.37	0.36	2841	7.03	933	3.34	0.36
0067D	0.14	–	0.03	0.26	2112	6.34	857	3.02	0.36	2881	4.68	675	2.36	0.41
0079	4.47	650	1.78	0.26	2114	5.01	711	2.38	0.36	2883	4.78	686	2.19	0.32
0083	6.51	500	2.98	0.32	2121	2.12	393	0.97	0.32	2913	–	–	2.19	0.32
0106	13.91	1000	5.12	0.23	2130	2.67	454	1.22	0.32	2915	5.67	784	2.45	0.30
0113	5.21	733	2.39	0.32	2131	3.17	509	1.46	0.32	2916	5.29	742	1.94	0.23
0170	4.21	623	1.92	0.32	2143	3.52	547	1.68	0.36	2923	3.43	537	1.64	0.36
0251	4.69	676	2.15	0.32	2157	6.20	842	2.85	0.32	2942	–	–	0.95	0.41
0400	–	–	1.30	0.29	2172	2.67	454	1.15	0.30	2960	7.40	974	3.40	0.32
0401	15.74	A	5.79	0.23	2174	4.68	675	2.23	0.36	3004	2.73	460	1.09	0.26
0771N	0.86	–	–	–	2211	12.10	1000	4.84	0.26	3018	4.33	636	1.73	0.26
0908P	230.00	390	105.25	0.32	2220	3.71	568	1.70	0.32	3022	6.16	838	2.94	0.36
0913P	658.00	818	301.84	0.32	2286	3.17	509	1.51	0.36	3027	4.50	655	1.80	0.26
0917	6.83	911	3.25	0.36	2288	6.06	827	2.88	0.36	3028	4.33	636	1.99	0.32
1005	8.74	1000	2.92	0.23	2300	–	–	1.87	0.32	3030	9.22	1000	3.69	0.26
1016X	19.32	1000	6.45	0.23	2302	2.64	450	1.21	0.32	3040	8.22	1000	3.29	0.26
1164D	5.07	718	1.66	0.22	2305	3.64	560	1.57	0.29	3041	7.61	997	3.48	0.32
1165D	4.62	668	1.68	0.23	2361	3.32	525	1.52	0.32	3042	6.33	856	2.73	0.29
1320	2.26	409	0.84	0.23	2362	2.93	482	1.34	0.32	3064	7.12	943	3.26	0.32
1322	9.98	1000	3.68	0.23	2380	3.13	504	1.43	0.32	3069	–	–	2.46	0.32
1430	7.85	1000	3.14	0.26	2386	–	–	1.87	0.32	3076	5.37	751	2.46	0.32
1438	8.11	1000	2.99	0.23	2388	2.42	426	1.15	0.36	3081D	11.99	1000	4.70	0.26
1452	3.48	543	1.39	0.27	2402	4.50	655	1.80	0.26	3082D	7.07	938	2.79	0.26
1463	25.09	1000	9.25	0.23	2413	4.07	608	1.86	0.32	3085D	8.85	1000	3.48	0.26
1472	5.15	727	1.89	0.23	2416	3.11	502	1.43	0.32	3110	8.57	1000	3.92	0.32
1624D	5.52	767	2.00	0.23	2417	1.85	364	0.85	0.32	3111	3.64	560	1.67	0.32
1642	2.96	486	1.19	0.26	2501	4.08	609	1.87	0.32	3113	2.81	469	1.29	0.32
1654	5.76	794	2.31	0.26	2503	2.12	393	1.01	0.36	3114	5.49	764	2.51	0.32
1655	–	–	1.19	0.26	2534	–	–	1.87	0.32	3118	2.74	461	1.31	0.36
1699	5.20	732	2.08	0.26	2570	7.12	943	3.39	0.36	3119	1.33	306	0.67	0.41
1701	4.55	661	1.82	0.26	2585	5.47	762	2.61	0.36	3122	3.09	500	1.47	0.36
1710D	5.21	733	2.06	0.26	2586	4.25	628	1.95	0.32	3126	3.97	597	1.82	0.32
1741	–	–	1.82	0.26	2587	2.80	468	1.33	0.36	3131	2.96	486	1.36	0.32
1747	4.58	664	1.83	0.27	2589	4.64	670	2.12	0.32	3132	4.46	651	2.04	0.32
1748	8.26	1000	3.29	0.26	2600	5.90	809	2.81	0.36	3145	3.17	509	1.45	0.32
1803D	13.29	1000	4.69	0.23	2623	11.53	1000	4.97	0.29	3146	3.68	565	1.69	0.32
1852	–	–	1.09	0.22	2651	3.25	518	1.55	0.36	3169	4.39	643	2.01	0.32
1853	–	–	1.82	0.26	2660	3.78	576	1.80	0.36	3175	–	–	2.01	0.32
1860	–	–	1.53	0.32	2670	4.11	612	2.07	0.41	3179	3.64	560	1.73	0.36
1924	3.99	599	1.90	0.36	2683	3.76	574	1.79	0.36	3180	3.74	571	1.78	0.36
1925	8.19	1000	3.52	0.29	2688	5.49	764	2.61	0.36	3188	3.42	536	1.63	0.36
2002	4.00	600	1.91	0.36	2701	18.29	1000	7.33	0.26	3220	2.82	470	1.30	0.32
2003	6.23	845	2.86	0.32	2702	28.90	1000	9.61	0.22	3223	–	–	1.78	0.36
2014	7.31	964	2.92	0.26	2709	13.56	1000	5.43	0.26	3224	5.20	732	2.48	0.36

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

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CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO	CLASS CODE	RATE	MIN PREM	ELR	D RATIO
3227	5.95	815	2.83	0.36	4034	11.27	1000	4.50	0.26	4665	11.86	1000	4.75	0.26
3240	5.86	805	2.78	0.36	4036	4.23	625	1.69	0.26	4670	–	–	2.81	0.32
3241	4.72	679	2.16	0.32	4038	3.93	592	1.98	0.41	4683	6.12	833	2.81	0.32
3255	3.68	565	1.85	0.41	4053	–	–	1.78	0.32	4686	3.38	532	1.35	0.26
3257	4.76	684	2.18	0.32	4061	–	–	1.78	0.32	4692	1.00	270	0.48	0.36
3270	4.17	619	1.91	0.32	4062	3.89	588	1.78	0.32	4693	2.08	389	0.95	0.32
3300	6.59	885	3.01	0.32	4101	5.27	740	2.26	0.29	4703	2.99	489	1.37	0.32
3303	4.11	612	1.95	0.36	4109	0.77	245	0.37	0.36	4717	2.52	437	1.27	0.41
3307	5.43	757	2.49	0.32	4110	1.18	290	0.54	0.32	4720	3.78	576	1.73	0.32
3315	5.54	769	2.64	0.36	4111	2.59	445	1.23	0.36	4740	2.22	404	0.89	0.26
3334	4.00	600	1.84	0.32	4113	–	–	1.23	0.36	4741	4.15	617	1.90	0.32
3336	4.50	655	1.80	0.26	4114	3.94	593	1.81	0.32	4751	7.97	1000	3.17	0.25
3365	6.80	908	2.72	0.26	4130	4.93	702	2.26	0.32	4771N	4.88	791	1.62	0.22
3372	6.53	878	2.81	0.29	4131	8.32	1000	3.96	0.36	4777	5.27	740	1.75	0.22
3373	7.18	950	3.29	0.32	4133	3.29	522	1.57	0.36	4825	1.56	332	0.63	0.26
3383	2.44	428	1.16	0.36	4149	1.20	292	0.60	0.41	4828	3.13	504	1.35	0.30
3385	1.29	302	0.61	0.36	4206	4.36	640	2.00	0.32	4829	1.70	347	0.63	0.23
3400	3.67	564	1.58	0.30	4207	4.21	623	1.69	0.26	4902	4.07	608	1.93	0.36
3507	5.34	747	2.45	0.32	4239	3.54	549	1.42	0.26	4923	1.77	355	0.81	0.32
3515	3.93	592	1.80	0.32	4240	5.73	790	2.73	0.36	5020	8.94	1000	3.58	0.26
3548	1.87	366	0.86	0.32	4243	3.34	527	1.53	0.32	5022	11.52	1000	4.24	0.23
3559	6.20	842	2.84	0.32	4244	3.94	593	1.81	0.32	5037	30.90	1000	10.28	0.22
3574	1.99	379	0.95	0.36	4250	3.11	502	1.42	0.32	5040	13.82	1000	4.61	0.22
3581	1.91	370	0.91	0.36	4251	4.04	604	1.85	0.32	5057	6.98	928	2.33	0.22
3612	3.03	493	1.31	0.29	4263	4.86	695	2.22	0.32	5059	26.70	1000	8.88	0.22
3620	5.69	786	2.28	0.26	4273	4.04	604	1.86	0.32	5069	–	–	8.88	0.22
3629	3.54	549	1.68	0.36	4279	3.34	527	1.53	0.32	5102	8.87	1000	3.26	0.23
3632	4.58	664	1.97	0.29	4282	–	–	1.53	0.32	5146	6.01	821	2.40	0.26
3634	2.73	460	1.30	0.36	4283	2.60	446	1.19	0.32	5160	7.29	962	2.70	0.23
3635	4.11	612	1.88	0.32	4299	2.85	474	1.36	0.36	5183	3.60	556	1.44	0.26
3638	3.20	512	1.52	0.36	4304	7.40	974	3.19	0.29	5188	5.15	727	2.06	0.27
3642	3.67	564	1.68	0.32	4307	2.91	480	1.46	0.41	5190	3.61	557	1.45	0.26
3643	3.13	504	1.44	0.32	4351	1.52	327	0.70	0.32	5191	1.17	289	0.54	0.32
3647	4.72	679	2.03	0.29	4352	2.46	431	1.17	0.36	5192	3.97	597	1.82	0.32
3648	2.67	454	1.27	0.36	4360	–	–	0.37	0.29	5213	10.74	1000	3.96	0.23
3681	1.43	317	0.68	0.36	4361	1.44	318	0.69	0.36	5215	7.80	1000	3.37	0.30
3685	2.30	413	1.09	0.36	4410	4.15	617	1.90	0.32	5221	6.79	907	2.72	0.26
3719	1.65	342	0.55	0.23	4420	9.72	1000	3.59	0.23	5222	20.05	1000	7.37	0.23
3724	6.68	895	2.46	0.23	4431	2.41	425	1.21	0.41	5223	7.74	1000	3.10	0.26
3726	5.59	775	1.86	0.22	4432	1.89	368	0.95	0.41	5348	7.85	1000	3.15	0.26
3803	3.97	597	1.82	0.32	4439	–	–	1.39	0.32	5402	6.57	883	3.13	0.36
3807	5.33	746	2.54	0.36	4452	4.76	684	2.18	0.32	5403	14.08	1000	5.17	0.23
3808	5.43	757	2.34	0.30	4459	4.32	635	1.98	0.32	5437	8.05	1000	3.22	0.26
3821	7.90	1000	3.41	0.29	4470	3.61	557	1.66	0.32	5443	5.55	771	2.54	0.32
3822	6.49	874	2.79	0.29	4484	5.02	712	2.30	0.32	5445	9.09	1000	3.35	0.23
3824	7.02	932	3.02	0.29	4493	4.55	661	2.09	0.32	5462	9.43	1000	3.77	0.26
3826	1.51	326	0.69	0.32	4511	1.16	288	0.50	0.29	5472	8.45	1000	2.82	0.22
3827	3.38	532	1.45	0.29	4557	3.25	518	1.55	0.36	5473	11.65	1000	3.88	0.22
3830	1.85	364	0.80	0.30	4558	3.03	493	1.39	0.32	5474	8.23	1000	3.03	0.23
3851	3.64	560	1.74	0.36	4568	3.17	509	1.27	0.26	5478	6.28	851	2.52	0.26
3865	2.48	433	1.25	0.41	4581	1.52	327	0.56	0.23	5479	7.80	1000	3.36	0.30
3881	6.85	914	3.14	0.32	4583	6.41	865	2.36	0.23	5480	11.23	1000	4.14	0.23
4000	8.36	1000	3.07	0.23	4611	1.56	332	0.75	0.36	5491	2.63	449	0.97	0.23
4021	7.35	969	2.94	0.26	4635	4.82	690	1.61	0.22	5506	10.47	1000	3.48	0.22
4024D	10.82	1000	4.28	0.26	4653	2.20	402	1.05	0.36	5507	5.59	775	2.06	0.23

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

Effective January 1, 2020

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
5508	–	–	2.06	0.23	7047M	12.75	1000	4.05	0.22	7710	54.96	1000	20.24	0.23
5535	8.19	1000	3.27	0.26	7050M	11.96	1000	3.79	0.22	7711	54.96	1000	20.24	0.23
5537	5.98	818	2.40	0.26	7090M	8.62	1000	2.86	0.22	7720	3.98	598	1.59	0.26
5551	21.83	1000	7.26	0.22	7098M	17.45	1000	5.81	0.22	7855	5.19	731	2.08	0.26
5606	1.79	357	0.66	0.23	7099M	23.88	1000	7.59	0.22	8001	3.03	493	1.44	0.36
5610	7.18	950	3.29	0.32	7133	3.59	555	1.32	0.23	8002	3.41	535	1.56	0.32
5645	12.87	1000	4.73	0.23	7151M	4.36	640	1.60	0.23	8006	3.20	512	1.47	0.32
5703	16.89	1000	6.75	0.26	7152M	6.10	831	2.14	0.23	8008	1.55	331	0.73	0.36
5705	20.61	1000	8.23	0.26	7153M	4.85	694	1.78	0.23	8010	2.67	454	1.27	0.36
5951	1.12	283	0.53	0.36	7219	10.00	1000	3.69	0.23	8013	0.57	223	0.26	0.32
6003	7.48	983	3.00	0.27	7222	9.00	1000	3.61	0.27	8015	1.22	294	0.56	0.32
6005	5.38	752	2.16	0.26	7225	10.04	1000	4.02	0.27	8017	2.50	435	1.19	0.36
6017	–	–	3.96	0.23	7228	–	–	3.69	0.23	8018	4.62	668	2.20	0.36
6018	3.41	535	1.37	0.27	7229	–	–	3.69	0.23	8021	3.29	522	1.51	0.32
6045	4.76	684	1.91	0.27	7230	11.93	1000	5.15	0.30	8031	3.78	576	1.73	0.32
6204	12.66	1000	4.66	0.23	7231	11.09	1000	4.78	0.30	8032	2.67	454	1.27	0.36
6206	3.82	580	1.27	0.22	7232	11.14	1000	4.12	0.23	8033	1.89	368	0.86	0.32
6213	2.13	394	0.78	0.23	7309F	20.85	1000	5.08	0.19	8037	2.37	421	1.12	0.36
6214	2.74	461	0.91	0.22	7313F	7.27	960	1.77	0.19	8039	2.02	382	0.96	0.36
6216	7.58	994	2.53	0.22	7317F	15.39	1000	3.73	0.20	8044	3.58	554	1.54	0.29
6217	6.46	871	2.38	0.23	7327F	38.78	1000	9.48	0.19	8045	0.95	265	0.45	0.36
6229	7.22	954	2.65	0.23	7333M	11.08	1000	3.71	0.23	8046	3.24	516	1.48	0.32
6233	4.21	623	1.55	0.23	7335M	12.31	1000	4.12	0.23	8047	1.38	312	0.66	0.36
6235	7.36	970	2.45	0.22	7337M	18.33	1000	5.86	0.23	8058	3.42	536	1.56	0.32
6236	10.04	1000	4.02	0.26	7350F	17.75	1000	4.61	0.20	8072	0.82	250	0.39	0.36
6237	2.15	397	0.86	0.27	7360	5.30	743	2.12	0.26	8102	2.47	432	1.18	0.36
6251D	12.52	1000	4.60	0.24	7370	6.12	833	2.80	0.32	8103	3.03	493	1.30	0.29
6252D	4.80	688	1.59	0.23	7380	6.37	861	2.75	0.30	8105	–	–	2.20	0.36
6260	–	–	4.60	0.24	7382	5.60	776	2.57	0.32	8106	8.66	1000	3.46	0.26
6306	7.62	998	2.80	0.23	7390	5.99	819	2.75	0.32	8107	4.56	662	1.83	0.26
6319	4.67	674	1.72	0.23	7394M	4.98	708	1.66	0.22	8111	2.93	482	1.34	0.32
6325	5.56	772	2.05	0.23	7395M	5.53	768	1.84	0.22	8116	3.46	541	1.59	0.32
6400	7.89	1000	3.40	0.29	7398M	7.40	974	2.35	0.22	8203	11.21	1000	5.14	0.32
6503	3.32	525	1.58	0.36	7402	0.39	203	0.18	0.32	8204	7.06	937	2.82	0.26
6504	3.89	588	1.85	0.36	7403	5.73	790	2.30	0.26	8209	6.08	829	2.79	0.32
6702M*	6.31	854	2.52	0.26	7405N	1.69	446	0.68	0.27	8215	4.71	678	1.88	0.26
6703M*	10.87	1000	4.17	0.26	7420	8.74	1000	2.93	0.23	8227	4.85	694	1.62	0.22
6704M*	7.01	931	2.81	0.26	7421	0.99	269	0.36	0.23	8232	6.99	929	2.80	0.26
6801F	7.61	997	2.08	0.24	7422	2.25	408	0.75	0.23	8233	3.46	541	1.39	0.27
6811	7.22	954	2.88	0.26	7425	4.19	621	1.40	0.22	8235	6.50	875	2.98	0.32
6824F	12.95	1000	3.39	0.20	7431N	1.20	364	0.40	0.23	8263	7.72	1000	3.32	0.29
6826F	12.03	1000	3.23	0.25	7445N	0.91	–	–	–	8264	8.46	1000	3.38	0.26
6834	5.06	717	2.18	0.29	7453N	0.65	–	–	–	8265	8.46	1000	3.11	0.23
6836	6.05	826	2.42	0.26	7502	2.54	439	1.02	0.26	8279	9.31	1000	3.42	0.22
6843F	21.52	1000	5.27	0.19	7515	1.51	326	0.50	0.22	8288	8.63	1000	3.44	0.26
6845F	10.60	1000	2.57	0.20	7520	4.82	690	2.21	0.32	8291	5.66	783	2.44	0.29
6854	8.26	1000	2.75	0.22	7538	6.05	826	2.01	0.22	8292	5.53	768	2.53	0.32
6872F	19.80	1000	4.81	0.20	7539	2.87	476	1.06	0.23	8293	13.53	1000	5.42	0.26
6874F	32.54	1000	7.88	0.20	7540	3.86	585	1.28	0.22	8304	7.28	961	2.91	0.26
6882	6.79	907	2.26	0.22	7580	2.91	480	1.16	0.26	8350	7.71	1000	2.84	0.23
6884	8.78	1000	2.94	0.23	7590	4.42	646	1.90	0.29	8380	3.78	576	1.63	0.29
7016M	8.49	1000	2.83	0.22	7600	5.02	712	2.01	0.26	8381	2.96	486	1.27	0.29
7024M	9.44	1000	3.14	0.22	7605	2.89	478	1.15	0.26	8385	3.16	508	1.27	0.26
7038M	7.76	1000	2.57	0.22	7610	0.86	255	0.37	0.29	8392	2.98	488	1.36	0.32
7046M	15.70	1000	5.23	0.22	7705	6.98	928	3.01	0.30	8393	2.37	421	1.09	0.32

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

Effective January 1, 2020

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
8500	7.88	1000	3.15	0.26	9062	1.73	350	0.87	0.41					
8601	0.56	222	0.24	0.30	9063	1.25	298	0.59	0.36					
8602	2.54	439	1.09	0.29	9077F	7.14	945	2.12	0.30					
8603	0.13	174	0.06	0.32	9082	1.63	339	0.81	0.41					
8606	2.80	468	1.03	0.23	9083	1.76	354	0.88	0.41					
8709F	9.91	1000	2.41	0.19	9084	1.73	350	0.79	0.32					
8719	3.15	507	1.05	0.22	9088a	a	a	a	a					
8720	1.42	316	0.57	0.26	9089	1.91	370	0.91	0.36					
8721	0.53	218	0.22	0.26	9093	2.07	388	0.98	0.36					
8723	0.23	185	0.11	0.32	9101	6.46	871	3.07	0.36					
8725	3.74	571	1.50	0.26	9102	4.62	668	2.11	0.32					
8726F	4.29	632	1.17	0.24	9154	2.21	403	1.01	0.32					
8734M	0.82	250	0.33	0.26	9156	4.03	603	1.73	0.29					
8737M	0.74	241	0.29	0.26	9170	15.80	1000	5.24	0.22					
8738M	1.12	283	0.44	0.26	9178	6.53	878	3.27	0.41					
8742	0.61	227	0.25	0.26	9179	20.29	1000	9.63	0.36					
8745	5.51	766	2.38	0.30	9180	8.09	1000	3.22	0.26					
8748	0.94	263	0.41	0.30	9182	2.95	485	1.35	0.32					
8755	0.57	223	0.23	0.26	9186	19.34	1000	7.09	0.22					
8799	0.72	239	0.32	0.32	9220	6.46	871	2.78	0.29					
8800	2.54	439	1.28	0.41	9402	6.71	898	2.68	0.26					
8803	0.09	170	0.04	0.26	9403	11.21	1000	4.12	0.23					
8805M	0.36	200	0.17	0.32	9410	3.50	545	1.60	0.32					
8810	0.27	190	0.12	0.32	9501	5.67	784	2.44	0.29					
8814M	0.34	197	0.15	0.32	9505	6.79	907	2.92	0.29					
8815M	0.52	217	0.21	0.32	9516	5.88	807	2.36	0.26					
8820	0.27	190	0.12	0.29	9519	5.17	729	2.07	0.26					
8824	3.06	497	1.45	0.36	9521	5.11	722	2.04	0.26					
8825	–	–	1.40	0.32	9522	5.37	751	2.46	0.32					
8826	3.07	498	1.40	0.32	9534	5.03	713	1.86	0.23					
8829	–	–	1.45	0.36	9554	12.21	1000	4.49	0.23					
8831	1.90	369	0.87	0.32	9586	0.65	232	0.33	0.41					
8832	0.49	214	0.23	0.32	9600	4.33	636	2.06	0.36					
8833	1.16	288	0.53	0.32	9620	1.72	349	0.74	0.29					
8835	3.24	516	1.49	0.32										
8842	3.68	565	1.68	0.32										
8855	0.21	183	0.10	0.32										
8856	0.88	257	0.41	0.32										
8864	2.34	417	1.07	0.32										
8868	0.64	230	0.30	0.36										
8869	1.61	337	0.77	0.36										
8871	0.12	173	0.05	0.36										
8901	0.31	194	0.13	0.29										
9012	2.29	412	0.98	0.29										
9014	4.84	692	2.22	0.32										
9015	4.67	674	2.14	0.32										
9016	3.78	576	1.73	0.32										
9019	3.52	547	1.41	0.26										
9033	3.02	492	1.38	0.32										
9040	4.15	617	1.98	0.36										
9044	1.76	354	0.83	0.36										
9052	2.83	471	1.35	0.36										
9058	2.16	398	1.09	0.41										
9060	2.07	388	0.98	0.36										
9061	1.86	365	0.94	0.41										

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

Effective January 1, 2020
APPLICABLE TO ASSIGNED RISK POLICIES ONLY

FOOTNOTES

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

A Minimum Premium $100 per ginning location for policy minimum premium computation.

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

Code No.	Disease Loading	Symbol	Code No.	Disease Loading	Symbol	Code No.	Disease Loading	Symbol
0059D	0.57	S	1165D	0.07	S	3082D	0.09	S
0065D	0.14	S	1624D	0.07	S	3085D	0.14	S
0066D	0.14	S	1710D	0.07	S	4024D	0.08	S
0067D	0.14	S	1803D	0.52	S	6251D	0.09	S
1164D	0.09	S	3081D	0.21	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.

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

*** 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 1.7 and elr x 1.623.

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, 2020
APPLICABLE TO ASSIGNED RISK POLICIES ONLY

MISCELLANEOUS VALUES

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

Employee operated vehicle	$70,900
Leased or rented vehicle	$47,300

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

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

Maximum Weekly Payroll applicable in accordance with ***Basic Manual*** Rule 2-E -- "Executive Officers" including members of limited liability companies, Rule 2-E-3 for Partners and Sole Proprietors, and ***Basic Manual*** footnote instructions for Code 9178 -- "Athletic Sports or Park: Non-Contact Sports", and Code 9179 -- "Athletic Sports or Park: Contact Sports" $3,600

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

Terrorism - (Assigned Risk) 0.01

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

(Multiply a Non-F classification rate by a factor of 1.32 to adjust for differences in benefits and loss-based expenses. This factor is the product of the adjustment for differences in benefits (1.25) and the adjustment for differences in loss-based expenses (1.056).)

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, 2020

Proposed Values for Inclusion in the Experience Rating Plan Manual

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

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

Effective January 1, 2020

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

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

(a) G	12.05
(b) State Per Claim Accident Limitation	$301,500
(c) State Multiple Claim Accident Limitation	$603,000
(d) USL&HW Per Claim Accident Limitation	$875,500
(e) USL&HW Multiple Claim Accident Limitation	$1,751,000
(f) Employers Liability Accident Limitation	$55,000
(g) Primary/Excess Loss Split Point	$17,500
(h) USL&HW Act -- Expected Loss Factor -- Non-F Classes	1.25

(Multiply a Non-F classification ELR by the USL&HW Act - Expected Loss Factor of 1.25.)

Effective January 1, 2020

TABLE OF BALLAST VALUES
APPLICABLE TO ALL POLICIES

Experience Rating Plan - ERA

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

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

Ballast = (0.10)(Expected Losses) + 2500(Expected Losses)(12.05) / (Expected Losses + (700)(12.05))

G = 12.05

NATIONAL COUNCIL ON COMPENSATION INSURANCE, INC.

IOWA—UPDATE TO EXPERIENCE RATING PREMIUM ELIGIBILITY AMOUNTS

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

2. State Subject Premium Eligibility Amounts

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

a. A risk qualifies for experience rating if its data within the most recent 24 months of the experience period develops a subject premium of at least the amount shown in Column A.

b. A risk may not qualify according to Rule 2-A-2-a. If it has more than the amount of experience referenced in Rule 2-A-2-a, then to qualify for experience rating the risk must develop an average annual subject premium of at least the amount shown in Column B. *Refer to Rule 2-A-3 to determine average annual subject premium.*

c. A risk's rating effective date determines the applicable Column A and Column B subject premium eligibility amounts required to qualify for experience rating. *Refer to Rule 2-B for rating effective date determination.*

State Table of Subject Premium Eligibility Amounts

State	Rating Effective Date	Column A ($)	Column B ($)
IA	7/1/20 and after	8,500	4,250
	7/1/19 - 6/30/20	8,000	4,000
	7/1/18 - 6/30/19	8,000	4,000

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

Iowa

Workers Compensation Rate Filing – January 1, 2020

Proposed Values for Inclusion in the Retrospective Rating Plan Manual

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

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

Proposed Values for Inclusion in the Retrospective Rating Plan Manual

Excess Ratio Curve Refresh

The excess ratio curves underlying the excess loss factors (ELFs) where last updated in 2014 and are being refreshed with more recent data in this update. The latest valuation of case-incurred loss amounts from NCCI's ***Statistical Plan for Workers Compensation and Employers Liability Insurance*** are compiled across 37 states and combined for five older policy periods, corresponding to policy periods within the 2005–2010 time frame. These policy periods are selected to use claim amounts evaluated as of the 6th through 10th reports. Using this data, one countrywide excess ratio curve is generated for each claim group (five curves).

Consistent with the current 2014 ELF methodology, every state has five unique excess ratio curves shaped from the newly refreshed countrywide curves. The state curves are shaped using state-specific claim amounts from the five policy periods evaluated as of the 6th through 10th reports. The variability of the state's claim data for each claim group is quantified and compared to the variability observed in the countrywide claim group data (at the same maturity) to determine the adjustment applied to generate the state excess ratio curves. This helps address the differences in benefit levels and variation in claim amounts across states. A credibility-weighted procedure is applied to compute the variability observed for states having small claim volumes for any one claim group.

The following table summarizes a comparison of the 2014 ELF methodology to that being proposed in this filing that refreshes the 2014 methodology with newer data:

Component	Current (2014)	Proposed
Organization of the Data	Curves by Claim Group: • Fatal • Permanent Total • Permanent Partial and Temporary Total—Likely-to-Develop • Permanent Partial and Temporary Total—Not-Likely-to-Develop • Medical Only	No Change
Maturity of the Data	Curves based on PYs ranging from 2000–2005 6th through 10th reports for all claim groups	PYs ranging from 2005 - 2010
Form of Body of Excess Ratio Curves	Mixture of two lognormal distributions fitted for each claim group	No Change
Form of Tail of Excess Ratio Curves	A Generalized Pareto (GPD) tail is spliced on to each CW Curve by claim group	No Change

Proposed Values for Inclusion in the Retrospective Rating Plan Manual

Component	Current (2014)	Proposed
Adjusting Countrywide Curves to the State Level	Countrywide parameters are adjusted to the state level using the state's R-value. The R-value is the state's credibility-weighted proxy CV relative to the countrywide proxy CV and is calculated by claim group.	No Change
Stabilizing ELFs for Annual Updates/ Treatment of PT Claims	PT severities (based on the same data as the curves) are locked-in and adjusted forward each year for trend and benefit on-levels The ratios (by state and hazard group) of expected PT claim counts to expected non-PT lost-time claim counts will remain constant	PYs ranging from 2005 - 2010
Handling of Catastrophic Events Beyond $50M	Final excess ratios are adjusted to limit occurrences to $50 million. Excess ratios at $50M = 0	Introduces unlimited parameter to accommodate the removal of expected losses beyond $50M Excess ratio at $50M = 0
Inclusion of ALAE by Claim Group and Size of Loss	Severities are scaled by separate claim group relativities (balanced to get the correct statewide total ALAE) Countrywide shape curves including ALAE are fitted for each claim group and then CV adjusted similar to loss CW ALAE/Loss = 12.7% Weighted at state level with pure loss shape curves based on how the statewide ALAE/Loss ratio compares to the overall countrywide ALAE /Loss ratio	No change except CW ALAE/Loss = 13.2%

Handling of Catastrophic Events Beyond $50M

The ELFs that NCCI produces and files are non-catastrophe. Events exceeding $50 million are considered catastrophes and non-ratable. The current approach handled this in a final adjustment by initially producing unlimited excess loss provisions. Then the excess provision for losses beyond $50 million is removed and the excess ratios at the remaining loss limits are adjusted and rescaled. This process ensures that the excess ratio at the $50M loss limit is zero and that the excess ratio at zero dollars is 1.0.

In this filing, NCCI is proposing to remove these expected losses directly. Let E[min(X;x)] be defined as the limited expected value (LEV) of a random variable loss amount (X) limited at x. Given this notation, the generalized form of the excess ratio calculation at a limit of $100,000 is as follows:

$$Excess\ Ratio\ @\$100{,}000 = 1 - \frac{E[\min(X; 100{,}000)]}{Average\ Cost\ per\ Case}$$

Proposed Values for Inclusion in the Retrospective Rating Plan Manual

The average cost per case varies by state, claim group, and hazard group, and it can be thought of as conceptually analogous to a limited expected value at $50M (because the ELFs are non-catastrophe).

Under the proposed, NCCI introduces the new unlimited parameter (UP), which is used in determining the numerator (LEV) in the formula above. UP is determined by setting E[min(X;$50,000,000)] equal to the average cost per case. This results in an excess ratio of zero at $50,000,000 and facilitates the removal of the expected loss for potential large loss events exceeding $50 million. The calculation change does not impact the methodology used to create the loss curve parameters that underlie the excess ratio calculations.

In summary, the excess loss calculation has an added parameter (i.e., the unlimited parameter) that allows for calculating excess ratios using limited expected values rather than calculating excess ratios from an unlimited distribution, which then needs to be adjusted. Because the UP is used only in intermediate calculations of the ELPPFs, it will not be included in the ***Retrospective Rating Plan Manual*** and is not needed for use in any other components of the ***Retrospective Rating Plan***. The UP will be provided as an informational value in the ***Excess Loss Factor Calculations*** NCCI produces by state.

1. Average Cost per Case by Hazard Group

A	B	C	D	E	F	G
8,322	13,112	14,654	21,070	28,323	48,328	46,759

Average Cost per Case including ALAE by Hazard Group

A	B	C	D	E	F	G
9,027	14,207	15,864	22,783	30,591	52,138	50,338

2. Tax Multipliers

a. State (non-F Classes)	1.024
b. Federal Classes, or non-F classes where rate is increased by the USL&HW Act Percentage	1.062

3. Countrywide Expected Loss Ratio
0.615

Countrywide Expected Loss and Allocated Expense Ratio
0.683

4. Table of Expense Ratios
Type A: 2019-01
Type B: 2019-01

5. Excess Loss Factors
(Applicable to New and Renewal Policies)

Per Accident Limitation	Hazard Groups A	B	C	D	E	F	G
$10,000	0.468	0.508	0.519	0.545	0.562	0.582	0.589
$15,000	0.434	0.478	0.490	0.519	0.539	0.562	0.572
$20,000	0.407	0.452	0.467	0.497	0.520	0.545	0.557
$25,000	0.384	0.431	0.446	0.478	0.503	0.530	0.544
$30,000	0.364	0.412	0.428	0.461	0.488	0.516	0.532
$35,000	0.346	0.395	0.412	0.446	0.474	0.503	0.521
$40,000	0.331	0.379	0.397	0.432	0.461	0.491	0.510
$50,000	0.304	0.353	0.371	0.407	0.438	0.470	0.491
$75,000	0.256	0.303	0.323	0.359	0.392	0.427	0.453
$100,000	0.223	0.268	0.288	0.325	0.358	0.394	0.422
$125,000	0.199	0.242	0.262	0.298	0.332	0.367	0.398
$150,000	0.179	0.220	0.241	0.276	0.310	0.345	0.377
$175,000	0.163	0.203	0.224	0.258	0.292	0.327	0.360
$200,000	0.150	0.189	0.209	0.242	0.276	0.311	0.345
$225,000	0.139	0.176	0.196	0.229	0.263	0.297	0.331
$250,000	0.130	0.165	0.185	0.217	0.251	0.284	0.320
$275,000	0.122	0.156	0.176	0.207	0.240	0.273	0.309
$300,000	0.115	0.148	0.167	0.198	0.230	0.263	0.299
$325,000	0.108	0.140	0.160	0.190	0.222	0.254	0.290
$350,000	0.103	0.134	0.153	0.182	0.214	0.246	0.282
$375,000	0.098	0.128	0.147	0.175	0.207	0.238	0.274
$400,000	0.093	0.122	0.141	0.169	0.200	0.231	0.267
$425,000	0.089	0.118	0.136	0.163	0.194	0.224	0.260
$450,000	0.085	0.113	0.131	0.158	0.188	0.218	0.254
$475,000	0.082	0.109	0.127	0.153	0.183	0.212	0.248
$500,000	0.079	0.105	0.123	0.149	0.178	0.207	0.243
$600,000	0.068	0.092	0.109	0.133	0.161	0.188	0.224
$700,000	0.060	0.082	0.098	0.121	0.148	0.174	0.208
$800,000	0.054	0.075	0.090	0.111	0.137	0.161	0.195
$900,000	0.049	0.068	0.083	0.103	0.128	0.151	0.184
$1,000,000	0.045	0.063	0.077	0.096	0.120	0.142	0.174
$2,000,000	0.025	0.037	0.047	0.060	0.077	0.093	0.119
$3,000,000	0.018	0.027	0.034	0.045	0.059	0.071	0.093
$4,000,000	0.014	0.021	0.027	0.036	0.048	0.058	0.077
$5,000,000	0.011	0.017	0.023	0.030	0.040	0.049	0.066
$6,000,000	0.009	0.014	0.019	0.026	0.035	0.042	0.058
$7,000,000	0.008	0.012	0.016	0.022	0.030	0.037	0.051
$8,000,000	0.007	0.011	0.014	0.019	0.027	0.033	0.046
$9,000,000	0.006	0.009	0.013	0.017	0.024	0.030	0.041
$10,000,000	0.005	0.008	0.011	0.015	0.021	0.027	0.037

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	0.512	0.554	0.565	0.592	0.610	0.631	0.638
$15,000	0.476	0.522	0.535	0.565	0.587	0.611	0.620
$20,000	0.448	0.496	0.510	0.543	0.567	0.593	0.605
$25,000	0.423	0.473	0.489	0.523	0.549	0.577	0.591
$30,000	0.402	0.453	0.470	0.505	0.533	0.563	0.579
$35,000	0.384	0.435	0.453	0.489	0.518	0.549	0.567
$40,000	0.367	0.419	0.437	0.474	0.504	0.537	0.556
$50,000	0.339	0.391	0.410	0.448	0.480	0.514	0.536
$75,000	0.288	0.338	0.359	0.398	0.432	0.469	0.495
$100,000	0.252	0.300	0.322	0.360	0.396	0.433	0.463
$125,000	0.225	0.272	0.293	0.331	0.367	0.405	0.437
$150,000	0.204	0.249	0.271	0.308	0.344	0.382	0.415
$175,000	0.187	0.230	0.252	0.288	0.324	0.362	0.396
$200,000	0.173	0.214	0.236	0.272	0.308	0.345	0.380
$225,000	0.161	0.201	0.222	0.257	0.293	0.330	0.366
$250,000	0.151	0.189	0.210	0.245	0.280	0.316	0.353
$275,000	0.141	0.179	0.200	0.233	0.269	0.304	0.341
$300,000	0.134	0.170	0.191	0.223	0.258	0.293	0.331
$325,000	0.126	0.162	0.182	0.214	0.249	0.283	0.321
$350,000	0.120	0.154	0.175	0.206	0.240	0.274	0.312
$375,000	0.114	0.148	0.168	0.199	0.232	0.266	0.304
$400,000	0.109	0.142	0.161	0.192	0.225	0.258	0.296
$425,000	0.105	0.136	0.156	0.186	0.218	0.251	0.289
$450,000	0.100	0.131	0.150	0.180	0.212	0.244	0.282
$475,000	0.096	0.126	0.146	0.174	0.206	0.238	0.276
$500,000	0.093	0.122	0.141	0.169	0.201	0.232	0.270
$600,000	0.081	0.108	0.126	0.152	0.182	0.212	0.249
$700,000	0.072	0.096	0.114	0.139	0.168	0.196	0.232
$800,000	0.064	0.088	0.104	0.127	0.155	0.182	0.218
$900,000	0.059	0.080	0.096	0.118	0.145	0.171	0.206
$1,000,000	0.054	0.074	0.089	0.111	0.136	0.161	0.195
$2,000,000	0.030	0.043	0.054	0.069	0.088	0.105	0.134
$3,000,000	0.021	0.031	0.040	0.051	0.067	0.080	0.105
$4,000,000	0.016	0.024	0.031	0.041	0.054	0.065	0.087
$5,000,000	0.013	0.020	0.026	0.034	0.045	0.055	0.074
$6,000,000	0.011	0.017	0.022	0.029	0.039	0.048	0.065
$7,000,000	0.009	0.014	0.019	0.025	0.034	0.042	0.057
$8,000,000	0.008	0.012	0.016	0.022	0.030	0.037	0.051
$9,000,000	0.007	0.011	0.014	0.019	0.027	0.033	0.046
$10,000,000	0.006	0.009	0.013	0.017	0.024	0.030	0.042

6. **Retrospective Development Factors**

With Loss Limit			Without Loss Limit			
1st Adj.	2nd Adj.	3rd Adj.	1st Adj.	2nd Adj.	3rd Adj.	4th & Subsequent Adjustment
0.04	0.03	0.02	0.16	0.11	0.08	0.00

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

Type A: 2019-01

WC Premium Range From		To	Expense Ratio
0	-	10,055	0.348
10,056	-	10,167	0.347
10,168	-	10,282	0.346
10,283	-	10,399	0.345
10,400	-	10,520	0.344
10,521	-	10,643	0.343
10,644	-	10,769	0.342
10,770	-	10,898	0.341
10,899	-	11,030	0.340
11,031	-	11,165	0.339
11,166	-	11,304	0.339
11,305	-	11,446	0.338
11,447	-	11,592	0.337
11,593	-	11,741	0.336
11,742	-	11,895	0.335
11,896	-	12,052	0.334
12,053	-	12,214	0.333
12,215	-	12,380	0.332
12,381	-	12,551	0.331
12,552	-	12,727	0.330
12,728	-	12,907	0.329
12,908	-	13,093	0.328
13,094	-	13,284	0.327
13,285	-	13,481	0.326
13,482	-	13,684	0.325
13,685	-	13,893	0.324
13,894	-	14,108	0.323
14,109	-	14,330	0.322
14,331	-	14,559	0.321
14,560	-	14,796	0.320
14,797	-	15,041	0.319
15,042	-	15,294	0.318
15,295	-	15,555	0.317
15,556	-	15,826	0.316
15,827	-	16,106	0.315
16,107	-	16,396	0.314
16,397	-	16,697	0.313
16,698	-	17,009	0.312
17,010	-	17,333	0.312
17,334	-	17,669	0.311
17,670	-	18,019	0.310
18,020	-	18,383	0.309
18,384	-	18,762	0.308
18,763	-	19,157	0.307
19,158	-	19,569	0.306
19,570	-	19,999	0.305
20,000	-	20,449	0.304
20,450	-	20,919	0.303
20,920	-	21,411	0.302
21,412	-	21,927	0.301

WC Premium Range From		To	Expense Ratio
21,928	-	22,469	0.300
22,470	-	23,037	0.299
23,038	-	23,636	0.298
23,637	-	24,266	0.297
24,267	-	24,931	0.296
24,932	-	25,633	0.295
25,634	-	26,376	0.294
26,377	-	27,164	0.293
27,165	-	27,999	0.292
28,000	-	28,888	0.291
28,889	-	29,836	0.290
29,837	-	30,847	0.289
30,848	-	31,929	0.288
31,930	-	33,090	0.287
33,091	-	34,339	0.286
34,340	-	35,686	0.286
35,687	-	37,142	0.285
37,143	-	38,723	0.284
38,724	-	40,444	0.283
40,445	-	42,325	0.282
42,326	-	44,390	0.281
44,391	-	46,666	0.280
46,667	-	49,189	0.279
49,190	-	51,999	0.278
52,000	-	55,151	0.277
55,152	-	58,709	0.276
58,710	-	62,758	0.275
62,759	-	67,407	0.274
67,408	-	72,799	0.273
72,800	-	79,130	0.272
79,131	-	86,666	0.271
86,667	-	95,789	0.270
95,790	-	107,058	0.269
107,059	-	121,333	0.268
121,334	-	139,999	0.267
140,000	-	165,454	0.266
165,455	-	200,377	0.265
200,378	-	208,235	0.264
208,236	-	216,734	0.263
216,735	-	225,957	0.262
225,958	-	235,999	0.261
236,000	-	246,976	0.260
246,977	-	259,024	0.260
259,025	-	272,307	0.259
272,308	-	287,027	0.258
287,028	-	303,428	0.257
303,429	-	321,818	0.256
321,819	-	342,580	0.255
342,581	-	366,206	0.254
366,207	-	393,333	0.253

WC Premium Range From		To	Expense Ratio
393,334	-	424,799	0.252
424,800	-	461,739	0.251
461,740	-	505,714	0.250
505,715	-	558,947	0.249
558,948	-	624,705	0.248
624,706	-	707,999	0.247
708,000	-	816,923	0.246
816,924	-	965,454	0.245
965,455	-	1,179,999	0.244
1,180,000	-	1,517,142	0.243
1,517,143	-	1,824,799	0.242
1,824,800	-	1,983,478	0.241
1,983,479	-	2,172,380	0.240
2,172,381	-	2,401,052	0.239
2,401,053	-	2,683,529	0.238
2,683,530	-	3,041,333	0.237
3,041,334	-	3,509,230	0.236
3,509,231	-	4,147,272	0.235
4,147,273	-	5,068,888	0.234
5,068,889	-	6,517,142	0.233
6,517,143	-	9,123,999	0.233
9,124,000	-	15,206,666	0.232
15,206,667	-	45,619,999	0.231
45,620,000	-	And Above	0.230

First	-	10,000	0.0%
Next	-	190,000	9.1%
Next	-	1,550,000	11.3%
Over	-	1,750,000	12.3%

Expected Loss Ratio:	0.615
Tax Multiplier:	1.038

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

Type B: 2019-01

WC Premium Range From		To	Expense Ratio
0	-	10,099	0.348
10,100	-	10,303	0.347
10,304	-	10,515	0.346
10,516	-	10,736	0.345
10,737	-	10,967	0.344
10,968	-	11,208	0.343
11,209	-	11,460	0.342
11,461	-	11,724	0.341
11,725	-	11,999	0.340
12,000	-	12,289	0.339
12,290	-	12,592	0.339
12,593	-	12,911	0.338
12,912	-	13,246	0.337
13,247	-	13,599	0.336
13,600	-	13,972	0.335
13,973	-	14,366	0.334
14,367	-	14,782	0.333
14,783	-	15,223	0.332
15,224	-	15,692	0.331
15,693	-	16,190	0.330
16,191	-	16,721	0.329
16,722	-	17,288	0.328
17,289	-	17,894	0.327
17,895	-	18,545	0.326
18,546	-	19,245	0.325

WC Premium Range From		To	Expense Ratio
19,246	-	19,999	0.324
20,000	-	20,816	0.323
20,817	-	21,702	0.322
21,703	-	22,666	0.321
22,667	-	23,720	0.320
23,721	-	24,878	0.319
24,879	-	26,153	0.318
26,154	-	27,567	0.317
27,568	-	29,142	0.316
29,143	-	30,909	0.315
30,910	-	32,903	0.314
32,904	-	35,172	0.313
35,173	-	37,777	0.312
37,778	-	40,799	0.312
40,800	-	44,347	0.311
44,348	-	48,571	0.310
48,572	-	53,684	0.309
53,685	-	59,999	0.308
60,000	-	67,999	0.307
68,000	-	78,461	0.306
78,462	-	92,727	0.305
92,728	-	113,333	0.304
113,334	-	145,714	0.303
145,715	-	200,606	0.302
200,607	-	213,548	0.301

WC Premium Range From		To	Expense Ratio
213,549	-	228,275	0.300
228,276	-	245,185	0.299
245,186	-	264,799	0.298
264,800	-	287,826	0.297
287,827	-	315,238	0.296
315,239	-	348,421	0.295
348,422	-	389,411	0.294
389,412	-	441,333	0.293
441,334	-	509,230	0.292
509,231	-	601,818	0.291
601,819	-	735,555	0.290
735,556	-	945,714	0.289
945,715	-	1,323,999	0.288
1,324,000	-	1,809,565	0.287
1,809,566	-	1,981,904	0.286
1,981,905	-	2,190,526	0.286
2,190,527	-	2,448,235	0.285
2,448,236	-	2,774,666	0.284
2,774,667	-	3,201,538	0.283
3,201,539	-	3,783,636	0.282
3,783,637	-	4,624,444	0.281
4,624,445	-	5,945,714	0.280
5,945,715	-	8,323,999	0.279
8,324,000	-	13,873,333	0.278
13,873,334	-	41,619,999	0.277
41,620,000	-	And Above	0.276

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:	0.615
Tax Multiplier:	1.038

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

Type A: 2019-01

WC Premium Range From		To	Expense Ratio
0	-	10,055	0.280
10,056	-	10,167	0.279
10,168	-	10,282	0.279
10,283	-	10,399	0.278
10,400	-	10,520	0.277
10,521	-	10,643	0.276
10,644	-	10,769	0.275
10,770	-	10,898	0.274
10,899	-	11,030	0.273
11,031	-	11,165	0.272
11,166	-	11,304	0.271
11,305	-	11,446	0.270
11,447	-	11,592	0.269
11,593	-	11,741	0.268
11,742	-	11,895	0.267
11,896	-	12,052	0.266
12,053	-	12,214	0.265
12,215	-	12,380	0.264
12,381	-	12,551	0.263
12,552	-	12,727	0.262
12,728	-	12,907	0.261
12,908	-	13,093	0.260
13,094	-	13,284	0.259
13,285	-	13,481	0.258
13,482	-	13,684	0.257
13,685	-	13,893	0.256
13,894	-	14,108	0.255
14,109	-	14,330	0.254
14,331	-	14,559	0.253
14,560	-	14,796	0.253
14,797	-	15,041	0.252
15,042	-	15,294	0.251
15,295	-	15,555	0.250
15,556	-	15,826	0.249
15,827	-	16,106	0.248
16,107	-	16,396	0.247
16,397	-	16,697	0.246
16,698	-	17,009	0.245
17,010	-	17,333	0.244
17,334	-	17,669	0.243
17,670	-	18,019	0.242
18,020	-	18,383	0.241
18,384	-	18,762	0.240
18,763	-	19,157	0.239
19,158	-	19,569	0.238
19,570	-	19,999	0.237
20,000	-	20,449	0.236
20,450	-	20,919	0.235
20,920	-	21,411	0.234
21,412	-	21,927	0.233

WC Premium Range From		To	Expense Ratio
21,928	-	22,469	0.232
22,470	-	23,037	0.231
23,038	-	23,636	0.230
23,637	-	24,266	0.229
24,267	-	24,931	0.228
24,932	-	25,633	0.227
25,634	-	26,376	0.227
26,377	-	27,164	0.226
27,165	-	27,999	0.225
28,000	-	28,888	0.224
28,889	-	29,836	0.223
29,837	-	30,847	0.222
30,848	-	31,929	0.221
31,930	-	33,090	0.220
33,091	-	34,339	0.219
34,340	-	35,686	0.218
35,687	-	37,142	0.217
37,143	-	38,723	0.216
38,724	-	40,444	0.215
40,445	-	42,325	0.214
42,326	-	44,390	0.213
44,391	-	46,666	0.212
46,667	-	49,189	0.211
49,190	-	51,999	0.210
52,000	-	55,151	0.209
55,152	-	58,709	0.208
58,710	-	62,758	0.207
62,759	-	67,407	0.206
67,408	-	72,799	0.205
72,800	-	79,130	0.204
79,131	-	86,666	0.203
86,667	-	95,789	0.202
95,790	-	107,058	0.201
107,059	-	121,333	0.200
121,334	-	139,999	0.200
140,000	-	165,454	0.199
165,455	-	200,377	0.198
200,378	-	208,235	0.197
208,236	-	216,734	0.196
216,735	-	225,957	0.195
225,958	-	235,999	0.194
236,000	-	246,976	0.193
246,977	-	259,024	0.192
259,025	-	272,307	0.191
272,308	-	287,027	0.190
287,028	-	303,428	0.189
303,429	-	321,818	0.188
321,819	-	342,580	0.187
342,581	-	366,206	0.186
366,207	-	393,333	0.185

WC Premium Range From		To	Expense Ratio
393,334	-	424,799	0.184
424,800	-	461,739	0.183
461,740	-	505,714	0.182
505,715	-	558,947	0.181
558,948	-	624,705	0.180
624,706	-	707,999	0.179
708,000	-	816,923	0.178
816,924	-	965,454	0.177
965,455	-	1,179,999	0.176
1,180,000	-	1,517,142	0.175
1,517,143	-	1,824,799	0.174
1,824,800	-	1,983,478	0.174
1,983,479	-	2,172,380	0.173
2,172,381	-	2,401,052	0.172
2,401,053	-	2,683,529	0.171
2,683,530	-	3,041,333	0.170
3,041,334	-	3,509,230	0.169
3,509,231	-	4,147,272	0.168
4,147,273	-	5,068,888	0.167
5,068,889	-	6,517,142	0.166
6,517,143	-	9,123,999	0.165
9,124,000	-	15,206,666	0.164
15,206,667	-	45,619,999	0.163
45,620,000	-	And Above	0.162

First	-	10,000	0.0%
Next	-	190,000	9.1%
Next	-	1,550,000	11.3%
Over	-	1,750,000	12.3%

Expected Loss and ALAE Ratio:	0.683
Tax Multiplier:	1.038

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

Type B: 2019-01

WC Premium Range From		To	Expense Ratio
0	-	10,099	0.280
10,100	-	10,303	0.279
10,304	-	10,515	0.279
10,516	-	10,736	0.278
10,737	-	10,967	0.277
10,968	-	11,208	0.276
11,209	-	11,460	0.275
11,461	-	11,724	0.274
11,725	-	11,999	0.273
12,000	-	12,289	0.272
12,290	-	12,592	0.271
12,593	-	12,911	0.270
12,912	-	13,246	0.269
13,247	-	13,599	0.268
13,600	-	13,972	0.267
13,973	-	14,366	0.266
14,367	-	14,782	0.265
14,783	-	15,223	0.264
15,224	-	15,692	0.263
15,693	-	16,190	0.262
16,191	-	16,721	0.261
16,722	-	17,288	0.260
17,289	-	17,894	0.259
17,895	-	18,545	0.258
18,546	-	19,245	0.257

WC Premium Range From		To	Expense Ratio
19,246	-	19,999	0.256
20,000	-	20,816	0.255
20,817	-	21,702	0.254
21,703	-	22,666	0.253
22,667	-	23,720	0.253
23,721	-	24,878	0.252
24,879	-	26,153	0.251
26,154	-	27,567	0.250
27,568	-	29,142	0.249
29,143	-	30,909	0.248
30,910	-	32,903	0.247
32,904	-	35,172	0.246
35,173	-	37,777	0.245
37,778	-	40,799	0.244
40,800	-	44,347	0.243
44,348	-	48,571	0.242
48,572	-	53,684	0.241
53,685	-	59,999	0.240
60,000	-	67,999	0.239
68,000	-	78,461	0.238
78,462	-	92,727	0.237
92,728	-	113,333	0.236
113,334	-	145,714	0.235
145,715	-	200,606	0.234
200,607	-	213,548	0.233

WC Premium Range From		To	Expense Ratio
213,549	-	228,275	0.232
228,276	-	245,185	0.231
245,186	-	264,799	0.230
264,800	-	287,826	0.229
287,827	-	315,238	0.228
315,239	-	348,421	0.227
348,422	-	389,411	0.227
389,412	-	441,333	0.226
441,334	-	509,230	0.225
509,231	-	601,818	0.224
601,819	-	735,555	0.223
735,556	-	945,714	0.222
945,715	-	1,323,999	0.221
1,324,000	-	1,809,565	0.220
1,809,566	-	1,981,904	0.219
1,981,905	-	2,190,526	0.218
2,190,527	-	2,448,235	0.217
2,448,236	-	2,774,666	0.216
2,774,667	-	3,201,538	0.215
3,201,539	-	3,783,636	0.214
3,783,637	-	4,624,444	0.213
4,624,445	-	5,945,714	0.212
5,945,715	-	8,323,999	0.211
8,324,000	-	13,873,333	0.210
13,873,334	-	41,619,999	0.209
41,620,000	-	And Above	0.208

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:	0.683
Tax Multiplier:	1.038

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, 2020

Exhibit I – Determination of Indicated Advisory Rate Level Change

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

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

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

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EXHIBIT I

Determination of Indicated Rate Level Change

Section A - Policy Year 2017 Experience

Premium:

(1)	Standard Earned Premium Developed to Ultimate (Appendix A-II)	$775,730,774
(2)	Premium On-level Factor (Appendix A-I)	0.490
(3)	Pure Premium Available for Benefit Costs = (1) x (2)	$380,108,079

Indemnity Benefit Cost:

(4)	Limited Indemnity Losses Developed to Ultimate (Appendix A-II)	$164,817,705
(5)	Indemnity Loss On-level Factor (Appendix A-I)	0.995
(6)	Adjusted Limited Indemnity Losses = (4) x (5)	$163,993,616
(7)	Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.431
(8)	Factor to Reflect Indemnity Trend (Appendix A-III)	0.941
(9)	Projected Limited Indemnity Cost Ratio = (7) x (8)	0.406
(10)	Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis (Appendix A-II)	1.028
(11)	Projected Indemnity Cost Ratio = (9) x (10)	0.417
(12)	Factor to Reflect Proposed Changes in Indemnity Benefits (Appendix C)	1.005
(13)	Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.419

Medical Benefit Cost:

(14)	Limited Medical Losses Developed to Ultimate (Appendix A-II)	$232,490,507
(15)	Medical Loss On-level Factor (Appendix A-I)	1.000
(16)	Adjusted Limited Medical Losses = (14) x (15)	$232,490,507
(17)	Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.612
(18)	Factor to Reflect Medical Trend (Appendix A-III)	0.970
(19)	Projected Limited Medical Cost Ratio = (17) x (18)	0.594
(20)	Factor to Adjust Medical Cost Ratio to an Unlimited Basis (Appendix A-II)	1.028
(21)	Projected Medical Cost Ratio = (19) x (20)	0.611
(22)	Factor to Reflect Proposed Changes in Medical Benefits (Appendix C)	1.000
(23)	Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.611

Total Benefit Cost:

(24)	Indicated Change Based on Experience, Trend and Benefits = (13) + (23)	1.030

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EXHIBIT I

Determination of Indicated Rate Level Change

Section B - Policy Year 2016 Experience

Premium:

(1)	Standard Earned Premium Developed to Ultimate (Appendix A-II)	$800,157,549
(2)	Premium On-level Factor (Appendix A-I)	0.460
(3)	Pure Premium Available for Benefit Costs = (1) x (2)	$368,072,473

Indemnity Benefit Cost:

(4)	Limited Indemnity Losses Developed to Ultimate (Appendix A-II)	$153,414,364
(5)	Indemnity Loss On-level Factor (Appendix A-I)	0.936
(6)	Adjusted Limited Indemnity Losses = (4) x (5)	$143,595,845
(7)	Adjusted Limited Indemnity Cost Ratio excluding Trend and Benefits = (6) / (3)	0.390
(8)	Factor to Reflect Indemnity Trend (Appendix A-III)	0.922
(9)	Projected Limited Indemnity Cost Ratio = (7) x (8)	0.360
(10)	Factor to Adjust Indemnity Cost Ratio to an Unlimited Basis (Appendix A-II)	1.028
(11)	Projected Indemnity Cost Ratio = (9) x (10)	0.370
(12)	Factor to Reflect Proposed Changes in Indemnity Benefits (Appendix C)	1.005
(13)	Projected Indemnity Cost Ratio including Benefit Changes = (11) x (12)	0.372

Medical Benefit Cost:

(14)	Limited Medical Losses Developed to Ultimate (Appendix A-II)	$197,994,149
(15)	Medical Loss On-level Factor (Appendix A-I)	1.000
(16)	Adjusted Limited Medical Losses = (14) x (15)	$197,994,149
(17)	Adjusted Limited Medical Cost Ratio excluding Trend and Benefits = (16) / (3)	0.538
(18)	Factor to Reflect Medical Trend (Appendix A-III)	0.961
(19)	Projected Limited Medical Cost Ratio = (17) x (18)	0.517
(20)	Factor to Adjust Medical Cost Ratio to an Unlimited Basis (Appendix A-II)	1.028
(21)	Projected Medical Cost Ratio = (19) x (20)	0.531
(22)	Factor to Reflect Proposed Changes in Medical Benefits (Appendix C)	1.000
(23)	Projected Medical Cost Ratio including Benefit Changes = (21) x (22)	0.531

Total Benefit Cost:

(24)	Indicated Change Based on Experience, Trend and Benefits = (13) + (23)	0.903

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EXHIBIT I

Determination of Indicated Rate Level Change

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

(1)	Policy Year 2017 Indicated Change Based on Experience, Trend, and Benefits	1.030
(2)	Policy Year 2016 Indicated Change Based on Experience, Trend, and Benefits	0.903
(3)	Indicated Change Based on Experience, Trend, and Benefits = [(1)+(2)] / 2	0.967

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

(1)	Indicated Rate Level Change	0.967
(2)	Effect of the Change in Production and General Expenses (Exhibit II)	1.001
(3)	Indicated Change Modified to Reflect the Change in Production and General Expenses = (1) x (2)	0.968

Section E - Application of the Change in Taxes

(1)	Indicated Rate Level Change	0.968
(2)	Effect of the Change in Taxes (Exhibit II)	1.001
(3)	Indicated Change Modified to Reflect the Change in Taxes = (1) x (2)	0.969

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

(1)	Indicated Rate Level Change	0.969
(2)	Effect of the Change in the Profit and Contingency Provision (Exhibit II)	1.000
(3)	Indicated Change Modified to Reflect the Change in the Profit and Contingency Provision = (1) x (2)	0.969

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

(1)	Indicated Rate Level Change	0.969
(2)	Effect of the Change in Loss-based Expenses (Exhibit II)	1.001
(3)	Indicated Change Modified to Reflect the Change in Loss-based Expenses = (1) x (2)	0.970

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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	1.005
Contracting	0.994
Office & Clerical	0.995
Goods & Services	0.995
Miscellaneous	1.017

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	0.970	1.005	0.975	(-2.5%)
Contracting	0.970	0.994	0.964	(-3.6%)
Office & Clerical	0.970	0.995	0.965	(-3.5%)
Goods & Services	0.970	0.995	0.965	(-3.5%)
Miscellaneous	0.970	1.017	0.986	(-1.4%)
Overall	0.970	1.000	0.970	(-3.0%)

Loss Adjustment Expenses

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

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

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

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

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

The calculation of the loss adjustment expense provision is shown in Exhibit II-F.

Production and General Expenses, and Taxes

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

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

See Exhibit II-A for more information.

Profit and Contingency Provision

NCCI is proposing no change to the current approved profit and contingency provision of –0.5%. See Appendix D for more information.

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EXHIBIT II

Comparison of Proposed and Current Expense Provisions

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

		Expense Provisions Underlying Current Rates	Expense Provisions Underlying Proposed Rates
(1)	Expense Constant	$160	$160
(2)	Production Expense	18.5%	18.5%
(3)	General Expense	5.0%	5.1%
(4)	Taxes, Licenses and Fees (other than Federal Income Tax)		
	Premium Tax	1.0%	1.0%
	Miscellaneous	0.3%	0.3%
	Second Injury Fund	0.9%	1.0%
	Total	**2.2%**	**2.3%**
(5)	Profit and Contingency Provision	-0.5%	-0.5%
(6)	Total Overhead Provisions (2)+(3)+(4)+(5)	25.2%	25.4%
(7)	Target Cost Ratio [100% - (6)]	74.8%	74.6%
(8)	Loss Adjustment Expense	15.7%	15.8%
(9)	Loss-based Assessment	0.0%	0.0%
(10)	Permissible Loss Ratio (7) / [1+(8)+(9)]	64.6%	64.4%

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EXHIBIT II

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	18.5%	18.5%	18.5%	18.5%
(2)	General Expense	5.0%	5.1%	5.1%	5.1%
(3)	Taxes	2.2%	2.2%	2.3%	2.3%
(4)	Profit and Contingency Provision	-0.5%	-0.5%	-0.5%	-0.5%
(5)	Total Provisions (1)+(2)+(3)+(4)	25.2%	25.3%	25.4%	25.4%
(6)	TCR (100%-(5))	74.8%	74.7%	74.6%	74.6%
(7)	Loss Based Expenses	15.7%	15.8%	15.8%	15.8%
(8)	Change in Production and General Expense (6A) / (6B)			1.001	+0.1%
(9)	Change in Taxes and Assessments (6B) / (6C)			1.001	+0.1%
(10)	Change in Profit and Contingency Provision (6C) / (6D)			1.000	0.0%
(11)	Change in Loss Based Expenses [1.0 + (7B)]/[1.0 + (7A)]			1.001	+0.1%

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EXHIBIT II

Countrywide Expense Program

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

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

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

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

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EXHIBIT II

Derivation of General Expense Provisions

The data below (amounts in thousands) illustrates that the combination of a 5.1% 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.

		2016	2017	2018
(1)	Direct Earned Premium *(NAIC Insurance Expense Exhibit Data)*	49,589,244	49,874,309	50,055,106
	(1a) Effect of Premium Discounts	0.9284	0.9281	0.9279
	(1b) Effect of Schedule Rating	0.9539	0.9500	0.9512
	(1c) Effect of Carrier Deviations	1.0304	1.0231	1.0349
	(1d) Effect of Deductibles	0.7345	0.7375	0.7393
	(1e) Expense Constant Offset	0.9918	0.9917	0.9917
(2)	Gross Adjusted Premium *(STD Premium @ NCCI Level Excl. Expense Constant)* {(1) / [(1a) x (1b) x (1c) x (1d)]} x (1e)	73,379,705	74,346,190	73,508,336
(3)	Direct General Expenses Incurred *(NAIC Insurance Expense Exhibit Data)*	2,813,993	3,200,452	3,291,102
	(3a) Proportion of Expense Constant Attributable to General Expenses	0.4063	0.4063	0.4063
(4)	General Expenses Incurred *(Excluding Expense Constant Revenue)* (3) - (2) x [1-(1e)]/(1e) x (3a)	2,567,495	2,947,637	3,041,136
(5)	Ratio of General Expense to Premium *(Excluding Expense Constant Revenue)* (4)/(2)	3.50%	3.96%	4.14%
(6)	General Expense Gradations *(General Expenses in Average Premium Discount)*	1.28%	1.28%	1.28%
(7)	General Expense Provision (5)+(6)	4.78%	5.24%	5.42%
(8)	Selected General Expense Provision *(Three-Year Average)*			**5.1%**

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EXHIBIT II

Derivation of Production Expense Provisions

The data below (amounts in thousands) illustrates that the combination of a 18.5% 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.

		2016	2017	2018
(1)	Direct Written Premium *(NAIC Insurance Expense Exhibit Data)*	49,898,708	50,045,258	49,778,219
	(1a) Effect of Premium Discounts	0.9284	0.9279	0.9279
	(1b) Effect of Schedule Rating	0.9501	0.9499	0.9520
	(1c) Effect of Carrier Deviations	1.0249	1.0220	1.0440
	(1d) Effect of Deductibles	0.7352	0.7393	0.7393
	(1e) Expense Constant Offset	0.9918	0.9916	0.9916
(2)	Pool Written Premium *(Summary of NCCI Managed Pools - Combined Stock and Mutual Company Data)*	1,156,397	1,110,747	1,096,491
(3)	Adjusted Direct Written Premium *(STD Premium Excl. Pool Written Premium)* [(1)-(2)] / (1a) x (1e)	52,070,901	52,293,848	52,023,711
(4)	Gross Direct Written Premium *(STD Premium @ NCCI Level Incl. Pool Written Premium)* {(1) / [(1a) x (1b) x (1c) x (1d)]} x (1e)	74,459,817	74,515,872	72,396,329
(5)	Direct Commission & Brokerage Incurred *(NAIC Insurance Expense Exhibit Data)*	4,434,236	4,591,083	4,460,371
(6)	Pool Producer Fees *(Summary of NCCI Managed Pools - Combined Stock and Mutual Company Data)*	42,149	39,826	39,215
(7)	Direct Other Acquisition Expenses Incurred *(NAIC Insurance Expense Exhibit Data)*	2,899,995	2,498,189	2,580,093
	(7a) Proportion of Expense Constant Attributable to Production Expenses	0.5313	0.5313	0.5313
(8)	Other Acquisition Expenses Incurred *(Excluding Expense Constant Revenue)* (7) - (4) x [1-(1e)]/(1e) x (7a)	2,572,917	2,162,813	2,254,257
(9)	Ratio of Other Acq. Expenses to Premium *(Excluding Expense Constant Revenue)* (8)/(4)	3.46%	2.90%	3.11%
(10)	Direct Commission & Brokerage Provision [(5)-(6)]/(3)	8.43%	8.70%	8.50%
(11)	Production Expense Gradations *(Production Expenses in Average Premium Discount)*	6.78%	6.78%	6.78%
(12)	Production Expense Provision (9)+(10)+(11)	18.67%	18.38%	18.39%
(13)	Selected Production Expense Provision *(Three-Year Average)*			**18.5%**

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EXHIBIT II

Workers Compensation Loss Adjustment Expense

Section A - Determination of Loss Adjustment Expense Provision

NCCI proposes a 15.8% loss adjustment expense allowance as a percentage of incurred losses.
The DCCE provision is based on Iowa-specific data reported to NCCI on the Policy Year Call for Experience.
The AOE provision is based on countrywide data reported to NCCI on the Call for Loss Adjustment Expense.

Policy Year	Policy Year Developed DCCE Ratio	Accident Year	Accident Year Developed AOE Ratio	
2013	7.2%	2014	6.9%	
2014	7.7%	2015	7.2%	
2015	7.2%	2016	7.7%	
2016	8.0%	2017	8.1%	
2017	8.1%	2018	7.9%	
Countrywide selected:			8.0%	
Iowa selected:	7.8%		8.0%	**15.8%**

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

(1)	(2)	(3)	(4) = (2) x (3)
Policy Year	Reported Ratio of Paid DCCE to Paid Losses	Age-to-Ultimate Development Factor	Ultimate DCCE Ratio
2013	7.6%	0.950	7.2%
2014	8.0%	0.961	7.7%
2015	7.3%	0.989	7.2%
2016	7.3%	1.099	8.0%
2017	6.2%	1.311	8.1%
		Iowa selected:	7.8%

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

(5)	Current Iowa LAE Provision	15.7%	
(6)	Proposed Iowa LAE Provision	15.8%	
(7)	Proposed Change in LAE Provision = [1.0 + (6)] / [1.0 + (5)] - 1	0.001	0.1%

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EXHIBIT II

Table of Premium Discounts

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

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

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EXHIBIT II

Average Expense Provisions

Reproduced below are the gradated expense provisions by policy size.

Gradation of Standard Premium

Division of Premium		Expense Gradations: Production*	General	Discounts
First	$10,000	18.5%	5.1%	---
Next	$190,000	11.0%	4.1%	9.1%
Next	$1,550,000	9.5%	3.5%	11.3%
Over	$ 1,750,000	9.5%	2.6%	12.3%
Proposed Average:		11.7%	3.8%	
Proposed Average Expense Gradation: *(Expense for 1st $10,000 - Avg Expense)*		6.8%	1.3%	

Average Premium Discount:
[Avg Exp Grad] / [1-Taxes-P&C] = [6.8%+1.3%] / [1-2.3% - -0.5%] = 8.2%

Composition of Standard Premium:

Benefit & Loss Adj. Cost	Production (18.5%)	General (5.1%)	Profit (-0.5%)	Taxes (2.3%)	
74.6%	11.7%	3.8%	-0.5%	2.2%	-- Premium After Discounts (91.8%)
	6.8%	1.3%	0.0%	0.1%	-- Discount (8.2%)
	0.5%	0.3%	0.0%	0.0%	-- Premium from $160 expense constant. (0.8% = 1/0.992 - 1)^

-- Standard Premium Excluding Expense Constant (100.0%)

Notes

** The production expense gradations shown are based on Type A gradations.*
^ The 0.992 offset is for the $160 expense constant.

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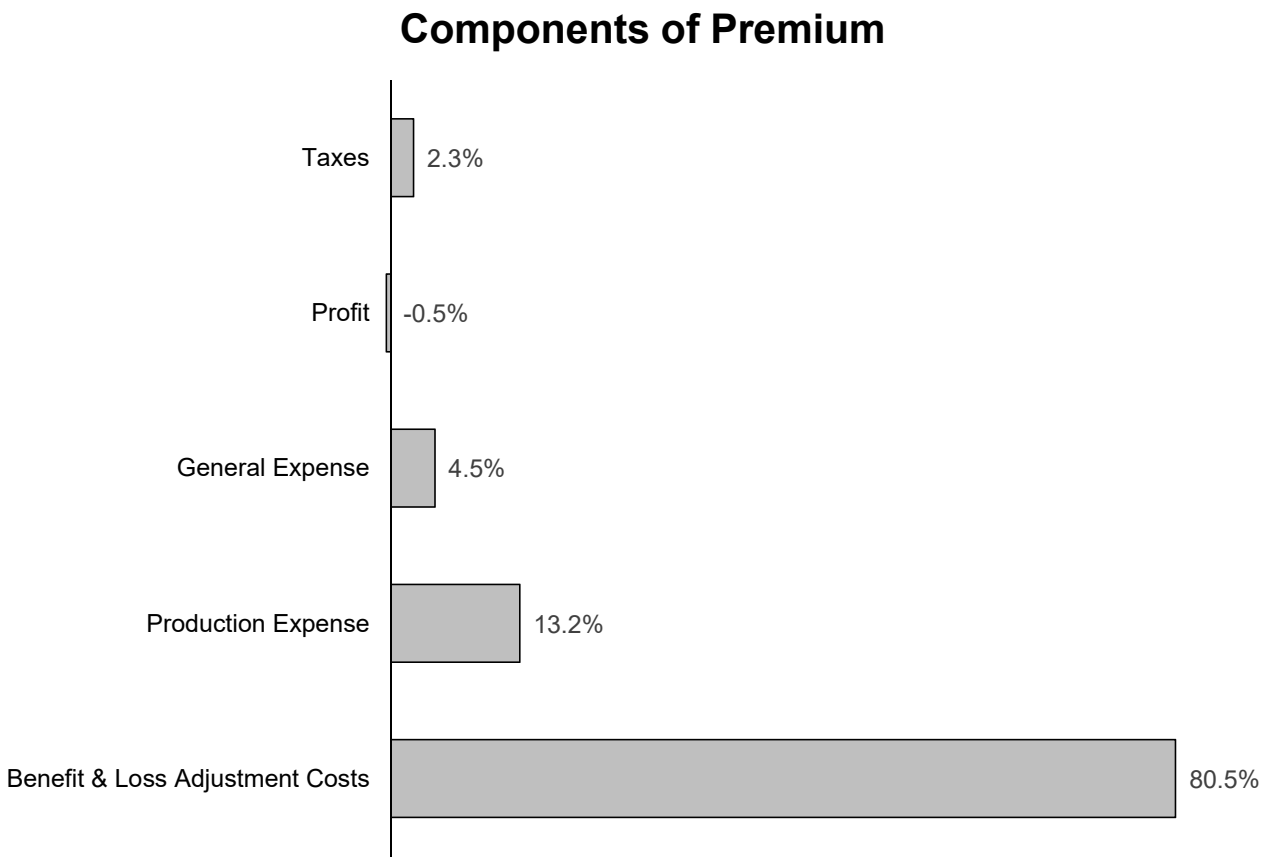
EXHIBIT II

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

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



Notes

Benefit & Loss Adjustment Costs	80.5%	=	(74.6%) / 92.6%
Production Expense	13.2%	=	(11.7% + 0.5%) / 92.6%
General Expense	4.5%	=	(3.8% + 0.4%) / 92.6%
Profit	-0.5%	=	(-0.5% + 0.0%) / 92.6%
Taxes	2.3%	=	(2.1% + 0.0%) / 92.6%
Total	**100.0%**		

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 2017 Policy Year Assigned Risk Premium to Present Assigned Risk Level

	Date	(1) Rate Level Change	(2) Cumulative Index	(3) Weight	(4) Product (2)x(3)	(5) Adj. Factor Present Index/ Sum Column (4)	(6) Adj. For Expense Constant Removal @	(7) Adj. For Expense Removal	(8) Premium Adjustment Factor (5)x(6)x(7)
NR	01/01/17	Base	1.000	0.537	0.537	0.775	0.988	0.646	0.495
NR	07/01/17	0.961	0.961	0.463	0.445				
NR	01/01/18	0.913	0.877						
NR	06/01/18	0.981	0.860						
NR	01/01/19	0.885	0.761						
					0.982				

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

	Date	(1) Rate Level Change	(2) Cumulative Index	(3) Weight	(4) Product (2)x(3)	(5) Adj. Factor Present Index/ Sum Column (4)	(6) Adj. For Expense Constant Removal @	(7) Adj. For Expense Removal	(8) Premium Adjustment Factor (5)x(6)x(7)
NR	01/01/17	Base	1.000	0.537	0.537	0.775	0.988	0.646	0.495
NR	07/01/17	0.961	0.961	0.463	0.445				
NR	01/01/18	0.913	0.877						
NR	06/01/18	0.981	0.860						
NR	01/01/19	0.885	0.761						
					0.982				

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

(1)	Assigned Risk Market Share PY 2017	0.040
(2)	Voluntary Market Share PY 2017	0.960
(3)	Assigned Risk Standard Premium Adjustment Factor (See Sec. A)	0.495
(4)	Voluntary Standard Premium Adjustment Factor (See Sec. B)	0.495
(5)	Premium Adjustment Factor = [(1)x(3)]/1.413+(2)x(4) #	0.489
(6)	Experience Rating Off-balance Adjustment Factor*	1.003
(7)	Final Premium Adjustment Factor = (5)x(6)	0.490

NR New and renewal business.
@ Eliminates premium derived from expense constants.
# Current premium index (assigned risk-to-voluntary) = 1.413
* = 1.003 = 0.949 / 0.946 = (Targeted Off-balance) / (Off-balance for Policy Year 2017)

Determination of Policy Year On-level Factors

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

Date	(1) Benefit Level Change	(2) Cumulative Index	(3) Weight	(4) Product (2)x(3)	(5) Adj. Factor Present Index/ Sum Column (4)
09/07/04	Base	1.000	0.173	0.173	0.995
07/01/17	0.912	0.912	0.418	0.381	
01/01/18	1.019	0.929	0.409	0.380	
				0.934	

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

Date	(1) Benefit Level Change	(2) Cumulative Index	(3) Weight	(4) Product (2)x(3)	(5) Adj. Factor Present Index/ Sum Column (4)
09/07/04	Base	1.000	0.173	0.173	1.000
07/01/17	1.000	1.000	0.418	0.418	
01/01/18	1.000	1.000	0.409	0.409	
				1.000	

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APPENDIX A-I

Determination of Policy Year On-level Factors

Section F - Factor Adjusting 2016 Policy Year Assigned Risk Premium to Present Assigned Risk Level

	Date	(1) Rate Level Change	(2) Cumulative Index	(3) Weight	(4) Product (2)x(3)	(5) Adj. Factor Present Index/ Sum Column (4)	(6) Adj. For Expense Constant Removal @	(7) Adj. For Expense Removal	(8) Premium Adjustment Factor (5)x(6)x(7)
NR	01/01/16	Base	1.000	1.000	1.000	0.726	0.989	0.646	0.464
NR	01/01/17	0.953	0.953						
NR	07/01/17	0.961	0.916						
NR	01/01/18	0.913	0.836						
NR	06/01/18	0.981	0.820						
NR	01/01/19	0.885	0.726						
					1.000				

Section G - Factor Adjusting 2016 Policy Year Voluntary Premium to Present Voluntary Level

	Date	(1) Rate Level Change	(2) Cumulative Index	(3) Weight	(4) Product (2)x(3)	(5) Adj. Factor Present Index/ Sum Column (4)	(6) Adj. For Expense Constant Removal @	(7) Adj. For Expense Removal	(8) Premium Adjustment Factor (5)x(6)x(7)
NR	01/01/16	Base	1.000	1.000	1.000	0.726	0.989	0.646	0.464
NR	01/01/17	0.953	0.953						
NR	07/01/17	0.961	0.916						
NR	01/01/18	0.913	0.836						
NR	06/01/18	0.981	0.820						
NR	01/01/19	0.885	0.726						
					1.000				

Section H - Factor Adjusting 2016 Policy Year Assigned Risk Premium and Voluntary Premium to Present Statewide Level

(1)	Assigned Risk Market Share PY 2016	0.048
(2)	Voluntary Market Share PY 2016	0.952
(3)	Assigned Risk Standard Premium Adjustment Factor (See Sec. F)	0.464
(4)	Voluntary Standard Premium Adjustment Factor (See Sec. G)	0.464
(5)	Premium Adjustment Factor = [(1)x(3)]/1.413+(2)x(4) #	0.458
(6)	Experience Rating Off-balance Adjustment Factor*	1.004
(7)	Final Premium Adjustment Factor = (5)x(6)	0.460

NR New and renewal business.
@ Eliminates premium derived from expense constants.
# Current premium index (assigned risk-to-voluntary) = 1.413
* = 1.004 = 0.949 / 0.945 = (Targeted Off-balance) / (Off-balance for Policy Year 2016)

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APPENDIX A-I

Determination of Policy Year On-level Factors

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

	(1)	(2)	(3)	(4)	(5)
Date	Benefit Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)
09/07/04	Base	1.000	0.918	0.918	0.936
07/01/17	0.912	0.912	0.082	0.075	
01/01/18	1.019	0.929			
				0.993	

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

	(1)	(2)	(3)	(4)	(5)
Date	Benefit Level Change	Cumulative Index	Weight	Product (2)x(3)	Adj. Factor Present Index/ Sum Column (4)
09/07/04	Base	1.000	0.918	0.918	1.000
07/01/17	1.000	1.000	0.082	0.082	
01/01/18	1.000	1.000			
				1.000	

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 $8,219,242, based on the volume of premium in policy years 2015 and 2016 underlying the currently approved filing that utilizes data valued as of 12/31/2017. The base threshold is detrended by policy year to reflect the inflationary impact on claim costs due to wage inflation. The wage index used as a basis for these calculations is the Iowa average weekly wages from the Quarterly Census of Employment and Wages (QCEW). Detrended thresholds are used in the experience period, trend period, and loss development period. Indemnity and medical losses are limited at the detrended large loss threshold corresponding to their Policy Year, as shown in Appendix A-II Section L.

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

After developing limited indemnity and medical losses to an ultimate report, a statewide excess ratio at the base threshold is used to adjust the limited losses to an unlimited basis. The proposed excess ratio in this filing is 2.7%, as shown in Appendix A-II Section K.

Development Factors

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

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

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

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 12/31/2018

Policy Year 2017

(1)	Standard Earned Premium	$771,104,149
(2)	Factor to Develop Premium to Ultimate	1.006
(3)	Standard Earned Premium Developed to Ultimate = (1)x(2)	$775,730,774
(4)	Limited Indemnity Paid Losses	$41,480,027
(5)	Limited Indemnity Paid Development Factor to Ultimate	3.999
(6)	Limited Indemnity Paid Losses Developed to Ultimate = (4)x(5)	$165,878,628
(7)	Limited Indemnity Paid+Case Losses	$119,705,250
(8)	Limited Indemnity Paid+Case Development Factor to Ultimate	1.368
(9)	Limited Indemnity Paid+Case Losses Developed to Ultimate = (7)x(8)	$163,756,782
(10)	Policy Year 2017 Limited Indemnity Losses Developed to Ultimate = [(6)+(9)]/2	$164,817,705
(11)	Limited Medical Paid Losses	$142,699,309
(12)	Limited Medical Paid Development Factor to Ultimate	1.613
(13)	Limited Medical Paid Losses Developed to Ultimate = (11)x(12)	$230,173,985
(14)	Limited Medical Paid+Case Losses	$218,222,146
(15)	Limited Medical Paid+Case Development Factor to Ultimate	1.076
(16)	Limited Medical Paid+Case Losses Developed to Ultimate = (14)x(15)	$234,807,029
(17)	Policy Year 2017 Limited Medical Losses Developed to Ultimate = [(13)+(16)]/2	$232,490,507

Policy Year 2016

(1)	Standard Earned Premium	$800,157,549
(2)	Factor to Develop Premium to Ultimate	1.000
(3)	Standard Earned Premium Developed to Ultimate = (1)x(2)	$800,157,549
(4)	Limited Indemnity Paid Losses	$80,760,937
(5)	Limited Indemnity Paid Development Factor to Ultimate	2.024
(6)	Limited Indemnity Paid Losses Developed to Ultimate = (4)x(5)	$163,460,136
(7)	Limited Indemnity Paid+Case Losses	$121,705,086
(8)	Limited Indemnity Paid+Case Development Factor to Ultimate	1.178
(9)	Limited Indemnity Paid+Case Losses Developed to Ultimate = (7)x(8)	$143,368,591
(10)	Policy Year 2016 Limited Indemnity Losses Developed to Ultimate = [(6)+(9)]/2	$153,414,364
(11)	Limited Medical Paid Losses	$153,052,918
(12)	Limited Medical Paid Development Factor to Ultimate	1.317
(13)	Limited Medical Paid Losses Developed to Ultimate = (11)x(12)	$201,570,693
(14)	Limited Medical Paid+Case Losses	$183,412,835
(15)	Limited Medical Paid+Case Development Factor to Ultimate	1.060
(16)	Limited Medical Paid+Case Losses Developed to Ultimate = (14)x(15)	$194,417,605
(17)	Policy Year 2016 Limited Medical Losses Developed to Ultimate = [(13)+(16)]/2	$197,994,149

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APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

Section B - Premium Development Factors

Policy Year	1st/2nd	Policy Year	2nd/3rd	Policy Year	3rd/4th	Policy Year	4th/5th
2014	1.006	2013	1.000	2012	1.000	2011	1.000
2015	1.006	2014	1.000	2013	1.000	2012	1.000
2016	1.005	2015	0.999	2014	1.000	2013	1.000
Average	1.006	Average	1.000	Average	1.000	Average	1.000

Summary of Premium Development Factors

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

Determination of Premium and Losses Developed to an Ultimate Report

Section C - Limited Indemnity Paid Loss Development Factors

Policy Year	1st/2nd	Policy Year	2nd/3rd	Policy Year	3rd/4th	Policy Year	4th/5th
2014	2.001	2013	1.417	2012	1.179	2011	1.073
2015	2.040	2014	1.400	2013	1.132	2012	1.067
2016	1.886	2015	1.379	2014	1.161	2013	1.071
Average	1.976	Average	1.399	Average	1.157	Average	1.070

Policy Year	5th/6th	Policy Year	6th/7th	Policy Year	7th/8th	Policy Year	8th/9th
2010	1.046	2009	1.024	2008	1.028	2007	1.013
2011	1.026	2010	1.025	2009	1.017	2008	1.009
2012	1.031	2011	1.019	2010	1.010	2009	1.009
Average	1.034	Average	1.023	Average	1.018	Average	1.010

Policy Year	9th/10th	Policy Year	10th/11th	Policy Year	11th/12th	Policy Year	12th/13th
2006	1.007	2005	1.005	2004	1.004	2003	1.004
2007	1.012	2006	1.014	2005	1.004	2004	1.003
2008	1.006	2007	1.005	2006	1.011	2005	1.007
Average	1.008	Average	1.008	Average	1.006	Average	1.005

Policy Year	13th/14th	Policy Year	14th/15th	Policy Year	15th/16th	Policy Year	16th/17th
2002	1.007	2001	1.002	2000	1.004	1999	1.003
2003	1.007	2002	1.003	2001	1.002	2000	1.006
2004	1.011	2003	1.003	2002	1.002	2001	1.004
Average	1.008	Average	1.003	Average	1.003	Average	1.004

Policy Year	17th/18th	Policy Year	18th/19th
1998	1.002	1997	1.006
1999	1.002	1998	1.002
2000	1.003	1999	1.005
Average	1.002	Average	1.004

Determination of Premium and Losses Developed to an Ultimate Report

Section D - Limited Medical Paid Loss Development Factors

Policy Year	1st/2nd	Policy Year	2nd/3rd	Policy Year	3rd/4th	Policy Year	4th/5th
2014	1.237	2013	1.063	2012	1.033	2011	1.016
2015	1.222	2014	1.068	2013	1.031	2012	1.017
2016	1.215	2015	1.065	2014	1.036	2013	1.018
Average	1.225	Average	1.065	Average	1.033	Average	1.017

Policy Year	5th/6th	Policy Year	6th/7th	Policy Year	7th/8th	Policy Year	8th/9th
2010	1.012	2009	1.016	2008	1.011	2007	1.009
2011	1.008	2010	1.010	2009	1.019	2008	1.009
2012	1.009	2011	1.007	2010	1.007	2009	1.009
Average	1.010	Average	1.011	Average	1.012	Average	1.009

Policy Year	9th/10th	Policy Year	10th/11th	Policy Year	11th/12th	Policy Year	12th/13th
2006	1.004	2005	1.006	2004	1.007	2003	1.006
2007	1.008	2006	1.017	2005	1.005	2004	1.005
2008	1.010	2007	1.004	2006	1.005	2005	1.005
Average	1.007	Average	1.009	Average	1.006	Average	1.005

Policy Year	13th/14th	Policy Year	14th/15th	Policy Year	15th/16th	Policy Year	16th/17th
2002	1.006	2001	1.004	2000	1.009	1999	1.005
2003	1.005	2002	1.007	2001	1.000	2000	1.005
2004	1.004	2003	1.003	2002	1.003	2001	1.003
Average	1.005	Average	1.005	Average	1.004	Average	1.004

Policy Year	17th/18th	Policy Year	18th/19th
1998	1.003	1997	1.002
1999	1.004	1998	1.002
2000	1.005	1999	1.001
Average	1.004	Average	1.002

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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	1st/2nd	Policy Year	2nd/3rd	Policy Year	3rd/4th	Policy Year	4th/5th
2012	1.149	2011	1.097	2010	1.058	2009	1.036
2013	1.169	2012	1.080	2011	1.023	2010	0.998
2014	1.203	2013	1.075	2012	1.024	2011	1.024
2015	1.165	2014	1.102	2013	1.055	2012	1.022
2016	1.117	2015	1.062	2014	1.013	2013	1.017
Average	1.161	Average	1.083	Average	1.035	Average	1.019

Policy Year	5th/6th	Policy Year	6th/7th	Policy Year	7th/8th	Policy Year	8th/9th
2008	1.014	2007	1.005	2006	1.002	2005	1.005
2009	1.010	2008	1.005	2007	1.009	2006	1.000
2010	1.007	2009	1.004	2008	1.006	2007	0.999
2011	1.006	2010	1.001	2009	0.995	2008	1.000
2012	1.000	2011	0.993	2010	1.002	2009	1.010
Average	1.007	Average	1.002	Average	1.003	Average	1.003

Policy Year	9th/10th	Policy Year	10th/11th	Policy Year	11th/12th	Policy Year	12th/13th
2004	1.001	2003	0.998	2002	1.004	2001	1.000
2005	1.005	2004	0.999	2003	1.003	2002	1.002
2006	1.010	2005	1.003	2004	1.002	2003	1.000
2007	0.999	2006	1.006	2005	0.999	2004	0.999
2008	1.005	2007	1.001	2006	1.001	2005	1.001
Average	1.004	Average	1.001	Average	1.002	Average	1.000

Policy Year	13th/14th	Policy Year	14th/15th	Policy Year	15th/16th	Policy Year	16th/17th
2000	1.001	1999	0.999	1998	1.001	1997	0.999
2001	1.000	2000	1.000	1999	0.997	1998	1.002
2002	0.999	2001	0.999	2000	1.001	1999	1.002
2003	1.001	2002	1.001	2001	1.000	2000	1.000
2004	0.997	2003	1.002	2002	1.001	2001	0.998
Average	1.000	Average	1.000	Average	1.000	Average	1.000

Policy Year	17th/18th	Policy Year	18th/19th
1996	1.001	1995	1.001
1997	1.001	1996	1.002
1998	1.002	1997	0.999
1999	1.002	1998	1.000
2000	0.999	1999	1.000
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	1st/2nd	Policy Year	2nd/3rd	Policy Year	3rd/4th	Policy Year	4th/5th
2012	1.004	2011	0.993	2010	1.005	2009	1.019
2013	1.022	2012	1.006	2011	0.986	2010	1.008
2014	1.006	2013	0.989	2012	0.985	2011	0.985
2015	1.027	2014	1.000	2013	0.999	2012	0.997
2016	1.014	2015	0.982	2014	1.010	2013	1.004
Average	1.015	Average	0.994	Average	0.997	Average	1.003

Policy Year	5th/6th	Policy Year	6th/7th	Policy Year	7th/8th	Policy Year	8th/9th
2008	1.013	2007	1.005	2006	1.009	2005	1.012
2009	1.001	2008	1.011	2007	1.001	2006	1.002
2010	0.994	2009	1.008	2008	1.003	2007	0.998
2011	0.998	2010	1.007	2009	1.011	2008	1.005
2012	0.996	2011	1.008	2010	1.009	2009	1.003
Average	1.000	Average	1.008	Average	1.007	Average	1.004

Policy Year	9th/10th	Policy Year	10th/11th	Policy Year	11th/12th	Policy Year	12th/13th
2004	0.996	2003	1.005	2002	1.002	2001	1.000
2005	1.008	2004	1.003	2003	1.003	2002	0.997
2006	1.003	2005	1.003	2004	1.000	2003	0.994
2007	0.997	2006	1.002	2005	1.003	2004	1.005
2008	1.000	2007	0.999	2006	0.999	2005	0.998
Average	1.001	Average	1.002	Average	1.001	Average	0.999

Policy Year	13th/14th	Policy Year	14th/15th	Policy Year	15th/16th	Policy Year	16th/17th
2000	1.000	1999	0.999	1998	0.999	1997	1.005
2001	1.002	2000	0.995	1999	0.999	1998	0.995
2002	1.002	2001	1.005	2000	1.012	1999	1.005
2003	1.004	2002	0.996	2001	1.000	2000	0.999
2004	1.003	2003	0.998	2002	0.997	2001	1.000
Average	1.002	Average	0.999	Average	1.001	Average	1.001

Policy Year	17th/18th	Policy Year	18th/19th
1996	1.024	1995	1.001
1997	1.014	1996	0.999
1998	1.008	1997	1.001
1999	0.998	1998	1.000
2000	1.001	1999	0.995
Average	1.009	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)	(2)	(3)	(4)	(5)	(6)	(7)
Policy Year	Losses for Policy Year 19th Report	Losses for Policy Year 20th Report	Losses for All Prior Policy Years Previous	Losses for All Prior Policy Years Current	Factor to Adjust Losses for Prior Policy Years	Indicated 19th-to-Ult Development for Policy Year
1989	114,362,271	114,441,268	1,012,224,979	1,012,727,987	0.640	1.008
1990	110,036,477	110,090,771	1,106,309,695	1,107,237,062	0.696	1.013
1991	98,530,504	98,529,633	1,217,327,833	1,217,908,047	0.834	1.007
1992	93,450,493	93,536,604	1,312,544,349	1,313,061,621	0.926	1.007
1993	87,319,062	87,107,611	1,406,598,225	1,406,819,743	1.030	1.000
1994	82,098,378	82,127,019	1,485,738,268	1,486,458,841	1.112	1.008
1995	85,195,400	85,284,318	1,570,622,846	1,571,748,890	1.100	1.013
1996	95,346,517	95,386,309	1,656,632,630	1,657,958,379	0.995	1.014
1997	92,836,500	92,881,504	1,750,430,496	1,751,399,453	1.035	1.011
1998	102,366,579	102,532,957	1,842,158,968	1,842,875,912	0.934	1.009
				Selected Indemnity 19th-to-Ultimate Loss Development Factor		1.010

Medical Paid+Case Data for Matching Companies

(8)	(9)	(10)	(11)	(12)	(13)	(14)
Policy Year	Losses for Policy Year 19th Report	Losses for Policy Year 20th Report	Losses for All Prior Policy Years Previous	Losses for All Prior Policy Years Current	Factor to Adjust Losses for Prior Policy Years	Indicated 19th-to-Ult Development for Policy Year
1989	85,996,011	86,154,548	632,126,304	635,659,045	0.522	1.081
1990	91,211,015	91,204,651	709,979,507	713,964,105	0.551	1.079
1991	89,375,740	89,378,456	805,168,756	805,273,671	0.629	1.002
1992	93,622,396	94,627,214	890,780,497	894,165,426	0.661	1.065
1993	81,422,582	81,357,885	988,792,640	987,065,646	0.834	0.974
1994	87,977,371	88,422,471	1,062,272,301	1,065,079,572	0.810	1.044
1995	84,849,798	84,914,112	1,156,303,800	1,159,113,329	0.899	1.038
1996	107,027,288	107,127,205	1,243,763,335	1,250,645,503	0.752	1.086
1997	91,746,244	91,553,334	1,355,258,463	1,348,384,436	0.938	0.918
1998	92,408,662	92,601,145	1,438,658,289	1,441,344,768	0.962	1.032
				Selected Medical 19th-to-Ultimate Loss Development Factor		1.040

(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.

Determination of Premium and Losses Developed to an Ultimate Report

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

Policy Year	Indemnity Paid-to-Paid + Case Ratio 19th Report	Medical Paid-to-Paid + Case Ratio 19th Report
1995	0.978	0.933
1996	0.972	0.950
1997	0.985	0.944
1998	0.974	0.972
1999	0.983	0.982
Selected	0.985	0.962

	Indemnity	Medical
(1) Paid+Case 19th-to-Ultimate Loss Development Factor (Section G)	1.010	1.040
(2) Factor to Adjust 19th-to-Ultimate Development Factor to a Limited Basis	0.822	0.822
(3) Limited Paid+Case 19th-to-Ultimate Loss Development Factor = [(1)-1]x(2)+1	1.008	1.033
(4) Limited Paid-to-Paid+Case Ratio (Section H)	0.985	0.962
(5) Limited Paid 19th-to-Ultimate Loss Development Factor = (3) / (4)	1.023	1.074

Section I - Summary of Limited Paid Loss Development Factors

	(1) Indemnity Paid Loss Development	(2)		(3) Medical Paid Loss Development	(4)
Report	to Next Report	to Ultimate	Report	to Next Report	to Ultimate
1st	1.976	3.999	1st	1.225	1.613
2nd	1.399	2.024	2nd	1.065	1.317
3rd	1.157	1.447	3rd	1.033	1.237
4th	1.070	1.251	4th	1.017	1.197
5th	1.034	1.169	5th	1.010	1.177
6th	1.023	1.131	6th	1.011	1.165
7th	1.018	1.106	7th	1.012	1.152
8th	1.010	1.086	8th	1.009	1.138
9th	1.008	1.075	9th	1.007	1.128
10th	1.008	1.066	10th	1.009	1.120
11th	1.006	1.058	11th	1.006	1.110
12th	1.005	1.052	12th	1.005	1.103
13th	1.008	1.047	13th	1.005	1.098
14th	1.003	1.039	14th	1.005	1.093
15th	1.003	1.036	15th	1.004	1.088
16th	1.004	1.033	16th	1.004	1.084
17th	1.002	1.029	17th	1.004	1.080
18th	1.004	1.027	18th	1.002	1.076
19th		1.023	19th		1.074

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

Determination of Premium and Losses Developed to an Ultimate Report

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

	(1)	(2)
	Indemnity Paid+Case Loss Development	
Report	to Next Report	to Ultimate
1st	1.161	1.368
2nd	1.083	1.178
3rd	1.035	1.088
4th	1.019	1.051
5th	1.007	1.031
6th	1.002	1.024
7th	1.003	1.022
8th	1.003	1.019
9th	1.004	1.016
10th	1.001	1.012
11th	1.002	1.011
12th	1.000	1.009
13th	1.000	1.009
14th	1.000	1.009
15th	1.000	1.009
16th	1.000	1.009
17th	1.001	1.009
18th	1.000	1.008
19th		1.008

	(3)	(4)
	Medical Paid+Case Loss Development	
Report	to Next Report	to Ultimate
1st	1.015	1.076
2nd	0.994	1.060
3rd	0.997	1.066
4th	1.003	1.069
5th	1.000	1.066
6th	1.008	1.066
7th	1.007	1.058
8th	1.004	1.051
9th	1.001	1.047
10th	1.002	1.046
11th	1.001	1.044
12th	0.999	1.043
13th	1.002	1.044
14th	0.999	1.042
15th	1.001	1.043
16th	1.001	1.042
17th	1.009	1.041
18th	0.999	1.032
19th		1.033

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

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APPENDIX A-II

Determination of Premium and Losses Developed to an Ultimate Report

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

(1) Threshold at the Midpoint of the Loss Cost Effective Period*	8,219,242
(2) Statewide Excess Ratio for (1)	0.027
(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) x (1.0 - (3))]}	1.028

Section L - Policy Year Large Loss Limits

Experience Year	Policy Year Detrended Limit
2017	7,349,266
2016	7,141,608
2015	6,985,767
2014	6,785,728
2013	6,547,291
2012	6,384,862
2011	6,222,049
2010	6,039,371
2009	5,859,200
2008	5,786,927
2007	5,686,418
2006	5,487,585
2005	5,282,435
2004	5,109,159
2003	4,908,624
2002	4,715,248
2001	4,574,628
2000	4,441,745
1999	4,296,739
1998	4,142,126
1997	3,960,167
1996	3,765,926
1995	3,613,803

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

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 2003 through 2017 are shown in Appendix A-III, along with the impact of the trend selection for each policy year in the experience period. The trend lengths displayed in Section B(3) are calculated by comparing the average accident date for the effective period of the proposed 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)
	Lost-Time	Indemnity		Medical	
Policy Year	Claim Frequency*	Avg Cost Per Case*^	Loss Ratio^	Avg Cost Per Case*^	Loss Ratio^
2003	25.889	20,116	0.520	23,754	0.615
2004	25.325	22,240	0.563	26,789	0.678
2005	23.661	22,071	0.522	25,280	0.598
2006	23.308	22,656	0.538	27,567	0.642
2007	23.390	24,344	0.570	28,602	0.670
2008	22.384	25,177	0.562	31,319	0.700
2009	21.482	26,444	0.568	34,892	0.749
2010	21.868	25,925	0.566	33,020	0.722
2011	20.212	24,934	0.504	31,788	0.642
2012	19.781	24,696	0.489	33,229	0.658
2013	19.823	26,433	0.525	33,606	0.667
2014	18.611	26,123	0.486	32,984	0.614
2015	17.158	27,440	0.471	35,740	0.613
2016	15.887	24,570	0.390	33,883	0.538
2017	15.696	27,488	0.431	38,969	0.612

* Figures have been adjusted to the common wage level.
^ Based on an average of paid and paid+case losses.

Section B - Summary of Annual Trend Factors

	Indemnity	Medical
(1) Current Approved Annual Loss Ratio Trend Factor	0.985	0.990
(2) Selected Annual Loss Ratio Trend Factor	**0.980**	**0.990**

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

	Years
Policy Year 2016	4.001
Policy Year 2017	3.001

(4) Trend Factor Applied to Experience Year = (2) ^ (3)	Indemnity	Medical
Policy Year 2016	0.922	0.961
Policy Year 2017	0.941	0.970

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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	140,500,261	686,794,744	664,554,666	1.147	1.167
Contracting	126,471,448	581,217,442	562,255,292	1.128	1.141
Office & Clerical	65,489,403	301,711,411	292,008,578	1.090	1.102
Goods & Services	209,834,788	978,540,763	947,336,129	1.056	1.068
Miscellaneous	96,687,068	450,596,195	435,723,189	1.100	1.112
Statewide	638,982,968	2,998,860,556	2,901,877,854		

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	138,092,373	675,024,483	653,165,555	1.033	1.000
Contracting	125,030,494	574,595,333	555,849,228	1.034	1.001
Office & Clerical	64,776,270	298,425,987	288,828,811	1.033	1.000
Goods & Services	207,477,094	967,545,923	936,691,903	1.033	1.000
Miscellaneous	95,643,682	445,733,646	431,021,140	1.034	1.001
Statewide	631,019,913	2,961,325,372	2,865,556,637	1.033	

II. Industry Group Differentials

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

Industry Group	(11) Converted Indicated Balanced Losses	(12) Indicated/ Expected Ratio (11)/[(8)x(10)]	(13) Indicated Differential (12)IG/(12)SW	(14) Lost-Time Claim Counts
Manufacturing	655,717,231	1.004	1.004	12,696
Contracting	551,604,048	0.991	0.991	7,077
Office & Clerical	286,195,821	0.991	0.991	5,034
Goods & Services	931,454,032	0.994	0.994	21,188
Miscellaneous	440,323,049	1.021	1.021	6,538
Statewide	2,865,294,181	1.000		

Industry Group	(15) Full Credibility Standard for Lost-Time Claim Counts	(16) Credibility Minimum of 1.000 and ((14)/(15))^0.5	(17) Credibility Weighted Indicated/Expected Ratio [(16)IGx(12)IG] + [1-(16)IG]x(12)SW*	(18) Final Industry Group Differential (17)IG/(17)SW
Manufacturing	12,000	1.00	1.004	1.005
Contracting	12,000	0.77	0.993	0.994
Office & Clerical	12,000	0.65	0.994	0.995
Goods & Services	12,000	1.00	0.994	0.995
Miscellaneous	12,000	0.74	1.016	1.017
Statewide			0.999	1.000

*Statewide ratio (column 17) = Σ_{IG}[(6)x(17)] ÷ Σ_{IG}(6)

Iowa

Workers Compensation Rate Filing – January 1, 2020

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
3/12-2/13	1.057	1.015	1.181	1.015
3/13-2/14	1.084	1.036	1.196	1.017
3/14-2/15	1.152	1.078	1.207	1.019
3/15-2/16	1.334	1.194	1.217	1.024
3/16-2/17	1.884	1.386	1.284	1.043

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
3/12-2/13	0.854	0.925
3/13-2/14	0.872	0.934
3/14-2/15	0.889	0.943
3/15-2/16	0.908	0.953
3/16-2/17	0.926	0.963

3. Factors to Adjust to the Proposed Benefit Level

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

Policy Period	Fatal	Permanent Total (P.T.)	Permanent Partial (P.P.)	Temporary Total (T.T.)	Medical
3/12-2/13	1.009	1.025	0.900	1.025	1.000
3/13-2/14	1.009	1.025	0.900	1.025	1.000
3/14-2/15	1.009	1.025	0.900	1.025	1.000
3/15-2/16	1.009	1.025	0.900	1.025	1.000
3/16-2/17	1.009	1.025	0.921	1.025	1.000

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)
3/12-2/13	0.911	0.875	0.925	0.812	0.780	0.925	0.888	1.092	0.939
3/13-2/14	0.954	0.912	0.969	0.851	0.813	0.969	0.926	1.117	0.950
3/14-2/15	1.033	0.967	1.050	0.922	0.863	1.050	0.982	1.138	0.961
3/15-2/16	1.222	1.094	1.242	1.090	0.976	1.242	1.111	1.160	0.976
3/16-2/17	1.760	1.295	1.788	1.607	1.182	1.788	1.316	1.236	1.004

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

Section A-2 – Expected Excess Provision and Redistribution

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

Hazard Group	A	B	C	D	E	F	G
(1) Excess Ratios	0.115	0.156	0.183	0.224	0.270	0.316	0.372
(2) Excess Factors 1/(1-(1))	1.130	1.185	1.224	1.289	1.370	1.462	1.592

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

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APPENDIX B-I

Section A-3 – Calculation of Secondary Conversion Factors

1. Factors to Adjust for Proposed Industry Group Differentials

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

	Manufacturing	Contracting	Office and Clerical	Goods and Services	Miscellaneous
(1) Indicated Differentials*	1.004	0.991	0.991	0.994	1.021
(2) Final Differentials**	1.005	0.994	0.995	0.995	1.017
(3) Adjustment (2)/(1)	1.001	1.003	1.004	1.001	0.996

*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)
3/12-2/13	0.773	1.101	1.080	1.019	0.788
3/13-2/14	0.746	1.101	1.102	0.999	0.745
3/14-2/15	0.782	1.101	1.129	0.975	0.762
3/15-2/16	0.810	1.101	1.131	0.973	0.788
3/16-2/17	0.863	1.100	1.126	0.977	0.843

3. Adjustment for Experience Change

A factor of 0.972 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 1.158 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
3/12-2/13	0.888	0.890	0.891	0.888	0.883
3/13-2/14	0.839	0.841	0.842	0.839	0.835
3/14-2/15	0.859	0.860	0.861	0.859	0.854
3/15-2/16	0.888	0.890	0.891	0.888	0.883
3/16-2/17	0.950	0.952	0.953	0.950	0.945

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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 0.972 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 1.000, for indemnity and medical, respectively, are applied to adjust to the proposed trend level.

3. Factors to Adjust to the Proposed Benefit Level

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

Effective Date	Indemnity	Medical
January 1, 2019	1.005	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	1.157	1.157	1.158	1.158
(2) Loss-based Assessment	1.000	1.000	1.000	1.000
(3) = (1) + (2) – 1.000	1.157	1.157	1.158	1.158
(4) Overall Change (3b)/(3a)			1.001	1.001

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	1.147	1.167	0.983
Contracting	1.128	1.141	0.989
Office & Clerical	1.090	1.102	0.989
Goods & Services	1.056	1.068	0.989
Miscellaneous	1.100	1.112	0.989

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	1.005	1.000	1.005
Contracting	0.994	1.001	0.995
Office & Clerical	0.995	1.000	0.995
Goods & Services	0.995	1.000	0.995
Miscellaneous	1.017	1.001	1.018

*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	0.948	0.961
Contracting	0.945	0.957
Office & Clerical	0.945	0.957
Goods & Services	0.945	0.957
Miscellaneous	0.967	0.980

Section C – Calculation of National Pure Premiums

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

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

Section D – Calculation of Derived by Formula Pure Premiums

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

As for the preceding pure premiums, separate computations are performed for each partial pure premium: indemnity and medical. Each partial formula pure premium is derived by the weighting of the indicated, present on rate level and national partial pure premiums. The weight assigned to the policy year indicated pure premium varies in one-percent intervals from zero percent to one hundred percent, depending upon the volume of expected losses (i.e. the product of the underlying pure premiums and the payroll in hundreds). To achieve full state credibility, a classification must have expected losses of at least: $37,679,820 for indemnity and $26,478,588 for medical.

The partial credibilities formula is:

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

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:

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

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	1.0004
Contracting	0.9970
Office & Clerical	0.9932
Goods & Services	0.9977
Miscellaneous	0.9989

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	1.167
Contracting	1.141
Office & Clerical	1.102
Goods & Services	1.068
Miscellaneous	1.112

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 0.746 (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.

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 23% above to 27% below
Contracting	from 21% above to 29% below
Office & Clerical	from 22% above to 28% below
Goods & Services	from 22% above to 28% below
Miscellaneous	from 24% above to 26% 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	List of Classifications Limited by the Lower Swing
None	4000 6703 7047 7050 7099 7337 7398 7710 8738 8815

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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
03/01/12 - 02/28/13	0	2,340	0	1,178,353	2,961,614	620,002	847,310	1,182,195	7,061,487
03/01/13 - 02/28/14	0	0	0	1,777,202	2,822,583	760,723	1,388,453	2,159,707	7,106,073
03/01/14 - 02/28/15	0	181,412	0	788,961	2,466,558	858,044	619,707	1,901,866	5,350,816
03/01/15 - 02/29/16	0	489,752	0	763,703	1,578,466	562,985	375,615	1,345,463	5,123,117
03/01/16 - 02/28/17	0	0	0	491,307	1,335,771	315,084	810,728	1,175,187	5,237,238

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
03/01/12 - 02/28/13	0.911	0.875	0.925	0.812	0.780	0.925	0.888	1.092	0.939
03/01/13 - 02/28/14	0.954	0.912	0.969	0.851	0.813	0.969	0.926	1.117	0.950
03/01/14 - 02/28/15	1.033	0.967	1.050	0.922	0.863	1.050	0.982	1.138	0.961
03/01/15 - 02/29/16	1.222	1.094	1.242	1.090	0.976	1.242	1.111	1.160	0.976
03/01/16 - 02/28/17	1.760	1.295	1.788	1.607	1.182	1.788	1.316	1.236	1.004

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	1.224

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
03/01/12 - 02/28/13	0	2,323	0	1,085,414	2,620,518	650,577	853,531	1,717,230	8,390,525
03/01/13 - 02/28/14	0	0	0	1,715,657	2,603,162	836,208	1,458,499	3,154,295	8,583,671
03/01/14 - 02/28/15	0	199,001	0	825,183	2,414,717	1,022,028	690,338	2,795,006	6,554,881
03/01/15 - 02/29/16	0	607,796	0	944,311	1,747,629	793,199	473,392	2,047,558	6,343,573
03/01/16 - 02/28/17	0	0	0	895,638	1,791,073	639,083	1,210,305	1,899,098	6,673,022

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

Policy Period	INDUSTRY GROUP: Office and Clerical
03/01/12 - 02/28/13	0.891
03/01/13 - 02/28/14	0.842
03/01/14 - 02/28/15	0.861
03/01/15 - 02/29/16	0.891
03/01/16 - 02/28/17	0.953

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
03/01/12 - 02/28/13	9,007,908,264	1,546,768	3,097,447	1,530,052	7,475,958	4,644,215	9,006,010	13,650,225
03/01/13 - 02/28/14	9,334,535,637	2,148,670	3,419,919	2,655,916	7,227,451	5,568,589	9,883,367	15,451,956
03/01/14 - 02/28/15	9,538,839,728	1,590,449	2,844,792	2,406,500	5,643,753	4,435,241	8,050,253	12,485,494
03/01/15 - 02/29/16	9,750,551,608	1,548,121	2,520,476	1,824,374	5,652,124	4,068,597	7,476,498	11,545,095
03/01/16 - 02/28/17	10,035,889,230	1,462,589	2,860,313	1,809,840	6,359,390	4,322,902	8,169,230	12,492,132
Total	47,667,724,467	8,296,597	14,742,947	10,226,682	32,358,676	23,039,544	42,585,358	65,624,902
		INDICATED PURE PREMIUM				**0.048**	**0.089**	**0.14**

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	0.057	0.093	0.15
Conversion Factors (App. B-I, Section B)	0.945	0.957	xxx
PURE PREMIUMS PRESENT ON RATE LEVEL (Underlying Pure Premiums) x (Conversion Factor)	0.054	0.089	0.14

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APPENDIX B-III

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

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

		Indemnity	Medical	Total
1.	Indicated Pure Premium	0.048	0.089	0.14
2.	Pure Premium Indicated by National Relativity	0.044	0.074	0.12
3.	Pure Premium Present on Rate Level	0.054	0.089	0.14
4.	State Credibilities	83%	100%	xxx
5.	National Credibilities	8%	0%	xxx
6.	Residual Credibilities = 100% - (4) - (5)	9%	0%	xxx
7.	Derived by Formula Pure Premiums = (1) x (4) + (2) x (5) + (3) x (6)	0.048	0.089	0.14
8.	Test Correction Factor	0.9932	0.9932	xxx
9.	Underlying Pure Premiums = (7) x (8) *	0.052	0.088	0.14
10.	Ratio of Manual to Standard Premium			1.102
11.	Target Cost Ratio			0.746
12.	Rate = (9) x (10) / (11)			0.21
13.	Rate Within Swing Limits			0.21
	Current Rate x Swing Limits a) Lower bound = 0.22 x 0.720 = 0.16 b) Upper bound = 0.22 x 1.220 = 0.26			
14.	Pure Premiums Underlying Proposed Rate* = ((14TOT) / (9TOT)) x (9) ; (14TOT) = (13) x (11) / (10)	0.052	0.088	0.14
15.	Disease, Catastrophe and/or Miscellaneous Loadings			0.00
16.	Final Loaded Rate			0.21

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

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APPENDIX B-IV

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

The Workers Compensation Statistical Plan (WCSP) data is used to determine the overall "F" classifications (F-class) premium level change as well as the individual change by the various classifications. There are three sets of pure premiums for each classification: indicated, present on rate level, and national pure premiums. All sets of pure premiums are adjusted to the common proposed level that is explained further in this exhibit. These three sets of pure premiums are credibility weighted and the results, the derived by formula pure premiums, are adjusted for additional proposed components (Section II) to determine the indicated rates. The payrolls are extended by the rates presently in effect and by the indicated rates. The rates are limited to the swing limits based on 25% above and 25% below the current rates. This results in the indicated rate level change of -7.8%.

Section A – Calculation of F-Class Indicated Pure Premiums

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

Section A-1 – Calculation of Primary Conversion Factors

1. Factors to Adjust to the Proposed Benefit Levels

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

STATE ACT

Policy Period	Fatal	Permanent Total (P.T.)	Permanent Partial (P.P.)	Temporary Total (T.T.)	Medical
1/12 - 12/12	1.009	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

FEDERAL ACT

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

2. Factors to Adjust to the Proposed Trend Level

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

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

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

3. Limited Loss Development Factors

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

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

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

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

STATE ACT

Policy Period	Fatal (L)	Fatal (NL)	P.T.*	P.P. (L)	P.P. (NL)	T.T. (L)	T.T. (NL)	Medical (L)	Medical (NL)
1/12 - 12/12	0.941	0.888	0.956	0.839	0.792	0.956	0.902	1.100	0.946
1/13 - 12/13	0.999	0.915	1.015	0.891	0.816	1.015	0.930	1.153	0.951
1/14 - 12/14	1.188	0.979	1.207	1.060	0.873	1.207	0.994	1.212	0.982
1/15 - 12/15	1.394	1.132	1.416	1.243	1.010	1.416	1.150	1.365	1.019
1/16 - 12/16	2.307	1.661	2.344	2.081	1.498	2.344	1.687	1.637	1.092

FEDERAL ACT

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

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

Section A-2 – Expected Excess Provision and Redistribution

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

Hazard Group	A	B	C	D	E	F	G
(1) Excess Ratios	0.115	0.156	0.183	0.224	0.270	0.316	0.372
(2) Excess Factors 1/(1-(1))	1.130	1.185	1.224	1.289	1.370	1.462	1.592

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

Section A-3 – Calculation of Secondary Conversion Factors

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

Policy Period	State Act	Federal Act
1/12 - 12/12	1.158	1.184
1/13 - 12/13	1.158	1.220
1/14 - 12/14	1.158	1.158
1/15 - 12/15	1.158	1.212
1/16 - 12/16	1.158	1.212

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

Section B – Present on Rate Level

1. Benefits

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

State Weight (St%)	0.192
Federal Weight (Fed%)	0.808

	Indemnity	Medical	Total
(a) State Laws	1.005	1.000	1.002
(b) Federal Laws	1.000	1.000	1.000
(c) Weighted Laws = [(a)xSt%] + [(b)xFed%]	1.001	1.000	1.000

2. Trend

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

Indemnity	Medical
0.980	0.990

Section B – Present on Rate Level (continued)

3. Loss-Based Expenses

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

Proposed:

STATE ACT

	Indemnity	Medical	Total
(a) Loss Adjustment Expense	1.158	1.158	1.158
(b) Loss-Based Assessment	1.000	1.000	1.000
(c) Total = (a) + (b) - 1	1.158	1.158	1.158

FEDERAL ACT

	Indemnity	Medical	Total
(d) Loss Adjustment Expense	1.158	1.158	1.158
(e) Loss-Based Assessment	1.113	1.000	1.065
(f) Total = (d) + (e) - 1	1.271	1.158	1.223

	Indemnity	Medical	Total
(g) Weighted Proposed Expenses = [(c) x St%] + [(f) x Fed%]	1.249	1.158	1.211

Current:

STATE ACT

	Indemnity	Medical	Total
(h) Loss Adjustment Expense	1.157	1.157	1.157
(i) Loss-Based Assessment	1.000	1.000	1.000
(j) Total = (h) + (i) - 1	1.157	1.157	1.157

FEDERAL ACT

	Indemnity	Medical	Total
(k) Loss Adjustment Expense	1.157	1.157	1.157
(l) Loss-Based Assessment	1.119	1.000	1.071
(m) Total = (k) + (l) - 1	1.276	1.157	1.228

	Indemnity	Medical	Total
(n) Weighted Current Expenses = [(j) x St%] + [(m) x Fed%]	1.253	1.157	1.214

Change:

	Indemnity	Medical	Total
Weighted Expense Change in Loss-Based Expenses = [(g) / (n)]	0.997	1.001	0.998

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

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

Indemnity	Medical
0.978	0.991

Section C – National Pure Premiums

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

Class Code 9077

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

Section D – Derived by Formula Pure Premiums

The derived by formula pure premiums are calculated by a process similar to that of the industrial codes, which is described in Appendix B-I, Section D. To achieve full state credibility, a classification must have expected losses of at least: $125,475,300 for indemnity and $54,928,000 for medical.

II. Calculation of Proposed Rates

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

A. Test Correction Factor	**1.0000**
B. Ratio of Manual Premium to Earned Premium (determined on a countrywide basis)	**1.230**
C. Expense Allowance	**0.746**

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

D. Swing Limits

No classifications were adjusted on account of swing limits.

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APPENDIX B-IV

Derivation of Proposed Rate - Code 6872

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

STATE ACT - LIMITED LOSSES (Workers Compensation Statistical Plan)

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/12 - 12/31/12	0	0	0	0	0	0	0	0	0
01/01/13 - 12/31/13	0	0	0	0	434,809	0	0	0	172,305
01/01/14 - 12/31/14	0	0	0	0	8,803	0	0	0	27,629
01/01/15 - 12/31/15	0	0	0	0	0	0	0	0	11,743
01/01/16 - 12/31/16	0	0	0	0	0	0	0	0	521

FEDERAL ACT - LIMITED LOSSES (Workers Compensation Statistical Plan)

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

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

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/12 - 12/31/12	0.941	0.888	0.956	0.839	0.792	0.956	0.902	1.100	0.946
01/01/13 - 12/31/13	0.999	0.915	1.015	0.891	0.816	1.015	0.930	1.153	0.951
01/01/14 - 12/31/14	1.188	0.979	1.207	1.060	0.873	1.207	0.994	1.212	0.982
01/01/15 - 12/31/15	1.394	1.132	1.416	1.243	1.010	1.416	1.150	1.365	1.019
01/01/16 - 12/31/16	2.307	1.661	2.344	2.081	1.498	2.344	1.687	1.637	1.092

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

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

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APPENDIX B-IV

Derivation of Proposed Rate - Code 6872

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

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

	HAZARD GROUP: G
Excess Factor	1.592

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

Redistribution %	40%

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

Policy Period	Fatal Likely	Fatal Not-Likely	Permanent Total	Permanent Partial Likely	Permanent Partial Not-Likely	Temporary Total Likely	Temporary Total Not-Likely	Medical Likely	Medical Not-Likely
01/01/12 - 12/31/12	0	0	0	0	0	0	0	0	0
01/01/13 - 12/31/13	0	0	0	0	480,907	0	0	0	344,995
01/01/14 - 12/31/14	0	0	0	0	10,416	0	0	0	45,025
01/01/15 - 12/31/15	0	0	0	0	0	0	0	0	19,054
01/01/16 - 12/31/16	0	0	0	0	0	0	0	0	906

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

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

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

Policy Period	INDUSTRY GROUP: F-Class
01/01/12 - 12/31/12	1.158
01/01/13 - 12/31/13	1.158
01/01/14 - 12/31/14	1.158
01/01/15 - 12/31/15	1.158
01/01/16 - 12/31/16	1.158

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

Policy Period	INDUSTRY GROUP: F-Class
01/01/12 - 12/31/12	1.184
01/01/13 - 12/31/13	1.220
01/01/14 - 12/31/14	1.158
01/01/15 - 12/31/15	1.212
01/01/16 - 12/31/16	1.212

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APPENDIX B-IV

Derivation of Proposed Rate - Code 6872

TOTAL - PAYROLL, FINAL CONVERTED LOSSES

Policy Period	Payroll	Indemnity Likely	Indemnity Not-Likely	Medical Likely	Medical Not-Likely	Total Indemnity	Total Medical	Total
01/01/12 - 12/31/12	153,449	0	0	0	0	0	0	0
01/01/13 - 12/31/13	2,095,925	0	556,890	0	399,504	556,890	399,504	956,394
01/01/14 - 12/31/14	2,525,687	0	12,062	0	52,139	12,062	52,139	64,201
01/01/15 - 12/31/15	2,371,350	0	0	0	22,065	0	22,065	22,065
01/01/16 - 12/31/16	873,862	0	0	0	1,049	0	1,049	1,049
Total	8,020,273	0	568,952	0	474,757	568,952	474,757	1,043,709
		INDICATED PURE PREMIUM				**7.094**	**5.919**	**13.01**

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

	Indemnity	Medical	Total
Pure Premiums Underlying Current Rate	4.925	5.095	10.02
Conversion Factors (Section B)	0.978	0.991	xxx
PURE PREMIUMS PRESENT ON RATE LEVEL (Underlying Pure Premiums) x (Conversion Factor)	4.817	5.049	9.87

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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:

		Indemnity	Medical	Total
1.	Indicated Pure Premium	7.094	5.919	13.01
2.	Pure Premium Indicated by National Relativity	3.257	3.793	7.05
3.	Pure Premium Present on Rate Level	4.817	5.049	9.87
4.	State Credibilities	6%	9%	xxx
5.	National Credibilities	29%	31%	xxx
6.	Residual Credibilities = 100% - (4) - (5)	65%	60%	xxx
7.	Derived by Formula Pure Premiums = (1) x (4) + (2) x (5) + (3) x (6)	4.501	4.738	9.24
8.	Test Correction Factor	1.0000	1.0000	xxx
9.	Underlying Pure Premiums = (7) x (8) *	4.502	4.738	9.24
10.	Ratio of Manual to Standard Premium			1.230
11.	Target Cost Ratio			0.746
12.	Rate = (9) x (10) / (11)			15.23
13.	Rate Within Swing Limits			15.23
	Current Rate x Swing Limits a) Lower bound = 16.28 x 0.750 = 12.21 b) Upper bound = 16.28 x 1.250 = 20.35			
14.	Pure Premiums Underlying Proposed Rate* = ((14TOT) / (9TOT)) x (9) ; (14TOT) = (13) x (11) / (10)	4.502	4.738	9.24
15.	Disease, Catastrophe and/or Miscellaneous Loadings			0.00
16.	Final Loaded Rate			15.23

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

Iowa

Workers Compensation Rate Filing – January 1, 2020

Appendix C – Memoranda for Laws and Assessments

Appendix C provides details on changes affecting workers compensation benefit costs that are not yet reflected in the on-level factors shown in Appendix A-I. Such changes may result from annual updates in 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:

- Impact of Iowa Senate File 2417, Effective January 1, 2019
- Longshore and Harbor Workers' Compensation Act Annual Assessment

IOWA

APPENDIX C-I

ANALYSIS OF IOWA SENATE FILE 2417
Effect of Income Tax Changes on Workers Compensation Benefits
Effective January 1, 2019

Senate File 2417 (SF 2417) lowered most individual state income tax rates in Iowa beginning in tax year 2019[1], thereby resulting in higher net pay or "spendable wages" on average[2] for employees in the state. In turn, this impacts the amount of indemnity benefits to be paid to injured workers in Iowa under the Workers Compensation Act, since the rate of compensation for fatal, total disability, and partial disability benefits is 80% of spendable wages, rather than gross wages. Hence, lower taxes and higher spendable wages will lead to higher workers compensation (WC) benefits, on average, in Iowa.

The approach used in calculating the effect of SF 2417 on WC benefits resulting from the expected increase in spendable wages is as follows:

1. Begin with the 2018 Iowa Withholding Tax Tables, along with the 2019 Federal Withholding Tax Tables for Single and for Married Filing Jointly taxpayers.
2. Estimate the appropriate number of exemptions for taxpayers based on filing status (using countrywide distributions of the number of dependents in disability and fatal cases).
3. Calculate spendable wages by gross earnings bracket, accounting for federal income tax, FICA[3] taxes, and state income taxes for each of the following four situations: (1) Single, (2) Single, Head of Household, (3) Married, Single Earner, and (4) Married, Dual Earner.
4. Calculate the average weekly benefits (AWB) for the four situations using a countrywide distribution of workers and their wages[4], indexed to the Iowa average weekly wage[5], for each injury type (Fatal, Permanent Total, Permanent Partial, and Temporary Total).
5. Calculate the AWB for each injury type weighted across the four situations[6].
6. Repeat steps 1 through 5, using the 2019 Iowa Withholding Tax Tables.
7. Calculate the ratios of the 2019 AWB to the 2018 AWB for each injury type.
8. Determine the indemnity cost distribution by injury type[7].
9. Using the indemnity cost distribution (Step 8) and the changes in the AWB by injury type (Step 7), calculate the effect of SF 2417 on total indemnity benefit costs.
10. Multiply the impact on total indemnity benefit costs (Step 9) by the percentage of losses attributed to indemnity benefits[8] to determine the impact of SF 2417 on overall benefit costs.

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[1] SF 2417 contains additional changes to Iowa income tax rates which are scheduled to become effective after 2019. Only changes affecting Tax Year 2019 income taxes are considered in this analysis.

[2] Note that the annual indexing of Iowa state income tax brackets (which increase progressively with income) slightly increases spendable wages and thus WC benefits. This effect is negligible when considered in isolation but is included in this analysis in determining the overall change due to tax rate revisions.

[3] Federal Insurance Contributions Act (FICA) taxes are payroll taxes which go towards the funding of the Social Security program and Medicare.

[4] Based on NCCI Detailed Claim Information data.

[5] Forecasted using the Bureau of Labor Statistics Quarterly Census of Employment and Wages, for all private sector employment, and adjusted to reflect injured workers wages.

[6] Based on countrywide distributions of average dependents by type (e.g., spouse, spouse with one child, parent, etc.) for fatal and for disability cases.

[7] NCCI Unit Statistical Plan data for the 24-month policy period ending 2/28/2016 on the 07/01/2018 law level and developed to an ultimate basis by type of injury.

[8] NCCI Financial Call data for Iowa for Policy Years 2015 and 2016 projected to 1/1/2019.

IOWA

APPENDIX C-I

ANALYSIS OF IOWA SENATE FILE 2417
Effect of Income Tax Changes on Workers Compensation Benefits
Effective January 1, 2019

Based on the above calculations, **the impact of SF 2417 on indemnity benefits is +0.5% for all injury types. As indemnity benefits represent approximately 42% of total benefit costs in Iowa, the impact of SF 2417 on overall WC system costs is +0.2 (= +0.5% x 42%).**

IOWA

APPENDIX C-II

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

Breakdown of Losses Under the Longshore and Harbor Workers Act

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

* Source: U.S. Department of Labor

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

Iowa

Workers Compensation Rate Filing – January 1, 2020

Appendix D – Internal Rate of Return Analysis

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

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

Overview

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

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

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

IRR Model Inputs and Results

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

- The "Static" estimate of the P&C provision assumes that the return on investment and the WACC do not change over time, but remain static at their indicated market values at the time the model was run.
- The "Dynamic" estimate assumes that the return on investment and WACC vary over time. The investment portfolio is assumed to be reinvested at future forecasted yields as securities mature, and WACC varies to reflect future expected costs of equity and debt. The starting point for the Dynamic estimates is January 1, 2020.

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

TABLE 1: IRR MODEL INPUTS AND RESULTS

Inputs:			
(1)	Expenses and Taxes as a Percentage of Net Premium at NCCI Level		20.00%
(2)	Reserve-to-Surplus Ratio		1.82
(3)	Cash Flow Patterns		See Table 2
		Static	Dynamic*
(4)	Return on Investments	3.26%	3.66% - 4.58%
(5)	Weighted Average Cost of Capital	7.83%	8.37% - 9.46%
Results			
		Static	Dynamic
(6)	**Indicated Profit and Contingency Provision**	**-0.43%**	**-1.23%**
(7)	Loss and Loss Adjustment Expense Provision [100% - (6) - (1)]	80.43%	81.23%

Table Notes:
It is assumed that no policyholders dividends are paid and that there are no rate departures (deviations or schedule rating).
(1) Expense provisions and taxes derived from the filing.
(2) Calculated from Best's 2018 Aggregates & Averages, for Commercial Casualty Composite, as the weighted average of Loss, LAE, and Unearned Premium Reserves to Policyholder Surplus, for years 2013 - 2017.
* See Table 3 for details by time period.

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

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	12.63%	3.60%	28.80%	12.81%	0.79%
0.50	29.48%	13.91%	53.70%	29.22%	3.05%
0.75	52.52%	30.55%	79.40%	51.24%	6.69%
1.00	75.82%	52.98%	100.00%	73.23%	11.60%
1.25	89.22%	74.38%		85.29%	20.08%
1.50	97.02%	89.06%		92.31%	28.55%
1.75	100.00%	97.43%		100.00%	37.03%
2.00		100.00%			45.50%
2.25					50.05%
2.50					54.60%
2.75					59.15%
3.00					63.70%
3.25					66.45%
3.50					69.20%
3.75					71.95%
4.00					74.70%
4.25					76.18%
4.50					77.65%
4.75					79.13%
5.00					80.60%
6.00					83.80%
7.00					85.40%
8.00					86.80%
9.00					88.70%
10.00					89.70%
11.00					90.20%
12.00					91.20%
13.00					91.80%
14.00					92.20%
15.00					93.00%
16.00					93.40%
17.00					93.70%
18.00					94.10%
19.00					94.20%
20.00					94.50%
21.00					94.80%
22.00					95.10%
23.00					95.60%
24.00					95.80%
25.00					96.10%
26.00					96.50%
27.00					96.70%
28.00					96.70%
29.00					96.90%
30.00					97.20%
31.00					97.50%
32.00					98.21%
33.00					98.87%
34.00					99.46%
35.00					100.00%

TABLE 3: DYNAMIC ESTIMATE INPUTS

Time	(1) Return on Investments	(2) Weighted Average Cost of Capital
0.00	-	-
0.25	3.66%	8.37%
0.50	3.66%	8.43%
0.75	3.65%	8.40%
1.00	3.65%	8.32%
1.25	3.67%	8.44%
1.50	3.69%	8.59%
1.75	3.74%	8.78%
2.00	3.77%	9.02%
2.25	3.81%	9.18%
2.50	3.82%	9.28%
2.75	4.00%	9.29%
3.00	4.00%	9.30%
3.25	4.00%	9.31%
3.50	4.00%	9.30%
3.75	4.00%	9.29%
4.00	4.00%	9.27%
4.25	4.00%	9.29%
4.50	4.00%	9.31%
4.75	4.00%	9.32%
5.00	4.01%	9.33%
6.00	4.03%	9.42%
7.00	4.06%	9.59%
8.00	4.26%	9.64%
9.00	4.45%	9.60%
10.00	4.43%	9.54%
11.00	4.40%	9.50%
12.00	4.39%	9.47%
13.00	4.39%	9.46%
14.00	4.39%	9.44%
15.00	4.40%	9.44%
16.00	4.48%	9.43%
17.00	4.48%	9.43%
18.00	4.48%	9.43%
19.00	4.49%	9.44%
20.00	4.49%	9.44%
21.00	4.58%	9.46%
22.00	4.58%	9.46%
23.00	4.58%	9.46%
24.00	4.58%	9.46%
25.00	4.58%	9.46%
26.00	4.58%	9.46%
27.00	4.58%	9.46%
28.00	4.58%	9.46%
29.00	4.58%	9.46%
30.00	4.58%	9.46%
31.00	4.58%	9.46%
32.00	4.58%	9.46%
33.00	4.58%	9.46%
34.00	4.58%	9.46%
35.00	4.58%	9.46%

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.

Calculation Details

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

List of Tables

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.

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

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	0.1263	0.0256	0.0063	0.0060	0.0884
0.50	0.2948	0.0584	0.0245	0.0120	0.1999
0.75	0.5252	0.1025	0.0538	0.0180	0.3510
1.00	0.7582	0.1465	0.0933	0.0240	0.4944
1.25	0.8922	0.1706	0.1615	0.0208	0.5393
1.50	0.9702	0.1846	0.2296	0.0176	0.5383
1.75	1.0000	0.2000	0.2978	0.0144	0.4878
2.00	1.0000	0.2000	0.3659	0.0113	0.4228
2.25	1.0000	0.2000	0.4025	0.0105	0.3870
2.50	1.0000	0.2000	0.4391	0.0097	0.3512
2.75	1.0000	0.2000	0.4757	0.0089	0.3154
3.00	1.0000	0.2000	0.5123	0.0081	0.2796
3.25	1.0000	0.2000	0.5344	0.0076	0.2580
3.50	1.0000	0.2000	0.5566	0.0070	0.2364
3.75	1.0000	0.2000	0.5787	0.0065	0.2149
4.00	1.0000	0.2000	0.6008	0.0059	0.1933
4.25	1.0000	0.2000	0.6127	0.0056	0.1817
4.50	1.0000	0.2000	0.6245	0.0053	0.1702
4.75	1.0000	0.2000	0.6364	0.0050	0.1586
5.00	1.0000	0.2000	0.6483	0.0047	0.1470
6.00	1.0000	0.2000	0.6740	0.0039	0.1221
7.00	1.0000	0.2000	0.6869	0.0035	0.1096
8.00	1.0000	0.2000	0.6981	0.0029	0.0989
9.00	1.0000	0.2000	0.7134	0.0022	0.0844
10.00	1.0000	0.2000	0.7214	0.0017	0.0768
11.00	1.0000	0.2000	0.7255	0.0013	0.0732
12.00	1.0000	0.2000	0.7335	0.0009	0.0656
13.00	1.0000	0.2000	0.7383	0.0006	0.0611
14.00	1.0000	0.2000	0.7415	0.0004	0.0581
15.00	1.0000	0.2000	0.7480	0.0001	0.0519
16.00	1.0000	0.2000	0.7512	(0.0001)	0.0489
17.00	1.0000	0.2000	0.7536	(0.0003)	0.0467
18.00	1.0000	0.2000	0.7568	(0.0005)	0.0437
19.00	1.0000	0.2000	0.7576	(0.0007)	0.0430
20.00	1.0000	0.2000	0.7600	(0.0007)	0.0407
21.00	1.0000	0.2000	0.7625	(0.0008)	0.0383
22.00	1.0000	0.2000	0.7649	(0.0008)	0.0359
23.00	1.0000	0.2000	0.7689	(0.0008)	0.0319
24.00	1.0000	0.2000	0.7705	(0.0008)	0.0303
25.00	1.0000	0.2000	0.7729	(0.0008)	0.0279
26.00	1.0000	0.2000	0.7761	(0.0008)	0.0247
27.00	1.0000	0.2000	0.7777	(0.0008)	0.0231
28.00	1.0000	0.2000	0.7777	(0.0008)	0.0231
29.00	1.0000	0.2000	0.7793	(0.0008)	0.0215
30.00	1.0000	0.2000	0.7818	(0.0008)	0.0191
31.00	1.0000	0.2000	0.7842	(0.0008)	0.0167
32.00	1.0000	0.2000	0.7899	(0.0009)	0.0109
33.00	1.0000	0.2000	0.7952	(0.0009)	0.0057
34.00	1.0000	0.2000	0.7999	(0.0009)	0.0010
35.00	1.0000	0.2000	0.8043	(0.0009)	(0.0034)

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)]

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	0.2746	0.1509	0.2638	0.0011	(0.1744)	(0.1744)	(0.1727)
0.50	0.4853	0.2666	0.5097	0.0042	(0.3056)	(0.1313)	(0.1276)
0.75	0.6804	0.3738	0.7855	0.0094	(0.4251)	(0.1195)	(0.1140)
1.00	0.8030	0.4412	1.0024	0.0166	(0.4914)	(0.0663)	(0.0620)
1.25	0.6930	0.3808	0.9659	0.0245	(0.4021)	0.0893	0.0821
1.50	0.5961	0.3275	0.8937	0.0320	(0.3235)	0.0786	0.0709
1.75	0.5115	0.2811	0.7926	0.0388	(0.2661)	0.0574	0.0508
2.00	0.4383	0.2408	0.6792	0.0447	(0.2117)	0.0544	0.0472
2.25	0.4017	0.2207	0.6225	0.0499	(0.1856)	0.0261	0.0223
2.50	0.3651	0.2006	0.5658	0.0547	(0.1599)	0.0257	0.0215
2.75	0.3285	0.1805	0.5091	0.0590	(0.1347)	0.0252	0.0207
3.00	0.2920	0.1604	0.4524	0.0629	(0.1099)	0.0248	0.0199
3.25	0.2698	0.1483	0.4181	0.0664	(0.0937)	0.0162	0.0128
3.50	0.2477	0.1361	0.3838	0.0696	(0.0778)	0.0159	0.0123
3.75	0.2256	0.1240	0.3496	0.0726	(0.0621)	0.0156	0.0119
4.00	0.2035	0.1118	0.3153	0.0752	(0.0468)	0.0154	0.0115
4.25	0.1916	0.1053	0.2969	0.0777	(0.0375)	0.0093	0.0068
4.50	0.1798	0.0988	0.2785	0.0800	(0.0284)	0.0091	0.0066
4.75	0.1679	0.0922	0.2601	0.0822	(0.0194)	0.0090	0.0063
5.00	0.1560	0.0857	0.2418	0.0842	(0.0105)	0.0088	0.0061
6.00	0.1303	0.0716	0.2019	0.0914	0.0116	0.0221	0.0146
7.00	0.1174	0.0645	0.1819	0.0977	0.0254	0.0138	0.0084
8.00	0.1062	0.0583	0.1645	0.1033	0.0378	0.0124	0.0070
9.00	0.0909	0.0499	0.1408	0.1083	0.0518	0.0141	0.0074
10.00	0.0828	0.0455	0.1284	0.1127	0.0611	0.0093	0.0045
11.00	0.0788	0.0433	0.1221	0.1168	0.0678	0.0067	0.0030
12.00	0.0708	0.0389	0.1097	0.1205	0.0764	0.0086	0.0036
13.00	0.0660	0.0362	0.1022	0.1240	0.0828	0.0064	0.0025
14.00	0.0627	0.0345	0.0972	0.1272	0.0881	0.0053	0.0019
15.00	0.0563	0.0309	0.0872	0.1302	0.0949	0.0068	0.0023
16.00	0.0531	0.0292	0.0822	0.1330	0.0997	0.0047	0.0015
17.00	0.0507	0.0278	0.0785	0.1356	0.1038	0.0041	0.0012
18.00	0.0475	0.0261	0.0735	0.1381	0.1082	0.0044	0.0012
19.00	0.0466	0.0256	0.0723	0.1405	0.1112	0.0030	0.0007
20.00	0.0442	0.0243	0.0685	0.1428	0.1149	0.0037	0.0009
21.00	0.0418	0.0230	0.0648	0.1449	0.1184	0.0035	0.0008
22.00	0.0394	0.0217	0.0611	0.1470	0.1218	0.0034	0.0007
23.00	0.0354	0.0194	0.0548	0.1489	0.1259	0.0041	0.0008
24.00	0.0338	0.0186	0.0523	0.1506	0.1286	0.0026	0.0004
25.00	0.0314	0.0172	0.0486	0.1523	0.1315	0.0030	0.0005
26.00	0.0281	0.0155	0.0436	0.1538	0.1348	0.0033	0.0005
27.00	0.0265	0.0146	0.0411	0.1551	0.1371	0.0023	0.0003
28.00	0.0265	0.0146	0.0411	0.1565	0.1384	0.0013	0.0002
29.00	0.0249	0.0137	0.0386	0.1578	0.1406	0.0022	0.0003
30.00	0.0225	0.0124	0.0349	0.1590	0.1431	0.0025	0.0003
31.00	0.0201	0.0110	0.0312	0.1600	0.1456	0.0024	0.0002
32.00	0.0144	0.0079	0.0223	0.1609	0.1496	0.0040	0.0004
33.00	0.0091	0.0050	0.0141	0.1615	0.1531	0.0035	0.0003
34.00	0.0044	0.0024	0.0067	0.1619	0.1561	0.0030	0.0002
35.00	-	-	-	0.1620	0.1586	0.0025	0.0002

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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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	0.1263	0.0256	0.0064	0.0058	0.0885
0.50	0.2948	0.0584	0.0247	0.0116	0.2000
0.75	0.5252	0.1025	0.0543	0.0174	0.3510
1.00	0.7582	0.1465	0.0942	0.0232	0.4943
1.25	0.8922	0.1706	0.1631	0.0198	0.5387
1.50	0.9702	0.1846	0.2319	0.0164	0.5372
1.75	1.0000	0.2000	0.3008	0.0131	0.4862
2.00	1.0000	0.2000	0.3696	0.0097	0.4207
2.25	1.0000	0.2000	0.4066	0.0089	0.3845
2.50	1.0000	0.2000	0.4435	0.0081	0.3484
2.75	1.0000	0.2000	0.4805	0.0073	0.3122
3.00	1.0000	0.2000	0.5174	0.0065	0.2761
3.25	1.0000	0.2000	0.5398	0.0060	0.2543
3.50	1.0000	0.2000	0.5621	0.0054	0.2325
3.75	1.0000	0.2000	0.5845	0.0049	0.2107
4.00	1.0000	0.2000	0.6068	0.0043	0.1889
4.25	1.0000	0.2000	0.6188	0.0040	0.1772
4.50	1.0000	0.2000	0.6308	0.0037	0.1655
4.75	1.0000	0.2000	0.6427	0.0034	0.1539
5.00	1.0000	0.2000	0.6547	0.0031	0.1422
6.00	1.0000	0.2000	0.6807	0.0023	0.1170
7.00	1.0000	0.2000	0.6937	0.0019	0.1044
8.00	1.0000	0.2000	0.7051	0.0013	0.0936
9.00	1.0000	0.2000	0.7205	0.0006	0.0789
10.00	1.0000	0.2000	0.7286	0.0001	0.0713
11.00	1.0000	0.2000	0.7327	(0.0003)	0.0676
12.00	1.0000	0.2000	0.7408	(0.0007)	0.0599
13.00	1.0000	0.2000	0.7457	(0.0011)	0.0554
14.00	1.0000	0.2000	0.7490	(0.0013)	0.0524
15.00	1.0000	0.2000	0.7555	(0.0016)	0.0461
16.00	1.0000	0.2000	0.7587	(0.0018)	0.0431
17.00	1.0000	0.2000	0.7611	(0.0020)	0.0409
18.00	1.0000	0.2000	0.7644	(0.0022)	0.0378
19.00	1.0000	0.2000	0.7652	(0.0023)	0.0371
20.00	1.0000	0.2000	0.7676	(0.0024)	0.0348
21.00	1.0000	0.2000	0.7701	(0.0025)	0.0324
22.00	1.0000	0.2000	0.7725	(0.0025)	0.0299
23.00	1.0000	0.2000	0.7766	(0.0025)	0.0259
24.00	1.0000	0.2000	0.7782	(0.0025)	0.0243
25.00	1.0000	0.2000	0.7806	(0.0025)	0.0218
26.00	1.0000	0.2000	0.7839	(0.0025)	0.0186
27.00	1.0000	0.2000	0.7855	(0.0025)	0.0170
28.00	1.0000	0.2000	0.7855	(0.0025)	0.0170
29.00	1.0000	0.2000	0.7871	(0.0025)	0.0154
30.00	1.0000	0.2000	0.7896	(0.0025)	0.0129
31.00	1.0000	0.2000	0.7920	(0.0025)	0.0105
32.00	1.0000	0.2000	0.7978	(0.0025)	0.0047
33.00	1.0000	0.2000	0.8031	(0.0026)	(0.0005)
34.00	1.0000	0.2000	0.8079	(0.0026)	(0.0053)
35.00	1.0000	0.2000	0.8123	(0.0026)	(0.0097)

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)]

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	0.2748	0.1510	0.2642	0.0012	(0.1745)	(0.1745)	0.9900	(0.1727)
0.50	0.4861	0.2671	0.5111	0.0047	(0.3063)	(0.1319)	0.9702	(0.1279)
0.75	0.6823	0.3749	0.7884	0.0105	(0.4269)	(0.1206)	0.9508	(0.1146)
1.00	0.8063	0.4430	1.0075	0.0186	(0.4947)	(0.0678)	0.9320	(0.0632)
1.25	0.6973	0.3832	0.9726	0.0276	(0.4064)	0.0883	0.9133	0.0806
1.50	0.6009	0.3302	0.9013	0.0361	(0.3280)	0.0784	0.8947	0.0701
1.75	0.5164	0.2837	0.8001	0.0439	(0.2700)	0.0580	0.8760	0.0508
2.00	0.4427	0.2432	0.6860	0.0508	(0.2144)	0.0556	0.8573	0.0477
2.25	0.4058	0.2229	0.6287	0.0570	(0.1871)	0.0273	0.8387	0.0229
2.50	0.3688	0.2026	0.5714	0.0626	(0.1604)	0.0268	0.8203	0.0219
2.75	0.3318	0.1823	0.5142	0.0680	(0.1339)	0.0265	0.8023	0.0212
3.00	0.2949	0.1620	0.4569	0.0728	(0.1081)	0.0259	0.7847	0.0203
3.25	0.2725	0.1497	0.4223	0.0771	(0.0909)	0.0172	0.7674	0.0132
3.50	0.2502	0.1375	0.3877	0.0811	(0.0741)	0.0168	0.7505	0.0126
3.75	0.2279	0.1252	0.3531	0.0848	(0.0576)	0.0165	0.7340	0.0121
4.00	0.2055	0.1129	0.3184	0.0881	(0.0415)	0.0161	0.7180	0.0116
4.25	0.1935	0.1063	0.2999	0.0911	(0.0315)	0.0099	0.7022	0.0070
4.50	0.1816	0.0998	0.2813	0.0940	(0.0218)	0.0098	0.6867	0.0067
4.75	0.1696	0.0932	0.2627	0.0967	(0.0122)	0.0096	0.6716	0.0064
5.00	0.1576	0.0866	0.2442	0.0992	(0.0028)	0.0094	0.6568	0.0062
6.00	0.1316	0.0723	0.2039	0.1082	0.0213	0.0241	0.6209	0.0150
7.00	0.1186	0.0652	0.1838	0.1161	0.0367	0.0155	0.5665	0.0088
8.00	0.1072	0.0589	0.1661	0.1235	0.0510	0.0143	0.5167	0.0074
9.00	0.0918	0.0504	0.1422	0.1304	0.0670	0.0160	0.4715	0.0076
10.00	0.0837	0.0460	0.1296	0.1364	0.0780	0.0110	0.4304	0.0047
11.00	0.0796	0.0437	0.1233	0.1420	0.0862	0.0082	0.3930	0.0032
12.00	0.0715	0.0393	0.1108	0.1471	0.0963	0.0100	0.3590	0.0036
13.00	0.0666	0.0366	0.1032	0.1518	0.1039	0.0077	0.3280	0.0025
14.00	0.0634	0.0348	0.0982	0.1562	0.1104	0.0065	0.2997	0.0019
15.00	0.0569	0.0312	0.0881	0.1603	0.1184	0.0080	0.2739	0.0022
16.00	0.0536	0.0295	0.0831	0.1642	0.1242	0.0058	0.2503	0.0015
17.00	0.0512	0.0281	0.0793	0.1678	0.1294	0.0052	0.2287	0.0012
18.00	0.0479	0.0263	0.0743	0.1712	0.1348	0.0054	0.2090	0.0011
19.00	0.0471	0.0259	0.0730	0.1745	0.1387	0.0039	0.1910	0.0007
20.00	0.0447	0.0245	0.0692	0.1777	0.1433	0.0046	0.1745	0.0008
21.00	0.0422	0.0232	0.0654	0.1808	0.1477	0.0044	0.1594	0.0007
22.00	0.0398	0.0219	0.0617	0.1837	0.1520	0.0043	0.1456	0.0006
23.00	0.0357	0.0196	0.0554	0.1864	0.1569	0.0049	0.1331	0.0007
24.00	0.0341	0.0187	0.0529	0.1889	0.1603	0.0034	0.1216	0.0004
25.00	0.0317	0.0174	0.0491	0.1912	0.1640	0.0037	0.1110	0.0004
26.00	0.0284	0.0156	0.0441	0.1934	0.1679	0.0039	0.1014	0.0004
27.00	0.0268	0.0147	0.0415	0.1953	0.1708	0.0029	0.0927	0.0003
28.00	0.0268	0.0147	0.0415	0.1972	0.1727	0.0019	0.0847	0.0002
29.00	0.0252	0.0138	0.0390	0.1991	0.1754	0.0027	0.0774	0.0002
30.00	0.0227	0.0125	0.0352	0.2008	0.1785	0.0030	0.0707	0.0002
31.00	0.0203	0.0112	0.0315	0.2023	0.1813	0.0029	0.0646	0.0002
32.00	0.0145	0.0080	0.0225	0.2035	0.1858	0.0044	0.0590	0.0003
33.00	0.0092	0.0051	0.0143	0.2044	0.1896	0.0038	0.0539	0.0002
34.00	0.0044	0.0024	0.0068	0.2049	0.1927	0.0031	0.0492	0.0002
35.00	-	-	-	0.2050	0.1953	0.0026	0.0450	0.0001

Column Notes:

(1) is Unearned Premium Reserve (equal to Written Premium minus Earned Premium, per the cashflow pattern) plus Unpaid Loss and LAE Reserve (equal to Incurred minus Paid Losses and LAE) by time period, expressed as a factor,
= [Table 2 col (3) - Table 2 col (2)] + Table 1 row (7, Dynamic) x [Table 2 col (2) - Table 2 col (5)]

(2) is the Surplus derived from Reserves per the Reserve-to-Surplus Ratio by time period, expressed as a factor, = (1) / Table 1 row (2)

(3) is Reserves plus Surplus minus Agent Balances by time period, expressed as a factor, = (1) + (2) - Agent Balances. Agent Balances exist when Written Premium exceeds Collected Premium, = [Table 2 col (3) - Table 2 col (1)].

(4) is derived by applying the Return on Investments [Table 3 col (1)] to the average Invested Funds (4) from the previous and current time periods, plus previous Income from Invested Funds, by time period expressed as a factor.

(5) is Insurance Cash Flow plus Income from Invested Funds minus Total Invested Funds by time period, expressed as a factor,
= Table 6 col (5) + (4) - (3)

(6) is the difference between Capital Provider Equity (5) at the current and previous time periods, expressed as a factor

(7) is derived from the respective Weighted Average Cost of Capital [Table 3 col (2)] for each time period, expressed as a factor

(8) is the Capital Provider Cash Flow (6) discounted by the Cumulative Discount Factor (7), expressed as a factor

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

		IRR Model Time (yrs)		
	Static	**1.00**	**2.00**	**5.00**
(1) 5 year US T-note Yield	2.46%	2.97%	3.70%	4.02%
(2) US Equity Market Risk Premium	7.49%			
(3) Beta for Property/Casualty (P/C) Insurers	0.85			
(4) Equity Cost of Capital for P/C Insurers	8.83%	9.34%	10.07%	10.38%
(5) Share of Equity Capital for P/C Insurers	83%			
(6) Debt Cost of Capital for P/C Insurers	2.95%	3.35%	3.92%	4.17%
(7) Weighted Average Cost of Capital (WACC)	7.83%	8.32%	9.02%	9.33%

Column Notes:

(1) Forward estimates of the 5-year US T-note yield are from Moody's forecasts and apply only to the Dynamic estimate of the WACC. Time periods provided are illustrative; the full model includes estimates on a quarterly basis for the first five years and annually thereafter.

(3) & (5) P/C beta and share of equity capital are estimated from historical data for a collection of insurers with publicly traded equity and debt.

(4) = (1) + (2) x (3)

(6) P/C debt cost of capital is the sum of the 5-year US T-note yield plus the historical corporate spread, net of income tax.

(7) = (4) x (5) + (6) x [1 - (5)]

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

TABLE A.2 CALCULATION OF RETURN ON INVESTMENTS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Security Description	Investment Portfolio	Yield Curve, Maturity and Spread	Roll-over Period	Income Tax Rate	Post-tax Return			
						IRR Model Time (yrs)		
Bonds, of which	73.7%				Static	1.00	2.00	5.00
Government Direct Obligations	6.5%							
< 1yr	2.0%	6 mo US T-bill	0.50 yrs	21.00%	1.98%	2.09%	2.36%	2.53%
1 – 5 yrs	2.5%	2.5 yr US T-note	2.50 yrs	21.00%	1.95%	2.30%	2.30%	2.91%
5 – 10 yrs	1.3%	7.5 yr US T-note	7.50 yrs	21.00%	2.03%	2.46%	2.46%	2.46%
10 – 20 yrs	0.2%	15 yr US T-note	15.00 yrs	21.00%	2.17%	2.60%	2.60%	2.60%
> 20 yrs	0.5%	20 yr US T-note	20.00 yrs	21.00%	2.25%	2.73%	2.73%	2.73%
Collateralized Securities	6.8%							
< 1yr	0.9%	6 mo US T-bill + 50 basis points	0.50 yrs	21.00%	2.37%	2.49%	2.75%	2.93%
1 – 5 yrs	2.5%	2.5 yr US T-note + 50 basis points	2.50 yrs	21.00%	2.35%	2.70%	2.70%	3.31%
5 – 10 yrs	1.8%	7.5 yr US T-note + 50 basis points	7.50 yrs	21.00%	2.42%	2.86%	2.86%	2.86%
10 – 20 yrs	1.2%	15 yr US T-note + 50 basis points	15.00 yrs	21.00%	2.57%	3.00%	3.00%	3.00%
> 20 yrs	0.4%	20 yr US T-note + 50 basis points	20.00 yrs	21.00%	2.65%	3.13%	3.13%	3.13%
Tax-exempt Bonds	25.5%							
< 1yr	1.7%	6 mo US T-bill + Tax-exempt spread	0.50 yrs	5.25%	2.53%	2.67%	2.98%	3.20%
1 – 5 yrs	6.4%	2.5 yr US T-note + Tax-exempt spread	2.50 yrs	5.25%	2.55%	2.97%	2.97%	3.71%
5 – 10 yrs	9.0%	7.5 yr US T-note + Tax-exempt spread	7.50 yrs	5.25%	2.66%	3.18%	3.18%	3.18%
10 – 20 yrs	6.4%	15 yr US T-note + Tax-exempt spread	15.00 yrs	5.25%	2.97%	3.48%	3.48%	3.48%
> 20 yrs	1.9%	20 yr US T-note + Tax-exempt spread	20.00 yrs	5.25%	3.22%	3.77%	3.77%	3.77%
Industrial and Hybrid Securities (unaffiliated)	34.0%							
< 1yr	3.9%	6 mo US T-bill + Corp spread	0.50 yrs	21.00%	2.52%	2.64%	2.90%	3.08%
1 – 5 yrs	13.4%	2.5 yr US T-note + Corp spread	2.50 yrs	21.00%	2.76%	3.11%	3.11%	3.72%
5 – 10 yrs	12.5%	7.5 yr US T-note + Corp spread	7.50 yrs	21.00%	3.12%	3.55%	3.55%	3.55%
10 – 20 yrs	1.9%	15 yr US T-note + Corp spread	15.00 yrs	21.00%	3.36%	3.78%	3.78%	3.78%
> 20 yrs	2.3%	20 yr US T-note + Corp spread	20.00 yrs	21.00%	3.46%	3.93%	3.93%	3.93%
Industrial and Hybrid Securities (affiliated)	0.9%							
< 1yr	0.3%	6 mo US T-bill + Corp spread	0.50 yrs	5.25%	3.03%	3.17%	3.48%	3.69%
1 – 5 yrs	0.6%	2.5 yr US T-note + Corp spread	2.50 yrs	5.25%	3.31%	3.73%	3.73%	4.47%
5 – 10 yrs	0.0%	7.5 yr US T-note + Corp spread	7.50 yrs	5.25%	3.74%	4.26%	4.26%	4.26%
10 – 20 yrs	0.0%	15 yr US T-note + Corp spread	15.00 yrs	5.25%	4.02%	4.54%	4.54%	4.54%
> 20 yrs	0.0%	20 yr US T-note + Corp spread	20.00 yrs	5.25%	4.15%	4.71%	4.71%	4.71%
Stocks, of which	12.2%							
Preferred Stock	0.4%	5 year US T-note + 374 basis points	0.25 yrs	13.13%	5.39%	5.84%	6.47%	6.74%
Common Stock	11.8%	5 year US T-note + 749 basis points	0.25 yrs	18.31%	8.13%	8.55%	9.14%	9.40%
Mortgage Loans	2.0%							
Real Estate	0.5%							
Cash & Short-Term Investment	4.0%	3 month US T-bill	0.25 yrs	21.00%	1.93%	2.07%	2.45%	2.46%
All Other Assets*	7.7%							
				Post-Tax Return on Invested Funds, pre-Expense:	3.43%	3.82%	3.94%	4.18%
				Investment Expense**:	-0.17%	-0.17%	-0.17%	-0.17%
				Post-Tax Return on Invested Funds:	**3.26%**	**3.65%**	**3.77%**	**4.01%**

Table Notes:

(1) Government Direct Obligations include US Government Issuer Obligations and Non-US Government Issuer Obligations.
Collateralized Securities include Mortgage Backed, Loan Backed, or Structured Securities.
Tax-exempt Bonds include Issuer Obligations of US States, Territories, and Possessions, US Political Subdivisions of States, Territories, and Possessions, and US Special Revenue and Special Assessment Obligations.
Industrial and Hybrid Securities (unaffiliated) include Industrial and Miscellaneous and Hybrid Securities.
Industrial and Hybrid Securities (affiliated) include Parents, Subsidiaries, and Affiliates.

(2) Bond and total portfolio distributions are 3-year averages for 2015-2017, calculated from various annual editions of Best's Aggregates & Averages (Property-Casualty), Assets for Commercial Casualty Composite, p. 276, Column 3, Net Admitted Assets.
For each year 2015-2017, the maturity distribution pertains to all bonds owned as of December 31 at book/adjusted carrying value for Commercial Casualty Composite, Schedule D, Part 1A, Section 2.

(3) Spread to US treasury yields are either constant or varying by maturity (tax-exempt or corporate) as applicable.
The tax-exempt spread is a term structure of average historical spreads in forward rates at different maturities between US municipal bonds and US Treasuries.
Data on historical yields to US municipal bonds are from Bloomberg.
The corporate spread is a term structure of average historical spreads in forward rates at different maturities between US corporate bonds and US Treasuries.
Historical data on yields to US corporate bonds are from the US Department of Treasury.

(4) Applies only to the Dynamic estimate of the return on invested funds.
The roll-over period is the time interval at which the estimated yield is updated for the given security in the investment portfolio.
For bonds, the roll-over period is the bond's term to maturity. Forward yields for common and preferred stocks are updated quarterly.

(5) It is assumed that investment returns, except dividends and tax exempt municipal bond income, are taxed at 21%.
With respect to dividends, it is assumed that 50% of dividends received are tax exempt. It is further assumed that in accordance with the "pro-ration" provision, 25% of otherwise exempt municipal bond income and dividends are taxed at 21%. The portion of income attributable to capital appreciation is assumed to equal 65.8% while the income portion is 34.2%. The percentages were obtained from Morningstar's Analyst Research Center containing Table 6-7 previously published in Ibbotson SBBI Classic Yearbook, large company stocks, arithmetic mean.

(6) Static estimates of treasury yields are actual current yields.

(7)-(9) Apply only to the Dynamic estimate of the return on invested funds. Forward estimates of 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 be equal to 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 2017 from the Annual Statement, Exhibit of Net Investment Income.
Average of 2016 and 2017 cash and invested assets from Best's Aggregates and Averages (Property-Casualty), Assets for Commercial Casualty Composite, p.276, Line 12.

APPENDIX B: FEDERAL INCOME TAX INCURRED FROM INSURANCE OPERATIONS

Federal taxes on underwriting income, based on the Tax Cuts and Jobs Act of 2017, are calculated in the following tables on an annual basis. Columns (1) through (4) are the same under both the Static and Dynamic Estimates; the paid losses and LAE factors (col (5)) vary by Estimate. Note that investment taxes are accounted for in Appendix A. Annual tax is prorated when quarterly amounts are required.

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

Time	(1) Written Premium Factor	(2) Unearned Premium Factor	(3) Expense and Taxes Factor	(4) Discount Factor	(5) Paid Losses and LAE Factor	(6) AY1 Paid Losses and LAE Factor	(7) AY2 Paid Losses and LAE Factor	(8) Discounted AY1 Unpaid Losses & LAE Factor	(9) Discounted AY2 Unpaid Losses & LAE Factor	(10) Federal Income Tax Factor
0.00	-	-	-	-	-	-	-	-	-	-
1.00	1.0000	0.4703	0.1465	0.8742	0.0933	0.0933	-	0.2700	-	0.0240
2.00	1.0000	-	0.2000	0.8584	0.3659	0.2278	0.1381	0.1496	0.2308	0.0113
3.00	1.0000	-	0.2000	0.8470	0.5123	0.2703	0.2420	0.1116	0.1375	0.0081
4.00	1.0000	-	0.2000	0.8313	0.6008	0.3154	0.2854	0.0721	0.0989	0.0059
5.00	1.0000	-	0.2000	0.8255	0.6483	0.3285	0.3198	0.0608	0.0685	0.0047
6.00	1.0000	-	0.2000	0.8199	0.6740	0.3413	0.3327	0.0499	0.0573	0.0039
7.00	1.0000	-	0.2000	0.8237	0.6869	0.3445	0.3423	0.0475	0.0490	0.0035
8.00	1.0000	-	0.2000	0.8325	0.6981	0.3513	0.3468	0.0423	0.0456	0.0029
9.00	1.0000	-	0.2000	0.8389	0.7134	0.3594	0.3540	0.0359	0.0401	0.0022
10.00	1.0000	-	0.2000	0.8586	0.7214	0.3614	0.3601	0.0350	0.0353	0.0017
11.00	1.0000	-	0.2000	0.8713	0.7255	0.3634	0.3621	0.0338	0.0344	0.0013
12.00	1.0000	-	0.2000	0.8843	0.7335	0.3684	0.3651	0.0298	0.0323	0.0009
13.00	1.0000	-	0.2000	0.8975	0.7383	0.3695	0.3688	0.0293	0.0295	0.0006
14.00	1.0000	-	0.2000	0.9110	0.7415	0.3714	0.3702	0.0280	0.0287	0.0004
15.00	1.0000	-	0.2000	0.9248	0.7480	0.3753	0.3727	0.0248	0.0268	0.0001
16.00	1.0000	-	0.2000	0.9388	0.7512	0.3758	0.3754	0.0248	0.0247	(0.0001)
17.00	1.0000	-	0.2000	0.9531	0.7536	0.3773	0.3763	0.0236	0.0243	(0.0003)
18.00	1.0000	-	0.2000	0.9675	0.7568	0.3790	0.3779	0.0224	0.0231	(0.0005)
19.00	1.0000	-	0.2000	0.9819	0.7576	0.3787	0.3789	0.0230	0.0225	(0.0007)
20.00	1.0000	-	0.2000	0.9846	0.7600	0.3807	0.3794	0.0211	0.0223	(0.0007)
21.00	1.0000	-	0.2000	0.9846	0.7625	0.3815	0.3809	0.0203	0.0209	(0.0008)
22.00	1.0000	-	0.2000	0.9846	0.7649	0.3829	0.3820	0.0189	0.0199	(0.0008)
23.00	1.0000	-	0.2000	0.9846	0.7689	0.3852	0.3837	0.0167	0.0182	(0.0008)
24.00	1.0000	-	0.2000	0.9846	0.7705	0.3853	0.3852	0.0166	0.0166	(0.0008)
25.00	1.0000	-	0.2000	0.9846	0.7729	0.3871	0.3859	0.0149	0.0160	(0.0008)
26.00	1.0000	-	0.2000	0.9846	0.7761	0.3886	0.3876	0.0134	0.0144	(0.0008)
27.00	1.0000	-	0.2000	0.9846	0.7777	0.3890	0.3887	0.0129	0.0132	(0.0008)
28.00	1.0000	-	0.2000	0.9846	0.7777	0.3888	0.3889	0.0131	0.0130	(0.0008)
29.00	1.0000	-	0.2000	0.9846	0.7793	0.3901	0.3892	0.0118	0.0127	(0.0008)
30.00	1.0000	-	0.2000	0.9846	0.7818	0.3913	0.3905	0.0107	0.0115	(0.0008)
31.00	1.0000	-	0.2000	0.9846	0.7842	0.3925	0.3917	0.0095	0.0103	(0.0008)
32.00	1.0000	-	0.2000	0.9846	0.7899	0.3962	0.3937	0.0059	0.0083	(0.0009)
33.00	1.0000	-	0.2000	0.9846	0.7952	0.3983	0.3969	0.0038	0.0052	(0.0009)
34.00	1.0000	-	0.2000	0.9846	0.7999	0.4008	0.3991	0.0013	0.0030	(0.0009)
35.00	1.0000	-	0.2000	0.9846	0.8043	0.4021	0.4021	-	-	(0.0009)

Column Notes:

(1) is Written Premium by time period, expressed as a factor, = Table 2 col (3)
(2) is Written Premium minus Earned Premium by time period, expressed as a factor, = Table 2 col (3) - Table 2 col (2)
(3) is Expenses and Taxes by time period, expressed as a factor, = Table 1 row (1) x Table 2 col (4)
(4) is from Internal Revenue Bulletin 2019-02, Rev. Proc 2019-06, dated January 7, 2019
(5) is Paid Losses and LAE by time period, expressed as a factor, = Table 1 row (7, Static) x Table 2 col (5)
(6) and (7) split the payments between the accident year coincident with the policy year ("AY1"), and the following accident year ("AY2"). Assuming that the payout pattern is linear between integer times, and that the average accident date for AY2 is two-thirds of a year later than the average accident date for AY1 , columns (6) and (7) are determined by solving these two equations simultaneously:
  Col (6) + Col (7) = Col (5)
  Col (7) = (2/3) * Col (6, previous row) + (1/3) * 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,
  = [col (6, Time 35) - (6)] x (4)
(9) is the discounted difference between AY2 Losses and LAE that will ultimately be paid, and the amount already paid,
  = [col (7, Time 35) - (7)] x 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)]}

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

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

Time	(1) Written Premium Factor	(2) Unearned Premium Factor	(3) Expense and Taxes Factor	(4) Discount Factor	(5) Paid Losses and LAE Factor	(6) AY1 Paid Losses and LAE Factor	(7) AY2 Paid Losses and LAE Factor	(8) Discounted AY1 Unpaid Losses & LAE Factor	(9) Discounted AY2 Unpaid Losses & LAE Factor	(10) Federal Income Tax Factor
0.00	-	-	-	-	-	-	-	-	-	-
1.00	1.0000	0.4703	0.1465	0.8742	0.0942	0.0942	-	0.2727	-	0.0232
2.00	1.0000	-	0.2000	0.8584	0.3696	0.2301	0.1395	0.1511	0.2331	0.0097
3.00	1.0000	-	0.2000	0.8470	0.5174	0.2730	0.2444	0.1128	0.1389	0.0065
4.00	1.0000	-	0.2000	0.8313	0.6068	0.3186	0.2882	0.0728	0.0999	0.0043
5.00	1.0000	-	0.2000	0.8255	0.6547	0.3318	0.3230	0.0614	0.0692	0.0031
6.00	1.0000	-	0.2000	0.8199	0.6807	0.3447	0.3361	0.0504	0.0579	0.0023
7.00	1.0000	-	0.2000	0.8237	0.6937	0.3480	0.3458	0.0479	0.0495	0.0019
8.00	1.0000	-	0.2000	0.8325	0.7051	0.3548	0.3503	0.0427	0.0460	0.0013
9.00	1.0000	-	0.2000	0.8389	0.7205	0.3630	0.3576	0.0362	0.0405	0.0006
10.00	1.0000	-	0.2000	0.8586	0.7286	0.3650	0.3636	0.0353	0.0357	0.0001
11.00	1.0000	-	0.2000	0.8713	0.7327	0.3670	0.3657	0.0341	0.0348	(0.0003)
12.00	1.0000	-	0.2000	0.8843	0.7408	0.3721	0.3687	0.0301	0.0326	(0.0007)
13.00	1.0000	-	0.2000	0.8975	0.7457	0.3732	0.3725	0.0296	0.0298	(0.0011)
14.00	1.0000	-	0.2000	0.9110	0.7490	0.3751	0.3739	0.0283	0.0290	(0.0013)
15.00	1.0000	-	0.2000	0.9248	0.7555	0.3790	0.3764	0.0251	0.0271	(0.0016)
16.00	1.0000	-	0.2000	0.9388	0.7587	0.3795	0.3792	0.0250	0.0249	(0.0018)
17.00	1.0000	-	0.2000	0.9531	0.7611	0.3811	0.3800	0.0239	0.0245	(0.0020)
18.00	1.0000	-	0.2000	0.9675	0.7644	0.3827	0.3816	0.0227	0.0234	(0.0022)
19.00	1.0000	-	0.2000	0.9819	0.7652	0.3825	0.3827	0.0232	0.0227	(0.0023)
20.00	1.0000	-	0.2000	0.9846	0.7676	0.3845	0.3832	0.0214	0.0226	(0.0024)
21.00	1.0000	-	0.2000	0.9846	0.7701	0.3853	0.3848	0.0205	0.0211	(0.0025)
22.00	1.0000	-	0.2000	0.9846	0.7725	0.3867	0.3858	0.0191	0.0201	(0.0025)
23.00	1.0000	-	0.2000	0.9846	0.7766	0.3891	0.3875	0.0168	0.0184	(0.0025)
24.00	1.0000	-	0.2000	0.9846	0.7782	0.3891	0.3891	0.0168	0.0168	(0.0025)
25.00	1.0000	-	0.2000	0.9846	0.7806	0.3909	0.3897	0.0150	0.0162	(0.0025)
26.00	1.0000	-	0.2000	0.9846	0.7839	0.3925	0.3914	0.0135	0.0145	(0.0025)
27.00	1.0000	-	0.2000	0.9846	0.7855	0.3929	0.3926	0.0130	0.0133	(0.0025)
28.00	1.0000	-	0.2000	0.9846	0.7855	0.3927	0.3928	0.0133	0.0131	(0.0025)
29.00	1.0000	-	0.2000	0.9846	0.7871	0.3940	0.3931	0.0120	0.0128	(0.0025)
30.00	1.0000	-	0.2000	0.9846	0.7896	0.3952	0.3944	0.0108	0.0116	(0.0025)
31.00	1.0000	-	0.2000	0.9846	0.7920	0.3964	0.3956	0.0096	0.0104	(0.0025)
32.00	1.0000	-	0.2000	0.9846	0.7978	0.4001	0.3977	0.0059	0.0084	(0.0025)
33.00	1.0000	-	0.2000	0.9846	0.8031	0.4023	0.4008	0.0038	0.0052	(0.0026)
34.00	1.0000	-	0.2000	0.9846	0.8079	0.4048	0.4031	0.0013	0.0030	(0.0026)
35.00	1.0000	-	0.2000	0.9846	0.8123	0.4062	0.4062	-	-	(0.0026)

Column Notes:

(1) is Written Premium by time period, expressed as a factor, = Table 2 col (3)

(2) is Written Premium minus Earned Premium by time period, expressed as a factor, = Table 2 col (3) - Table 2 col (2)

(3) is Expenses and Taxes by time period, expressed as a factor, = Table 1 row (1) x Table 2 col (4)

(4) is from Internal Revenue Bulletin 2019-02, Rev. Proc 2019-06, dated January 7, 2019

(5) is Paid Losses and LAE by time period, expressed as a factor, = Table 1 row (7, Dynamic) x Table 2 col (5)

(6) and (7) split the payments between the accident year coincident with the policy year ("AY1"), and the following accident year ("AY2"). Assuming that the payout pattern is linear between integer times, and that the average accident date for AY2 is two-thirds of a year later than the average accident date for AY1 , columns (6) and (7) are determined by solving these two equations simultaneously:

Col (6) + Col (7) = Col (5)

Col (7) = (2/3) * Col (6, previous row) + (1/3) * 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,
= [col (6, Time 35) - (6)] x (4)

(9) is the discounted difference between AY2 Losses and LAE that will ultimately be paid, and the amount already paid,
= [col (7, Time 35) - (7)] x 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)]}

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

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)
2017	194,692,095	42,696,647	77,537,150	171,664,964	1.38	1.83
2016	186,424,236	41,741,053	72,716,997	169,831,305	1.34	1.77
2015	185,919,427	42,816,231	73,469,477	169,017,203	1.35	1.79
2014	214,239,981	48,564,685	83,674,315	192,947,461	1.36	1.80
2013	215,275,673	47,841,227	81,229,642	182,832,920	1.44	1.88
2013 - 2017	996,551,412	223,659,843	388,627,581	886,293,853	1.38	1.82

Selected Ratio including Unearned Premium: 1.82

Source: Columns (1) - (4) for the latest year are taken from Liabilities, Surplus and Other Funds on page 277 in Best's 2018 Aggregates & Averages, for Commercial Casualty Composite.

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

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

Iowa

Workers Compensation Rate Filing – January 1, 2020

Appendix F – Derivation of Experience Rating Values

1. Expected Loss Rate (ELR) factors

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

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

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

The final ELR for each classification is calculated as follows:

ELR = {(Hazard Group indemnity ELR factor) x (indemnity pure premium) +

(Hazard Group medical ELR factor) x (medical pure premium)} x 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.

Appendix F – Derivation of Experience Rating Values

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

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

D-ratio = {(HG indemnity D-ratio factor) x (indemnity pure premium) +
(HG medical D-ratio factor) x (medical pure premium)} / 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.

Part 4 Additional Information

- Definitions
- NCCI Affiliate List
- Key Contacts

Iowa

Workers Compensation Rate Filing – January 1, 2020

Definitions

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

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

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

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

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

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

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

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

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

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

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

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

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

Iowa

Workers Compensation Rate Filing – January 1, 2020

Definitions

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

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

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

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

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

NCCI Affiliate List

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

NCCI Affiliate List

NATIONWIDE AGRIBUSINESS INS CO
NATIONWIDE ASSURANCE CO
NATIONWIDE GENERAL INSURANCE CO
NATIONWIDE INS CO OF AMERICA
NATIONWIDE MUTUAL FIRE INS CO
NATIONWIDE MUTUAL INS CO
NATIONWIDE PROPERTY AND CASUALTY INS CO
NETHERLANDS INSURANCE COMPANY
NEW HAMPSHIRE INSURANCE COMPANY
NEW YORK MARINE AND GENERAL INSURANCE CO
NHRMA MUTUAL INSURANCE COMPANY
NORGUARD INS CO
NORTH AMERICAN ELITE INSURANCE CO
NORTH AMERICAN SPECIALTY INS CO
NORTH POINTE INS CO
NORTH RIVER INS CO
NORTHSTONE INSURANCE COMPANY
NOVA CASUALTY COMPANY
OAK RIVER INSURANCE COMPANY
OBI AMERICA INSURANCE COMPANY
OBI NATIONAL INSURANCE COMPANY
OH CASUALTY INS CO
OH FARMERS INS CO
OHIO SECURITY INS CO
OLD GUARD INSURANCE COMPANY
OLD REPUBLIC GENERAL INSURANCE CORPORATION
OLD REPUBLIC INS CO
OWNERS INSURANCE COMPANY
PA MANUFACTURERS ASSN INS CO
PA MANUFACTURERS INDEMNITY CO
PACIFIC EMPLOYERS INS CO
PACIFIC INDEMNITY CO
PACIFIC INS CO LTD
PARTNERS MUTUAL INS CO
PATRONS MUTUAL INS CO OF CT
PEERLESS INDEMNITY INS CO
PEERLESS INSURANCE COMPANY
PEKIN INS CO
PENN MILLERS INS CO
PENNSYLVANIA INSURANCE COMPANY
PETROLEUM CASUALTY CO
PHARMACISTS MUTUAL INS CO
PHOENIX INS CO
PINNACLEPOINT INSURANCE COMPANY
PIONEER SPECIALTY INSURANCE COMPANY
PLAZA INSURANCE CO
PRAETORIAN INSURANCE COMPANY
PREFERRED PROFESSIONAL INSURANCE COMPANY
PREVISOR INSURANCE COMPANY
PROPERTY AND CASUALTY INS CO OF HARTFORD
PROSELECT INSURANCE COMPANY
PROTECTIVE INS CO
QBE INSURANCE CORPORATION
REDWOOD FIRE & CASUALTY INS CO
REGENT INSURANCE COMPANY
REPUBLIC INDEMNITY COMPANY OF AMERICA
RIVERPORT INSURANCE COMPANY
RLI INSURANCE COMPANY
ROCKWOOD CASUALTY INS CO
RURAL TRUST INSURANCE COMPANY
SAFECO INS CO OF AMERICA
SAFETY FIRST INS CO
SAFETY NATIONAL CASUALTY CORP
SAGAMORE INSURANCE CO
SAMSUNG FIRE AND MARINE INS CO LTD USB
SECURA INSURANCE A MUTUAL CO
SECURA SUPREME INS CO
SECURITY NATIONAL INS CO (AMTRUST GROUP)
SELECTIVE INS CO OF SC
SELECTIVE INS CO OF THE SOUTHEAST
SELECTIVE INSURANCE COMPANY OF AMERICA
SELECTIVE WAY INS CO
SENECA INSURANCE CO
SENTINEL INS CO
SENTRY CASUALTY CO
SENTRY INSURANCE A MUTUAL CO
SENTRY SELECT INSURANCE COMPANY
SEQUOIA INSURANCE CO
SERVICE AMERICAN INDEMNITY COMPANY
SFM MUTUAL INS CO
SFM SAFE INSURANCE COMPANY
SFM SELECT INSURANCE COMPANY
SIRIUS AMERICA INSURANCE COMPANY
SOCIETY INSURANCE A MUTUAL COMPANY
SOMPO AMERICA FIRE & MARINE INSURANCE COMPANY
SOMPO AMERICA INSURANCE COMPANY
SOUTHERN INS CO
ST PAUL FIRE AND MARINE INS CO
ST PAUL GUARDIAN INS CO
ST PAUL MERCURY INS CO
ST PAUL PROTECTIVE INS CO
STANDARD FIRE INSURANCE COMPANY
STAR INS CO
STARNET INSURANCE COMPANY
STARR INDEMNITY AND LIABILITY CO
STARR SPECIALTY INSURANCE COMPANY
STARSTONE NATIONAL INSURANCE COMPANY
STATE AUTO PROPERTY AND CASUALTY INS CO
STATE AUTOMOBILE MUTUAL INS CO
STATE FARM FIRE AND CASUALTY CO
STATE NATIONAL INSURANCE COMPANY
STONINGTON INS CO
SUMMITPOINT INSURANCE COMPANY
SUNZ INSURANCE COMPANY
T H E INSURANCE COMPANY
TECHNOLOGY INSURANCE CO
THE TRAVELERS CASUALTY COMPANY
TNUS INSURANCE CO
TOKIO MARINE AMERICA INSURANCE CO
TRANS PACIFIC INS CO
TRANSGUARD INS CO OF AMERICA INC
TRANSPORTATION INS CO
TRAVELERS CASUALTY AND SURETY CO
TRAVELERS CASUALTY INS CO OF AMERICA
TRAVELERS INDEMNITY CO
TRAVELERS INDEMNITY CO OF AMERICA
TRAVELERS INDEMNITY CO OF CT
TRAVELERS INSURANCE CO
TRAVELERS PROPERTY CASUALTY CO OF AMERICA
TRI STATE INSURANCE COMPANY OF MINNESOTA

TRIANGLE INSURANCE COMPANY INC
TRIUMPHE CASUALTY COMPANY
TRUCK INSURANCE EXCHANGE
TRUMBULL INS CO
TWIN CITY FIRE INS CO
UNION INS CO OF PROVIDENCE
UNION INSURANCE COMPANY
UNITED FIRE AND CASUALTY CO
UNITED STATES FIDELITY AND GUARANTY CO
UNITED WI INS CO
US FIRE INS CO
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
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 INS CO
WESTFIELD NATIONAL INS CO
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, 2020

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