

LOSS COSTS – IMPLEMENTATION

APRIL 18, 2024

COMMERCIAL PROPERTY

LI-CF-2024-043

MINNESOTA COMMERCIAL FIRE AND ALLIED LINES ADVISORY PROSPECTIVE LOSS COST REVISION TO BE IMPLEMENTED

KEY MESSAGE

Revised advisory prospective loss costs reflecting a statewide loss cost level change of **+11.1%** to be implemented.

BACKGROUND

In circular [LI-CF-2024-016](#), we provided you with information about the Commercial Fire and Allied Lines loss cost level experience review.

ISO ACTION

We are implementing [CF-2024-RLA1](#), which presents a review of Commercial Fire and Allied Lines loss cost experience.

Refer to the attachment(s) for complete details.

For more information on the status of filings in a particular state, including filed and approved documents, associated circulars and links to Print Ready Manuals and Commercial Lines Manual, please feel free to access our [Filings](#) feature within the ISOnet Circulars product.

CONSIDERATION OF COVID-19

ISO has considered whether any adjustments need to be made to prospective loss costs, which are based partially on historical experience (pre-COVID-19), to reflect the conditions in which these loss costs will be effective (post-COVID-19). While there will almost certainly be long-term behavioral, social and economic changes as a result of COVID-19, we expect, that those changes will have negligible and/or offsetting effects on prospective loss costs. Considering the nature of the perils covered by Basic Group I (fire) and the weather driven perils covered by Basic Group II and Special Causes of Loss, ISO is not making any explicit adjustments to our Commercial Property prospective loss costs due to COVID-19.

SUPPLEMENTARY INFORMATION

We are including the following supplementary information:

- PCS Catastrophe List - A list of events that have been identified as catastrophes in the state by ISO's Property Claims Services, Inc.
- Section S, which provides Basic Group I experience on a Rating Group basis.

NOTE: This supplementary information is **not** part of the experience review document and, in states where we are making a filing, is **not** part of the filing.

EFFECTIVE DATE

We do not establish an effective date for Commercial Fire and Allied Lines loss cost revisions in this state. Each insurer that elects to utilize this revision is responsible for determining its own effective date.

IMPACT ON THE STATISTICAL REPORTING OF LOSS COST MULTIPLIER

For the purpose of reporting your company Loss Cost Multiplier under the CSP, as of October 1, 2024, the multiplier must be based on the relationship between your gross rates and the ISO advisory prospective loss costs contained in this circular.

COMPANY ACTION

You must independently determine the final rates you will use and the effective date of any rate change. If you decide to use our prospective loss costs to revise your rates, you are NOT required to file anything with the Insurance Department.

You must document your files in case the Insurance Department wishes to review the information at a later date. In all correspondence on this revision, you should refer to ISO Filing Number CF-2024-RLA1, NOT this circular number.

RATING SOFTWARE IMPACT

No new attributes are being introduced with this revision.

POLICYHOLDER NOTIFICATION

If you decide to implement this revision, you should check all applicable laws for the state(s) to which this revision applies, to determine whether or not a specific policyholder notice requirement may apply. Please note that circular [LI-CL-2024-016](#) contains the ISO Guide To Renewals With Changed Conditions For Commercial Lines, which is available only as a guide to assist participating companies in complying with various conditional renewal statutes or regulations, for the major commercial lines of insurance serviced by ISO. The information in the Guide does not necessarily reflect all requirements or exceptions that may apply, and it is not intended as a substitute for your review of all applicable statutes and regulations concerning policyholder notification.

REVISION DISTRIBUTION INFORMATION

- **Manual And ISO Suite**

We will issue a Notice to Manualholders with an edition date of 10-24 (or the earliest possible subsequent date), along with any new and/or revised manual pages.

- **ProMetrix**

Revised loss costs for specifically rated and class-rated properties contained in ProMetrix will be displayed as "Pending" beginning on May 27, 2024. On October 1, 2024, these loss costs will move to "Current" status. The previous "Current" becomes the most recent "Prior" and joins all previously displayed "Priors". With each subsequent loss cost revision, we will make an additional "Prior" available.

- **Toll-free Telephone Service**

Revised loss costs for specifically rated and class-rated properties will be available by calling toll-free 1-800-444-4554 and requesting "Pending" from May 27, 2024 to October 1, 2024. On October 1, 2024, these loss costs will move to "Current" status. The previous "Current" becomes the most recent "Prior" and joins all previously displayed "Priors".

NOTE: Specific property information is provided for Basic Group I and Basic Group II in this state. However, the eligibility criteria for Basic Group I and Basic Group II are independent and, therefore, an individual property may be eligible for Basic Group I and/or Basic Group II specific rating.

REFERENCE(S)

- [LI-CL-2024-016](#) (03/12/2024) Commercial Lines Revised Lead Time Requirements Listing
- [LI-CF-2024-016](#) (03/05/2024) Commercial Fire And Allied Lines Experience Level Indications Reviewed By ISO Staff

ATTACHMENT(S)

- CF-2024-RLA1
- PCS Catastrophe List
- Supplement containing Basic Group I experience on a Rating Group basis

FILES AVAILABLE FOR DOWNLOAD

To download all files associated with this circular, including attachments in the full circular PDF and/or any additional files not included in the PDF, search for the circular number on [ISOnet Circulars](#). Then click the Word/Excel link under the Full Circular column on the Search Results screen.

Please note that in some instances, not all files listed in the Attachment(s) block (if applicable) are included in the PDF.

DATA QUALITY

Statistical plan data reported to ISO is first processed through a system of rigorous automated data verification procedures so that only valid data would be used for ratemaking. Subsequent to this initial data submission review, additional analyses on the statistical plan data involving an even more customized data review for this line were performed by staff. During these processes, various data records were excluded from the review. The ISO staff responsible for this circular also reviewed the data for reasonableness.

ACKNOWLEDGMENT OF ACTUARIAL QUALIFICATIONS

The American Academy of Actuaries' "Qualifications Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States" requires that an actuary issuing a Statement of Actuarial Opinion should include an acknowledgment with the opinion that he/she has met the qualification standards of the AAA. ISO considers the loss cost level indications shown in this document a Statement of Actuarial Opinion; therefore, we are including the following acknowledgment:

I, Rimma Maasbach, am an Actuarial Consultant in Actuarial Operations for ISO, and I, Brian Klaif, am an Associate Actuarial Consultant for Commercial Property for ISO. We are jointly responsible for the content of this Statement of Actuarial Opinion. We are both members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

XACTWARE SOLUTIONS, INC.

This filing incorporates the use of pricing data from Xactware Solutions, Inc., to estimate trends in building costs for commercial properties. Xactware provides computer software solutions for professionals involved in estimating all phases of building construction and repair. The company has been providing building cost data, estimate tracking and data trending to the insurance repair market since 1986. Insurance carriers using Xactware data are responsible for settlement of the majority of property claims in the USA and Canada.

For more information concerning Xactware Solutions, Inc., please see the Contact Information block.

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MINNESOTA

COMMERCIAL FIRE AND ALLIED LINES INSURANCE PROSPECTIVE LOSS COST LEVEL REVISION EXECUTIVE SUMMARY

PURPOSE

This document:

- revises advisory prospective loss costs. These loss costs represent a +11.1% statewide change from the current ISO loss costs.
- provides the analyses used to derive the prospective loss costs based on experience through calendar/accident year ending 9/30/2022, evaluated as of 12/31/2022.
- introduces Basic Group I loss costs for the cannabis classes (0535, 0574, 0575, 0585, and 2205). See filing CF-2021-RCCLC.

CONSIDERATION OF COVID-19

ISO has considered whether any adjustments need to be made to prospective loss costs, which are based partially on historical experience (pre-COVID-19), to reflect the conditions in which these loss costs will be effective (post-COVID-19). While there will almost certainly be long-term behavioral, social and economic changes as a result of COVID-19, we expect, that those changes will have negligible and/or offsetting effects on prospective loss costs. Considering the nature of the perils coverage by Basic Group I (fire) and the weather driven perils covered by Basic Group II and Special Causes of Loss, ISO is not making any explicit adjustments to our Commercial Property prospective loss costs due to COVID-19.

DEFINITION OF THE ISO PROSPECTIVE LOSS COST

Advisory prospective loss costs in this document are the expected value of that portion of a rate that does not include provisions for expenses (other than loss adjustment expenses) or profit, and are based on historical aggregate losses and loss adjustment expenses adjusted and projected through trending to a future point in time.

CHANGES TO METHODOLOGY

Calculation of Aggregate Loss Costs at Current Level (ALCCL)

With the implementation of a new ratemaking system, we are now able to reflect risk count in the calculation of PPR (extension of exposure approach) used to calculate Aggregate Loss Costs at Current Level (ALCCL). When there are multiple risks having the same features and are reported as such, they are now counted separately, which more accurately reflects current statistical reporting instructions.

Premiums are both on-leveled and, where possible, PPR'd for the calculation of ALCCL. It should be noted that PPR cannot be calculated for some risks, e.g., Basic Group I specifically-rated risks for which there are no manual (class-rated) loss costs to be used for PPR'ing.

In both the old system and the new, ISO's ratemaking procedures include coding which compares the ALCCL results of using the PPR approach versus the on-level approach, then selects the appropriate result. In the old system, if multiple base records were being inadvertently calculated as if they were one base record, then often the PPR approach would result in too little ALCCL, but the on-level results would have accurately reflected the higher ALCCL of the multiple exposures. In the new system, if there are extra records being reported as if they are base records, which could result in the PPR method calculating them to have too much ALCCL, then the on-level approach would accurately reflect the lower ALCCL from fewer exposures. Because not all reporting errors can be caught, this system acts to ensure that a valid ALCCL amount is selected in both the old methodology and the new.

In addition, the PPR or on-level selection criteria has also been updated with our new programs. Because we now have the ability to make the system more granular, the decision of whether to use the PPR'd or on-leveled ALCCL is being made on a record basis rather than based on an aggregation over similar fields as was done in the old system, which we believe is more accurate.

The combination of reflecting risk count for PPR and selecting on-leveled vs. PPR'd ALCCL on a unit record basis results in more accurate ALCCL for ratemaking. Note that these changes only apply for those records that can be PPR'd and have no impact on those records that are on-leveled only.

LOSS COST LEVEL CHANGES

The statewide monoline prospective loss cost level changes are:

<u>Coverage</u>	<u>Indicated</u>
Basic Group I	11.7%
Basic Group II	10.3%
Special Causes of Loss	11.9%
Total	11.1%

Indicated loss cost level changes are changes from the current loss cost level.

PRIOR ISO
REVISIONS

The latest revisions in this state are:

<u>Reference Document or Filing</u>	CF-2022-RLA1	CF-2019-RLA1
<u>Rates/ Loss Costs</u>	Loss Costs	Loss Costs
<u>Dates Implemented</u>	11/01/2022	06/01/2020
<u>Changes</u>		
Basic Group I	+11.9%	+5.7%
Basic Group II	+0.8%	+5.3%
Special Causes of Loss	+5.5%	-6.4%
Total	+5.7%	+2.8%

HISTORICAL
SOURCE DATA

The data used in this revision is:

- Voluntary experience for ISO reporting companies.
 - Five calendar/accident years ending 9/30/2022 for Basic Group I and Special Causes of Loss.
 - Ten calendar/accident years ending 9/30/2022 for Basic Group II.
-

DISTRIBUTION
OF STATEWIDE
MONOLINE
LOSS COST
CHANGES

ISO has distributed the statewide monoline prospective loss cost changes as follows:

- by territory (where applicable) for Basic Group I.
- by territory, coverage and symbol (where applicable) for Basic Group II.
- by category (building coverage and occupancy type) for Special Causes of Loss.

This has been done based on the experience of each territory (where applicable) or category for Basic Group I and Special Causes of Loss. Therefore, the resulting changes will vary by territory (where applicable) for Basic Group I and by category for Special Causes of Loss.

TREND AND
OTHER
ADJUSTMENTS

Loss Trend

For trend purposes, the period of use for this revision is assumed to begin on 09/01/2024. To adjust the loss experience to the levels expected to prevail while the revised loss costs are in effect, trend factors have been applied to the historical incurred losses. These trend factors are based on:

- external cost indices published by the U.S. Government and information provided by Xactware Solutions, Inc.
- changes in multistate average claim costs through fourth quarter 2021.

The "historic" trend factors based on the external indices, i.e. the factors based on historic changes in the indices, vary by year. The latest annual rates of change based on these indices are:

<u>Coverage</u>	<u>Annual Rate of Change</u>
Buildings	7.2%
Contents	7.4%
Time Element	6.9%

Incurred losses are also multiplied by loss trend adjustment factors (LTA's) to reflect trends in claim frequency and claim costs that are different from those exhibited by the external indices. The annual loss trend adjustments are:

<u>Line of Business</u>	<u>Buildings</u>	<u>Contents</u>	<u>Time Element</u>
Basic Group I	-0.3%	0.3%	1.6%
Basic Group II	0.5%	3.1%	2.3%
Special Causes of Loss	0.2%	-0.2%	1.6%

TREND AND
OTHER
ADJUSTMENTS
(cont'd)

This produces a total annual loss trend of:

<u>Line of Business</u>	<u>Buildings</u>	<u>Contents</u>	<u>Time Element</u>
Basic Group I	6.9%	7.7%	8.6%
Basic Group II	7.7%	10.8%	9.3%
Special Causes of Loss	7.4%	7.2%	8.6%

Premium Trend

Over time, insureds tend to purchase increased amounts of insurance in order to compensate for inflation, which results in increased premium revenue.

In order to reflect this increase in revenue, ISO uses a premium trend procedure. The premium trend factors are based on observed changes in the annual amount of insurance written for BG I renewal policies for a group of selected companies. For property damage coverages, these amount of insurance, or exposure, trend factors are adjusted for the decrease in limit of insurance factors associated with the increase in amount of insurance to calculate premium trend factors. The selected annual trends in the amount of insurance are:

<u>Line of Business</u>	<u>Buildings</u>	<u>Contents</u>	<u>Time Element</u>
Basic Group I	3.9%	2.3%	1.6%
Basic Group II	3.5%	2.1%	1.6%
Special Causes of Loss	3.7%	1.8%	1.6%

Other Adjustments

Standard actuarial procedures have been used in calculating the loss costs including loss development and the reflection of all loss adjustment expense. In addition, smoothing procedures have been applied to stabilize the effects of large or excess losses.

TEN LARGEST
COMPANY
GROUPS IN
ISO DATA BASE

COMMERCIAL MULTIPERIL - NON-LIABILITY (ASLOB 51)

1. Cincinnati Insurance Company
2. QBE Insurance Corporation
3. Westfield Insurance Company
4. Firemans Fund Insurance Company
5. Liberty Mutual Insurance Company
6. Nationwide Mutual Insurance Company
7. State Auto Mutual Insurance Company
8. Tokio Marine Companies
9. Illinois Casualty Company
10. NGM Insurance Company

Insurers are listed in descending order based on the percent of statewide written premium volume from Annual Statement Page 15 for year ending 12/31/2022 for Annual Statement Line of Business (ASLOB) 51, Commercial Multiperil - Non-liability.

Although ASLOB 51 includes coverages in addition to commercial fire and allied lines, e.g., crime, inland marine, fidelity, the largest percentage of premium volume is due to fire and allied lines (Basic Group I, Basic Group II, and Special Causes of Loss coverages). ASLOB 51 does not include data reported under monoline fire and allied lines (ASLOBs 10 and 21), which includes both commercial and personal property experience.

SIZE OF ISO
DATA BASE

The market share of all insurers reporting to ISO in this state and included in the ratemaking experience underlying this review as measured by Annual Statement Page 15 written premium for year ending 12/31/2022 is:

Commercial Multi-peril - Non-liability (ASLOB 51) – 2.11%

COMPANY
DECISION

We encourage each insurer to decide independently whether the judgments made and the procedures or data used by ISO in developing the loss costs contained herein are appropriate for its use. We have included within this document the information upon which ISO relied in order to enable companies to make such independent judgments.

The data underlying the enclosed material comes from companies reporting to Insurance Services Office, Inc. Therefore, the ISO experience permits the establishment of a much broader statistical ratemaking base than could be employed by using any individual company's data. A broader data base enhances the validity of ratemaking analysis derived therefrom. At the same time, however, an individual company may benefit from comparison of its own experience to the aggregate ISO experience, and may reach valid conclusions with respect to the manner in which its own costs can be expected to differ from ISO's projections based on the aggregate data.

Some calculations included in this document involve areas of ISO staff judgment. Each company should carefully review and evaluate its own experience in order to determine whether the ISO selected loss costs are appropriate for its use.

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COMMERCIAL PROPERTY

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OVERVIEW OF ISO ACTUARIAL PROCEDURES - COMMERCIAL PROPERTY

INTRODUCTION

Commercial Property prospective loss costs are determined by evaluating the adequacy of the current ISO loss costs to pay for our best estimate of losses and all loss adjustment expenses that will be incurred in the prospective (or future) period. This evaluation is done separately for Basic Group I, Basic Group II, and Special Causes of Loss.

STEP 1: DETERMINATION OF INDICATED STATEWIDE LOSS COST LEVEL CHANGE

The first step in this process is the determination of the indicated statewide loss cost level change. This indicated statewide loss cost level change is the average percentage change which must be made to the current ISO loss costs in order to achieve adequacy for the prospective conditions. The percentage changes are presented on the exhibits labeled "Statewide Coverage Loss Cost Level Evaluation".

STEP 2: DISTRIBUTION OF CHANGES

Based on the experience, ISO then distributes the indicated statewide loss cost level change by territory (where applicable) and type of policy for Basic Group I; by type of policy for Basic Group II; and by type of policy and category for Special Causes of Loss.

STEP 3: CALCULATION OF REVISED LOSS COSTS

The last step is the calculation of the prospective ISO loss costs. This is achieved by applying the indicated monoline changes to the current ISO loss costs. For Basic Group I, for those states without BG I rating territories, the statewide loss cost changes are applied to the current manual loss costs. For those states with rating territories, the Balance of State loss cost changes are applied to the current manual loss costs. The revised territory multipliers are calculated by multiplying the current territory multipliers by the indicated territory changes. For specifically-rated properties, the appropriate changes are applied to the current experience level adjustment factors and territory multipliers. For Basic Group II, revised loss costs are calculated by applying the indicated statewide monoline change to the current ISO loss costs, and where applicable, adding the hurricane modeled loss costs. For Special Causes of Loss, revised loss costs are calculated by applying the indicated monoline changes by category to the current ISO loss costs.

COMMERCIAL PROPERTY INSURANCE
CALCULATION OF STATEWIDE ADVISORY LOSS COST LEVEL CHANGES IN EXHIBITS B1-B3

OBJECTIVE	<p>The objective of this procedure is to determine the indicated statewide advisory loss cost level change. This procedure answers the question: What average percentage change must be made to the current ISO loss costs in order for them to be adequate to cover indemnity losses and all loss adjustment expenses incurred in the prospective period in which the revised loss costs are assumed to be in effect?</p>
DESCRIPTION	<p>This procedure compares the trended and developed incurred losses and loss adjustment expenses with the trended aggregate loss costs at current ISO level. The aggregate loss costs at current level are the amounts that would have been collected for losses and all loss adjustment expenses if the current ISO loss costs had been in effect during the experience period.</p> <p>Experience ratios (losses and all loss adjustment expenses divided by aggregate loss costs, both trended to the prospective experience period) are calculated by year, and a weighted average of the yearly experience ratios is calculated. For Basic Group I (BG I) and Special Causes of Loss (SCL), the five year weights vary by year, giving greater weight to the more recent experience. For Basic Group II (BG II), because of the more volatile nature of the data, the ten individual years are given equal weight.</p> <p>The average experience ratio is then credibility-weighted with the expected experience ratio in order to minimize the impact of random variation in the observed losses. The resulting credibility-weighted experience ratio is the indicated statewide advisory loss cost level change in decimal form.</p>
EXPERIENCE BASE	<p>The experience used in this review is the latest available data reported under the ISO Commercial Statistical Plan for BG I, BG II and SCL. The data are aggregated on an accident year basis.</p>

EXPLANATORY NOTES TO EXHIBITS B1-B3

STATEWIDE BASIC GROUP I, BASIC GROUP II AND SPECIAL CAUSES OF LOSS COVERAGE LOSS COST LEVEL EVALUATION

COLUMN (1)

EXPERIENCE PERIOD

Experience for the five most recent accident years is used for BG I and SCL.
Experience for the ten most recent accident years is used for BG II.

COLUMN (2)

AGGREGATE LOSS COSTS

Since the objective of the ratemaking procedure is to test the adequacy of the current ISO loss costs, premium data for each year in the experience period are adjusted to the loss cost level which would have been earned had the current loss costs been in effect. This is accomplished by using either an extension-of-exposures (PPR or premium at present rates/loss costs) approach or an on-level approach. Where appropriate, certain reported data elements have been adjusted prior to being used in the calculations.

Extension of Exposures Approach

Where feasible, aggregate loss costs at current level (ALCCL) are developed using an extension-of-exposures approach. That is, the exposure (amount of insurance per \$100) for each policy is multiplied by the current manual loss cost for that state, territory, subline, coverage, construction, occupancy and by any other applicable rating factors, such as limit of insurance factors and deductible relativities.

On-Level Approach

The on-level approach is applied on an individual policy basis. The first step in the process is to multiply the reported premiums by the product of all loss cost level changes that have become effective subsequent to the inception date of the policy. The premiums are divided by the reported Rating Modification Factors and Loss Cost Multipliers to bring them to current ISO monoline manual loss cost level.

For premium records with inception dates prior to the effective date of the implementation of Limit of Insurance (LOI) curves, premiums are multiplied by off-balance factors and limit of insurance factors to bring them to a post-LOI loss cost level.

The on-level approach is used to adjust those premium records which cannot be adjusted using the extension-of-exposures techniques, for example, premium records for Basic Group I specifically-rated properties, for which manual loss costs do not exist. In addition, records failing an exposure edit which checks for a reasonable relationship between reported premium and exposure amount have also been on-leveled.

STATEWIDE BASIC GROUP I, BASIC GROUP II AND
SPECIAL CAUSES OF LOSS COVERAGE LOSS COST LEVEL EVALUATION (cont'd)

COLUMN (2)
(cont'd)

Current IPMF and Prospective Amount of Insurance Levels

Premiums are also adjusted to prospective amount of insurance levels by exposure trend factors to reflect the impact of inflation on the average amount of insurance written (Exhibit C13). After multiline premiums are brought to current ISO monoline manual level, they are further adjusted to implicit package modification factor (IPMF) level by the application of Commercial Package Policy (CPP) IPMF's which vary by the eight CPP types of policy. (Both the adjustments to prospective amount of insurance level and to current IPMF level are done on an aggregate basis.) For a more complete description of the IPMF's and the other premium adjustments, refer to Exhibits C7 through C9 in the supporting material.

COLUMN (3)

ADJUSTED INCURRED LOSSES

In order to assure the adequacy of the proposed loss cost level, incurred losses are adjusted to reflect the effect of inflation and other trends on loss costs. The adjustment of past losses to prospective levels is accomplished on an individual loss basis by application of current cost factors, loss projection factors and loss trend adjustments (Exhibits C10 through C12). In addition to adjusting losses to prospective cost level, the effect of inflation on the deductible portion of the loss incurred is reflected.

For each subline, incurred losses are further adjusted by an excess loss procedure which smoothes fluctuations due to large loss occurrences. The procedure removes any losses determined to be excess from the total incurred losses, resulting in normal incurred losses. These normal incurred losses (total - excess) are then multiplied by excess loss factors to calculate adjusted incurred losses (Exhibits C18 through C21). The resulting adjusted incurred losses are then developed to their ultimate settlement value and loaded by a factor to include all loss adjustment expenses. Loss development factors can be found on Exhibit C17, and loss adjustment expense factors on Exhibit D6. Where appropriate, certain reported data elements have been adjusted prior to being used in the calculations.

COLUMN (4)

EXPERIENCE RATIO

The experience ratio is the ratio of adjusted incurred losses to aggregate loss costs for each year.

STATEWIDE BASIC GROUP I, BASIC GROUP II AND
SPECIAL CAUSES OF LOSS COVERAGE LOSS COST LEVEL EVALUATION (cont'd)

COLUMN (5) - BG I, SCL WEIGHTS

For Basic Group I and Special Causes of Loss, the yearly experience ratios are weighted using weights of 10%, 15%, 20%, 25%, and 30% with the greatest weight assigned to the most recent year. These weights recognize the need to balance stability and responsiveness. The ten Basic Group II experience ratios are equally weighted, each given 10% weight.

LINE (6) - BG I, SCL WEIGHTED EXPERIENCE RATIO
LINE (5) - BG II

For Basic Group I and Special Causes of Loss, the weights are applied to the experience ratios to yield the weighted experience ratio. For Basic Group II, the experience ratios are equally weighted. These weighted experience ratios represent a projection of the experience which would result if future policies were written without a loss cost level revision.

LINE (7) - BG I, SCL CREDIBILITY
LINE (6) - BG II

The standards for 100% credibility are discussed in detail in Exhibits C22, C23, and C24 for Basic Group I, Basic Group II, and Special Causes of Loss, respectively.

LINE (8) - BG I, SCL EXPECTED EXPERIENCE RATIO
LINE (7) - BG II

The expected experience ratio is ISO's best prediction of the experience ratio if the actual incurred experience were not available. For this review, we have assumed that the current loss costs were adequate when implemented and will be inadequate for the prospective period only to the extent of the net trend. The expected experience ratio is represented by the net (loss/amount of insurance) trend factor.

LINE (9) - BG I, SCL CREDIBILITY WEIGHTED EXPERIENCE RATIO
LINE (8) - BG II

The credibility weighted experience ratio is a weighted average of the weighted experience ratio (line (6) for BG I and SCL; line (5) for BG II) and the expected experience ratio (line (8) for BG I and SCL; line (7) for BG II) using the credibility factor and its complement as respective weights. For more detailed information regarding the development of the credibility factors, refer to Exhibits C22, C23, and C24.

LINE (10) - BG I, SCL INDICATED COVERAGE LOSS COST CHANGE
LINE (9) - BG II

The credibility weighted experience ratio yields the overall coverage loss cost level change for Basic Group I (see Exhibit B1), Basic Group II (see Exhibit B2), and Special Causes of Loss (see Exhibit B3).

COMPOSITION OF THE RATEMAKING DATA BASE

DATA INCLUDED

BASIC GROUP I

- . CSP Subline 010 (Commercial Fire)
- . CSP Subline 015 (Basic Group I, i.e., Fire, Lightning, Explosion, Vandalism, Sprinkler Leakage)
- . CSP Subline 016 (BG I excluding Vandalism)
- . CSP Subline 017 (BG I excluding Sprinkler Leakage)
- . CSP Subline 018 (BG I excluding Vandalism and Sprinkler Leakage)

BASIC GROUP II

- . CSP Subline 020 (Extended Coverage)
- . CSP Subline 025 (Basic Group II, i.e., Windstorm or Hail, Smoke, Aircraft or Vehicles, Riot or Civil Commotion, Sinkhole Collapse and Volcanic Action)
- . CSP Subline 027 (Basic Group II Causes of Loss, i.e., Windstorm or Hail, Smoke, Aircraft or Vehicles, Riot or Civil Commotion, Sinkhole Collapse and Volcanic Action)
- . CSP Subline 029 (Basic Group II Causes of Loss excluding Windstorm or Hail)

SPECIAL CAUSES OF LOSS

- . CSP Subline 028 (All Other Perils Special Coverage Forms & Endorsements)
- . CSP Subline 035 (Causes of Loss Special Form Including Theft)
- . CSP Subline 045 (Causes of Loss Special Form Excluding Theft)

NOTES ON DATA INCLUDED

All CSP data are reviewed for CSP Types of Policy 10 (monoline), 3X, 70, and 7X (multiline).

For BG I, BG II and SCL, the reviewed experience is for property damage and time element coverages (coverage codes 1-7, as well as coverage code 9 reported under pre-simplification sublines 010, 020, and 028).

COMPOSITION OF THE RATEMAKING DATA BASE (cont'd)

<u>DATA EXCLUDED</u>	<u>TYPE OF DATA</u>	<u>BG I</u>	<u>BG II</u>	<u>SCL</u>
	• Non-voluntary experience (e.g. FAIR Plans)	X	X	NA
	• Dwelling experience	X	X	X
	• Farm experience	X	X	NA
	• Countrywide rated risks	X	X	X
	• Highly protected risks	X	X	X
	• Experience for policies with large deductibles	X	X	X

X indicates that experience is excluded.

Separately identifiable terrorism premium and loss records have been excluded from the ratemaking experience.

OVERVIEW OF ISO ACTUARIAL PROCEDURES - COMMERCIAL PROPERTY

STEP 2 - DISTRIBUTION OF LOSS COST LEVEL CHANGES

OBJECTIVE	<p>The objective of this procedure is to distribute the indicated statewide loss cost level change for Basic Group I, Basic Group II, and Special Causes of Loss among the various rating variables used in each subline. These procedures are used to answer the question: What percentage change for each rating variable must be made to the current ISO loss costs in order to achieve adequacy for the prospective conditions?</p> <hr/>
BASIC GROUP I	<p>For Basic Group I, a consolidated simultaneous iterative procedure is used to calculate the type of policy and territory relativities. More detail on this procedure is given in Exhibit B4. The type of policy relativities serve to price Commercial Package policies relative to monoline policies, via the Package Modification Factors (PMF), while the territory relativities serve to price the various territories relative to one another.</p> <p>The overall loss cost change is distributed across type of policy and territory. The indicated monoline change is the product of the monoline type of policy relativity, the territorial relativity, and the statewide loss cost level change.</p> <hr/>
BASIC GROUP II	<p>The purpose of the Basic Group II relativity analysis is to determine monoline loss cost level needs, to obtain marginal relativities displayed on Exhibit B8 and to price CPP policies relative to monoline policies via the PMFs. Unlike the BG I and SCL relativity analyses, the BG II relativity analysis does not employ a simultaneous review procedure because the overall loss cost change is distributed across type of policy only. The indicated statewide monoline change is the product of the monoline type of policy relativity times the statewide loss cost level change.</p> <hr/>

OVERVIEW OF ISO ACTUARIAL PROCEDURES - COMMERCIAL PROPERTY

STEP 2 - DISTRIBUTION OF LOSS COST LEVEL CHANGES (cont'd)

SPECIAL CAUSES OF LOSS

For Special Causes of Loss, a simultaneous iterative procedure is used as for BG I to arrive at a set of type of policy and category relativities (as displayed on Exhibit B5) that best represent the experience within each state. The type of policy relativities serve to price CPP policies relative to monoline policies via the PMFs, while the category relativities serve to price the various categories relative to one another.

The indicated monoline loss cost level changes are calculated for each category by taking the product of the monoline type of policy relativity, the category relativity and the statewide coverage loss cost change. See Exhibit B5 for the monoline loss cost indications.

The overall monoline loss cost level change is a weighted average of the 14 monoline category changes. In calculating this weighted average, the latest year monoline and multiline combined loss costs at current level are used as weights.

EXPLANATORY NOTES TO EXHIBITS B4 AND B5

BASIC GROUP I AND SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

INTRODUCTION

The explanations which follow clarify Exhibits B4 and B5, the Basic Group I relativity analysis and the Special Causes of Loss relativity analysis, respectively. The purpose of these analyses is to:

- (1) determine monoline territorial loss cost level needs for Basic Group I;
- (2) determine monoline category loss cost level needs for Special Causes of Loss;
- (3) determine indicated changes to the eight CPP package modification factors (PMFs) based on Basic Group I/Special Causes of Loss experience.

COLUMN (1)

LEAST SQUARES FORMULA RELATIVITIES

The least squares formula relativities are the marginal relativities which result from the application of the simultaneous review procedure to the raw experience (where marginal refers to the relativities for a given rating variable, e.g. type of policy, across all subsets of any other rating variables, i.e. territory for Basic Group I, and category for Special Causes of Loss).

The purpose of such a simultaneous review procedure is to arrive at a set of type of policy relativities (which will serve to price CPP policies relative to monoline policies via the PMFs); a set of territory relativities for Basic Group I; and a set of category relativities for Special Causes of Loss that best represent the experience. This procedure is in contrast to a review of each rating variable's experience separately. Such one-way types of review do not take into account differing percentages of monoline and multiline experience in each rating variable, nor differing percentages of a particular rating variable's experience in the monoline and multiline types of policy. The simultaneous relativity procedure accounts for these different distributions in generating relativities for the various rating variables.

EXPLANATORY NOTES TO EXHIBITS B4 AND B5 (cont'd)

COLUMN (1)
(Cont'd)

The procedure follows an iterative technique to determine a set of marginal relativities by rating variable that is a best fit to the individual cell relativities, with each cell being defined as the cross-section of specific values of each rating variable. The process uses the relativity of the five year experience ratios by rating cell to the overall statewide experience ratio and the latest year aggregate loss costs for each rating cell. (This experience is shown in Exhibits B6 for Basic Group I and Exhibits B7 for Special Causes of Loss.) Specifically, the iteration procedure uses the following formulas:

BASIC GROUP I:

$$TOP_i = \frac{\sum_{k=1}^t W_{ik}^2 R_{ik} TER_k}{\sum_{k=1}^t W_{ik}^2 TER_k^2}, \text{ where } 1 \leq i \leq m;$$

$$TER_k = \frac{\sum_{i=1}^m W_{ik}^2 R_{ik} TOP_i}{\sum_{i=1}^m W_{ik}^2 TOP_i^2}, \text{ where } 1 \leq k \leq t;$$

SPECIAL CAUSES OF LOSS:

$$TOP_i = \frac{\sum_{j=1}^n W_{ij}^2 R_{ij} CAT_j}{\sum_{j=1}^n W_{ij}^2 CAT_j^2} \quad \text{where } 1 \leq i \leq m;$$

$$CAT_j = \frac{\sum_{i=1}^m W_{ij}^2 R_{ij} TOP_i}{\sum_{i=1}^m W_{ij}^2 TOP_i^2}, \quad \text{where } 1 \leq j \leq n;$$

EXPLANATORY NOTES TO EXHIBITS B4 AND B5 (cont'd)

COLUMN (1)
(cont'd)

- TOP_i is the relativity for the i th type of policy;
- CAT_j is the relativity for the j th category;
- TER_k is the relativity for the k th territory;
- W_{ik} is the loss cost volume at current level for the i th type of policy and k th territory;
- R_{ij} is the experience ratio relativity for the i th type of policy and j th category (Special Causes of Loss);
- R_{ik} is the experience ratio relativity for the i th type of policy and k th territory (Basic Group I);
- m is the number of types of policy in the analysis;
- n is the number of categories in the analysis;
- t is the number of territories in the analysis.

The procedure determines m type of policy relativities using the above formulas. Then, using those results, a set of t territory relativities is determined. These steps form an iterative process which continues until there is no appreciable difference in results from one iteration to the next.

COLUMN (2)

CREDIBILITY

The credibility of the experience for each rating variable is determined from the formula:

$$Z = \frac{P}{P + K} ,$$

where P represents the five-year aggregate adjusted loss costs for a given rating variable, and K is a constant value. For Basic Group I, K equals an aggregate loss cost volume of \$55,000,000 for territory and \$100,000,000 for type of policy. For Special Causes of Loss, K equals an aggregate loss cost volume of \$15,000,000 for category and \$40,000,000 for type of policy.

EXPLANATORY NOTES TO EXHIBITS B4 AND B5 (cont'd)

COLUMN (3)

CREDIBILITY-WEIGHTED RELATIVITIES

Credibility-weighted relativities are calculated based on the formula

$$W = R^Z,$$

where Z is the credibility, R is the least squares formula relativity and W is the credibility weighted relativity for a given rating variable.

This formula implicitly assigns the complement of credibility to a relativity of unity.

COLUMN (4)

BALANCED RELATIVITIES

The credibility-weighted relativities are balanced to assure that the average relativity across all rating variables remains at unity.

COLUMN (5)

INDICATED MONOLINE LOSS COST LEVEL CHANGE

For Basic Group I, the indicated monoline loss cost changes are calculated for each territory by taking the product of the monoline type of policy (TOP 10) relativity, the territory relativity, and the statewide loss cost level change. (An example of such a calculation appears on Exhibit B4.)

The indicated overall statewide monoline loss cost level change shown at the bottom of the first page of Exhibit B4 is the aggregate loss cost-weighted average of the individual territory changes.

For Special Causes of Loss, the indicated monoline loss cost changes are calculated for each category by taking the product of the monoline type of policy (TOP 10) relativity, the category relativity, and the statewide loss cost level change. (An example of such a calculation is included in Exhibits B5.) The indicated overall statewide loss cost level change shown at the bottom of Exhibits B5 is the aggregate loss cost-weighted average of the individual category changes.

In all cases, the loss costs used in these calculations are the latest year's monoline and multiline combined adjusted loss costs.

EXPLANATORY NOTES TO EXHIBITS B4 AND B5 (cont'd)

MULTILINE CONSIDERATIONS

The type of policy (TOP) relativities are used to generate multiline indications which apply to the current implicit package modification factors (IPMF's). The indicated IPMF's are calculated as follows:

$$\frac{\text{TOP y indicated IPMF}}{\text{IPMF}} = \frac{(\text{TOP y current IPMF})(\text{TOP y relativity})}{\text{monoline relativity}}$$

For each CPP type of policy, the indicated IPMF is subject to a minimum value of 0.50 and a maximum value of 1.50. If an indicated IPMF falls outside one of those limits, it is capped at that amount, the loss costs for that type of policy are adjusted to the capped IPMF level, and the entire relativity review as described above is re-performed to take this into account. If an IPMF has been capped, it is so noted at the bottom of Exhibits B4 and Exhibits B5.

It should be noted that although this procedure generates multiline indications, this filing only addresses monoline loss cost levels. That is, upon implementation of this filing only the monoline loss costs will be revised. The multiline indications developed here will be combined with those of the other component coverages, e.g. GL Premises and Operations in the CPP review for the purpose of revising the package modification factors.

EXPLANATORY NOTES TO EXHIBITS B6

BASIC GROUP I RELATIVITY ANALYSIS SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

INTRODUCTION	<p>The experience used in the relativity analysis and displayed in Exhibit B6 is the latest five accident years of data reported under the Commercial Statistical Plan. As in the overall review, loss costs have been adjusted to current ISO loss cost and prospective amount of insurance levels (with multiline aggregate loss costs adjusted additionally by the current implicit package modification factors). Incurred losses are adjusted to prospective cost levels, and are further adjusted by the Basic Group I large loss procedure and the Special Causes of Loss excess procedure. Losses have also been developed to their ultimate settlement value by application of loss development factors.</p>
COLUMN (1)	<p><u>2022 AGGREGATE LOSS COSTS</u></p> <p>The latest accident year aggregate loss costs (adjusted as described above) are used as weights both in the calculation of any totals shown in this table and in the iterative formulas used in the simultaneous review procedure.</p>
COLUMN (2)	<p><u>2018 - 2022 AGGREGATE LOSS COSTS</u></p> <p>The combined five-year adjusted aggregate loss costs (adjusted as described above) are used to calculate the experience ratios in column (3).</p>
COLUMN (3)	<p><u>FIVE-YEAR EXPERIENCE RATIOS</u></p> <p>These are the ratios of the combined five-year adjusted incurred losses (adjusted as described above) to the combined five-year adjusted aggregate loss costs as shown in column (2). Any totals which are shown are weighted averages using the adjusted aggregate loss costs in column (1).</p>
COLUMN (4)	<p><u>RELATIVITIES</u></p> <p>The relativities are the ratios of the five-year experience ratios shown in column (3) to the average five-year experience ratio for all TOP's and territories (where applicable) combined. These relativities represent how much better or worse than average the experience for a given cell is. They are used along with the aggregate loss costs in column (1) as input for the simultaneous review procedure.</p>

EXPLANATORY NOTES TO EXHIBITS B7

SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

INTRODUCTION	<p>The experience used in the relativity analysis and displayed in Exhibit B7 is the latest five accident years of data reported under the Commercial Statistical Plan. As in the overall review, loss costs have been adjusted to current ISO loss cost and prospective amount of insurance levels (with multiline aggregate loss costs adjusted additionally by the current implicit package modification factors). Incurred losses are adjusted to prospective cost levels, and are further adjusted by the Basic Group I large loss procedure and the Special Causes of Loss excess procedure. Losses have also been developed to their ultimate settlement value by application of loss development factors.</p>
COLUMN (1)	<p><u>2022 AGGREGATE LOSS COSTS</u></p> <p>The latest accident year aggregate loss costs (adjusted as described above) are used as weights both in the calculation of any totals shown in this table and in the iterative formulas used in the simultaneous review procedure.</p>
COLUMN (2)	<p><u>2018 - 2022 AGGREGATE LOSS COSTS</u></p> <p>The combined five-year adjusted aggregate loss costs (adjusted as described above) are used to calculate the experience ratios in column (3).</p>
COLUMN (3)	<p><u>FIVE-YEAR EXPERIENCE RATIOS</u></p> <p>These are the ratios of the combined five-year adjusted incurred losses (adjusted as described above) to the combined five-year adjusted aggregate loss costs as shown in column (2). Any totals which are shown are weighted averages using the adjusted aggregate loss costs in column (1).</p>
COLUMN (4)	<p><u>CREDIBILITY (Z) WEIGHTED EXPERIENCE RATIO</u></p> <p>A credibility procedure is applied to the initial experience ratios in column (3) on a cell-by-cell basis prior to the simultaneous review procedure. The credibility values are calculated using an empirical Bayesian credibility procedure. In the following discussion, cell refers to an individual combination of TOP and category.</p>

EXPLANATORY NOTES TO EXHIBITS B7 (cont'd)

COLUMN (4)
(cont'd)

The important concept underlying empirical Bayesian credibility is that credibility should depend both on the overall variation of the group of which the cell is a member and the variation of the yearly experience ratios for the cell. Therefore, if a cell's data is very stable then a relatively high credibility value is assigned, and vice versa.

The empirical Bayesian credibility formula for individual cell credibility is $Z = ((C-3)/C) (P/(P+K)) + (3/C)$. P equals the cell's five-year adjusted aggregate loss costs and C equals the number of unique combinations of rating variables (TOP and Category) within a class group. The K value is estimated from the underlying data using the empirical Bayes method and varies by TOP group. The three TOP groups used in this analysis are: Monoline (TOP 10), Premises (TOP's 31-35), and Operations (TOP's 36-38). The 3/C term corrects for the statistical bias associated with the credibility process. The minimum credibility that is possible is 3/C.

COLUMN (5)

Z-WEIGHTED RELATIVITIES

The relativities are the ratios of the five-year credibility-weighted experience ratios shown in column (4) to the average five-year credibility-weighted experience ratio for all TOP's and categories combined. These relativities represent how much better or worse than average the experience for a given cell is. They are used along with the aggregate loss costs in column (1) as input for the simultaneous review procedure.

EXPLANATORY NOTES TO EXHIBIT B8

BASIC GROUP II RELATIVITY ANALYSIS

INTRODUCTION

The explanations which follow clarify Exhibit B8, the Basic Group II (BG II) relativity analysis. The purpose of this analysis is to:

- (1) determine the monoline loss cost level need;
- (2) determine indicated changes to the eight CPP package modification factors (PMFs) based on Basic Group II experience.

COLUMN (1)

2022 AGGREGATE LOSS COSTS

The latest accident year adjusted aggregate loss costs (adjusted in the same manner as in the overall review, i.e. to current manual loss cost and prospective amount of insurance levels, with multiline aggregate loss costs further adjusted to current IPMF level) are used as weights in the calculation of any totals shown in this table.

COLUMN (2)

2013 - 2022 EXPERIENCE RATIO

These experience ratios are the ratios of the combined ten-year CSP adjusted incurred losses (adjusted to current deductible and prospective cost levels including loss development, and smoothed by the BG II excess loss procedure) to the combined ten year CSP adjusted aggregate loss costs. Any totals which are shown are weighted averages using the aggregate loss costs in column (1). When a dash is displayed in the column, it indicates that the indicated IPMF which resulted from this procedure was capped. The procedure which follows when capping occurs is described below.

COLUMN (3)

FORMULA RELATIVITY

The formula relativities are the ratios of the ten year experience ratios for the type of policy (either monoline vs. multiline or individual multiline programs) to the average ten year experience ratio for monoline and multiline combined. These relativities represent how much better or worse than average the experience for a given type of policy is. Again, any totals which are shown are weighted averages and the display of a dash indicates that the resulting IPMF was capped. Unlike the BG I and SCL relativity analyses, the BG II analysis does not employ a simultaneous review procedure since a one way review is involved. That is, the overall loss cost change is only distributed across type of policy; no other rating variables are considered.

EXPLANATORY NOTES TO EXHIBIT B8 (cont'd)

COLUMN (4)

CREDIBILITY

The credibility of the experience for each type of policy is determined from the formula:

$$Z = \frac{P}{P + K}$$

where P is the ten year aggregate adjusted loss costs for a given type of policy, and K is a constant loss cost volume of \$45,000,000.

COLUMN (5)

Z - WEIGHTED RELATIVITY

The weighted relativity is a weighted average of the individual TOP formula relativity and the overall (coverage) formula relativity using credibility and its complement as the respective weights. Therefore, to the extent that the indication for a type of policy is not fully credible, the complement of credibility is assigned to the statewide coverage level change.

COLUMN (6)

BALANCED FORMULA RELATIVITY

The individual multiline weighted relativities are balanced to the multiline weighted relativity level by applying a factor equal to the overall multiline relativity (i.e. the weighted relativity for all multiline combined which is shown on the top of the exhibit directly under the corresponding monoline relativity) divided by the average multiline relativity (i.e. the weighted average of the individual multiline weighted relativities which is shown on the bottom of the exhibit). When the indicated IPMF for a type of policy is capped, the balanced relativity is set equal to the product of the capped IPMF in column (9) and the monoline balanced formula relativity in column (6), divided by the current IPMF in column (8).

COLUMN (7)

NORMALIZED FORMULA RELATIVITY

The normalized relativity is equal to the balanced formula relativity divided by the average monoline/multiline combined relativity. This balances the average monoline/multiline relativity to unity.

COLUMN (8)

CURRENT IMPLICIT PMF

This is the current IPMF for each multiline type of policy.

EXPLANATORY NOTES TO EXHIBIT B8 (cont'd)

COLUMN (9)

INDICATED IMPLICIT PMF

The indicated IPMF is calculated from the normalized relativities as follows:

$$\frac{\text{TOP y indicated IPMF}}{\text{IPMF}} = \frac{(\text{TOP y current IPMF})(\text{TOP y relativity})}{\text{monoline relativity}}$$

For each CPP type of policy the indicated IPMF is subject to a minimum value of 0.50 and a maximum value of 1.50. If an indicated IPMF falls outside one of those limits, it is capped at that amount, the aggregate loss costs for that type of policy are adjusted to the capped IPMF level, and the entire relativity review as described above is redone to take this into account. If an IPMF has been capped it is so noted in footnote A.

COLUMN (10)

INDICATED LOSS COST CHANGES

The indicated monoline and multiline (by TOP) changes are calculated by taking the product of the statewide loss cost level change and the corresponding TOP relativity.

The overall multiline loss cost level change is the aggregate loss cost weighted average of all multiline TOP loss cost level changes.

MULTILINE
CONSIDERATIONS

It should be noted that although this procedure generates multiline indications, this filing only addresses monoline loss cost levels. That is, upon implementation of this filing only the monoline loss costs will be revised. The multiline indications developed here will be combined with those of the other component coverages, e.g. GL Premises and Operations in the CPP review for the purpose of revising the package modification factors.

OVERVIEW

AGGREGATE LOSS COSTS AT CURRENT LEVEL

Exhibit C1, C2 and C3 provide the overall loss cost/rate level histories for Basic Group I, Basic Group II, and Special Causes of Loss respectively. These tables, along with Exhibits C4 and C6, provide information on the on-level factors needed to bring collected aggregate loss costs to current loss cost level.

Exhibit C4 provides rate level/loss cost level histories by rating id (class vs. specific), rating group, and territory (where applicable) for Basic Group I, while Exhibit C6 provides rate level/loss cost level histories by category for Special Causes of Loss. These tables can be used to develop on-level factors appropriate to bring collected aggregate loss costs up to current loss cost level. Factors based on these tables are more appropriate for company use than the overall factors shown on Exhibits C1 and C3 if the company's mix of business differs substantially from the industrywide average. For example, if a company's business is very heavily concentrated in a single class or territory, it is more appropriate to use the rate level/loss cost history for that class rather than the overall average to develop on-level factors.

Exhibits C7, C8 and C9 provide the current implicit package modification factors (IPMFs) and IPMF caps for Basic Group I, Basic Group II and Special Causes of Loss.

ADJUSTMENTS TO LOSSES

The loss projection factors, current cost factors, and loss trend adjustments shown on Exhibits C10, C11 and C12 reflect the combined impact of all economic influences on Commercial Property underwriting results and are used to project past underwriting results to future loss levels. They are intended to reflect the impact of inflation on loss payments, the impact of higher costs due to repairs done on an “emergency” basis, the impact of coinsurance and relative insurance to value on loss payments, and any other economic influences which can affect underwriting losses but for which specific provisions are not made. Losses have also been developed to their ultimate settlement value using factors shown on Exhibit C17.

CREDIBILITY

Credibility, Z , is a weight given to the most recent body of data. The complement of credibility, $1-Z$, is the weight assigned to net trend. The final estimate is a weighted average obtained by using the formula $C = Z \times R + (1-Z) \times N$, where

Z = credibility

C = final estimate

R = estimate based on the most recent data

N = net trend

OVERVIEW (cont'd)

CREDIBILITY (cont'd)

Credibility may range from 0 to 1, where $Z=1$ is full credibility and $Z=0$ is no credibility. The actual numerical value of Z is calculated by considering how the state's volume of experience compares with the full credibility standard. Credibility is capped at 25% if the credibility calculated is less than 25%. See Exhibits C22, C23 and C24 for a complete explanation of the credibility standards for Basic Group I, Basic Group II, and Special Causes of Loss.

LOSS COST/RATE LEVEL HISTORY

Loss cost/rate level histories are provided for Basic Group I, Basic Group II and Special Causes of Loss. The loss cost/rate level changes are then further split out by rating territory, rating group or category since a company's business may be more heavily concentrated in a single class. These histories can be used to develop on-level factors appropriate to bring collected aggregate loss costs up to current loss cost levels.

EXPLANATORY NOTES TO EXHIBITS C1, C2 AND C3

LOSS COST/RATE LEVEL HISTORIES

COLUMN (1) EFFECTIVE DATE

The effective dates of the latest loss cost/rate level changes are shown.

COLUMN (2) LOSS COST/RATE LEVEL CHANGE

The overall loss cost/rate level change is shown in percent form.

COLUMN (3) LOSS COST/RATE LEVEL INDEX

The product of all loss cost/rate level changes up to and including the loss cost/rate change for that effective date is used to calculate on level factors.

COLUMN (4) WRITTEN ADJUSTMENT (ON LEVEL) FACTORS

The factors are used to bring individual policies with inception dates prior to the effective date up to current loss cost level. For Basic Group II these are the actual factors used. However, the loss cost/rate changes for Basic Group I vary by rating id, rating group, and territory (where applicable), while the loss cost/rate level changes for Special Causes of Loss vary by category. Consequently, for these coverages the on-level factors represent average factors and are not the factors actually used to adjust the aggregate loss costs on an individual policy basis. For complete loss cost/rate level histories by rating id, rating group, and territory (where applicable) for Basic Group I and by category for Special Causes of Loss refer to Exhibits C4 and C6.

COLUMN (5) WEIGHT

The weight indicates the portion of the effective year for which the on level factors apply. These can be used to calculate average yearly factors.

EXPLANATORY NOTES TO EXHIBIT C4

HISTORY OF BASIC GROUP I LOSS COST/RATE CHANGES
BY TERRITORY, RATING ID AND RATING GROUP

TERRITORY

The loss cost/rate level changes shown apply to the rating territory shown here.

EFFECTIVE DATE

The effective dates of the latest loss cost/rate level changes are shown.

LOSS COST/RATE LEVEL CHANGES

Loss cost/rate level changes are shown in percent form for each rating group.

EXPLANATORY NOTES TO EXHIBIT C6

HISTORY OF SPECIAL CAUSES OF LOSS
LOSS COST/RATE LEVEL CHANGES BY CATEGORY

COLUMN (1)

EFFECTIVE DATE

The effective dates of the latest loss cost/rate level changes are shown.

COLUMN (2)

LOSS COST/RATE LEVEL CHANGES BY CATEGORY

Loss cost/rate changes are shown in percent form for each category. Refer to Exhibit D2 for definitions of the current 14 categories.

The prior category definitions (before implementation of the revised rating for Special Causes of Loss) are:

- 01 - Buildings
- 02 - Apartments Contents
- 03 - Office Contents
- 04 - Mercantile, Motel/Hotel and Institutional Contents
- 05 - Service, Industrial/Processing, and Contractors Contents

COMMERCIAL PACKAGE POLICY IMPLICIT PACKAGE MODIFICATION FACTORS (IPMF's)
AND IPMF CAPS

IMPLICIT PACKAGE
MODIFICATION
FACTORS

Since multiline experience is included in the loss cost level evaluations, an additional adjustment is made to multiline aggregate loss costs after they have been brought to current ISO loss cost level. This adjustment is the application of implicit CPP package modification factors which vary for each of the eight CPP types of policy.

The loss costs used to price a Commercial Package Policy (CPP) are the monoline loss costs multiplied by the PMF to reflect the package policy discount for the particular type of CPP policy relative to the individual monoline policies. However, these PMF's measure the amount of multiline discount for all property coverages combined. A more accurate measure of the amount of multiline discount for each subline (e.g., Basic Group I, Basic Group II, or Special Causes of Loss) is the implicit package modification factor that was used to calculate the overall PMF for all property coverages combined.

For example, the published PMF for Apartments (all property coverages combined) may be .85, but the implicit PMF for Apartments, Commercial Basic Group I coverage only, may be .80. The average of the implicit PMF's for the various coverages is equal to the published PMF for each type of policy.

The current IPMF's by coverage for each CPP type of policy are applied to multiline aggregate loss costs at current level for Basic Group I, Basic Group II and Special Causes of Loss.

IPMF CAPS

For Basic Group I, Basic Group II, and Special Causes of Loss, the IPMF's lower caps are set at 0.50 and the upper caps are set at 1.50 for all TOP's.

EXPLANATORY NOTES TO EXHIBITS C7, C8 AND C9

IMPLICIT PACKAGE MODIFICATION
FACTORS (IPMF's) AND IPMF CAPS

EXHIBITS C7, C8
AND C9

These tables provide the current IPMF's and IPMF caps for Basic Group I, Basic Group II, and Special Causes of Loss. The IPMF's shown here are those which resulted from the most recent CPP revision. The IPMF lower caps are set at .50 and the upper caps are set at 1.50 for all TOP's.

TREND PROCEDURE

INTRODUCTION

The prospective loss cost levels established in this document reflect the anticipated claim cost and claim frequency levels and changes in revenue due to increased amounts of insurance purchased for the period when the new loss costs are assumed to be in effect.

LOSS TREND

EXTERNAL LOSS DATA

For Commercial Property, the loss trend factors are referred to as current cost factors (CCF's) and loss projection factors (LPF's). These CCF's and LPF's are based on the following accepted economic indices:

1. Xactware Commercial Index (XCI) for buildings loss projection factors and current cost factors
2. Producer Price Index (PPI) published by the US Department of Labor (Finished Goods Less Energy, Not Seasonally Adjusted) for contents factors
3. Index for Manufacturers' Sales Exposure (IMSEP) developed by ISO using indices published by the Department of Commerce and Chain-Type Price Index for Retail Sales (RSALES) produced by the Bureau of the Census, Bureau of Economic Analysis for time element factors

The CCF's adjust losses for actual inflationary changes which have taken place between the accident date and the midpoint of the latest period of external trend information, i.e. 08/15/2023 for property damage and time element. The LPF's adjust losses for projected inflationary changes from the midpoint of the latest period of external trend information to the anticipated average date of accident for policies written under the proposed loss costs (assumed to be 12 months after the assumed revision date based on all one-year policies).

The CCF's and LPF's are calculated separately for buildings, contents, and time element coverages. For coverage 3 (buildings and contents on a combined basis), combined trend factors are calculated using the following weights for buildings and contents: 70%/30% for Basic Group I, 75%/25% for Basic Group II, and 50%/50% for Special Causes of Loss. For time element (coverages 4-9) the combined trend factors are calculated using 70%/30% weights for RSALES/IMSEP. The factors are applied by coverage to the losses reported under CSP and CMSP on an individual occurrence basis.

TREND PROCEDURE (cont'd)

LOSS TREND (cont'd)

LOSS TREND ADJUSTMENT - SEVERITY

An evaluation of the latest Commercial Property insurance data shows that the cost levels inherent in the property damage coverages are increasing at a different rate than those measured by the external indices. Therefore, to insure adequate prospective loss cost levels during the period for which loss costs are to be determined, loss trend adjustments (LTA's) have been applied. These factors were developed by comparing the annual rate of change in average claim costs to the annual rate of change in the external indices. (Refer to Exhibit C12 for the calculations.)

LOSS TREND ADJUSTMENT - FREQUENCY

In order to reflect total trend more precisely, a frequency component is included in the loss trend adjustment factors (LTA's) separately for buildings and contents for Basic Group I and contents only for Special Causes of Loss. No frequency component is used for Basic Group II and Special Causes of Loss buildings due to the extremely volatile nature of the coverages.

AMOUNT-OF- INSURANCE TREND

Cost changes over time to both real and personal property result in insureds purchasing increased amounts of insurance. To reflect the impact of this phenomenon, amount of insurance trend factors are applied to collected loss costs to bring them to prospective amount of insurance levels. These factors are developed by measuring amount of insurance trends on a sample of renewal policies.

The application and development of these factors parallels loss trend factors in that separate factors are developed for buildings, contents, and time element, and the adjustment to prospective amount of insurance levels is done in two steps. The current written factors adjust loss costs to the amount of insurance level for the midpoint of the latest period of renewal information, i.e. July 1, 2022. Total amount of insurance trend factors are then calculated by projecting these current factors to the average date of writing (i.e. to the amount of insurance level six months beyond the assumed effective date).

EXPLANATORY NOTES TO EXHIBIT C10

PART A: XACTWARE, PRODUCER PRICE, IMSEP, RSALES INDICES AND COMBINED TIME ELEMENT

QUARTER	The quarter for which the indices shown apply.
XACTWARE COMMERCIAL INDEX (XCI)	The Xactware Commercial Index measures the costs of building material and repairs for commercial properties. The index, which is available since 1st Quarter 2005, is based on regular surveys of over 42,000 material and equipment suppliers and over 9,500 contractors, in addition to claims settlement data. The index values are created by estimating the cost to rebuild a sample set of different structures ranging in size, style, and quality in each economic market. The Xactware index is used in this filing to adjust for current cost from 1/1/05 to the midpoint of the latest index point and for determining the loss projection factor.
PRODUCER PRICE INDEX (PPI)	The Producer Price Index is a time series which measures the price level for a predetermined group of goods produced relative to the price level for an earlier point in time (2009). The PPI Finished Goods Less Energy is published by the U.S. Department of Labor.
PRICE DEFLATOR INDEX FOR MANUFACTURERS' SALES EXPOSURE (IMSEP)	<p>The price deflator index for manufacturers' sales exposure is a quarter's model of Manufacturers' Sales Exposure Proxy (MSEP) for the period in question relative to MSEP measured in chained 2012 dollars. The price deflator is defined as the GNP (Gross National Product) price deflator with government expenditures, investment in intellectual property products, inventory changes, and all services except food services removed.</p> $\text{MSEP} = (\text{CD} + \text{CN} + \text{FS}) + (\text{EXD\&N} - \text{IMD\&N}) + (\text{IFIX} - \text{IPP}), \text{ where}$ <p>CD and CN represent consumption of durables and nondurables, respectively; EXD&N and IMD&N represent exports and imports of merchandise, respectively; FS represents food services and IFIX represents gross private domestic fixed investment (including residential fixed investment as well as nonresidential fixed investment in structures, equipment, and intellectual property products); and IPP represents nonresidential fixed investment in intellectual property products.</p>
CHAIN-TYPE PRICE INDEX FOR RETAIL SALES (RSALES)	The Chain-Type Price Index for Retail Sales measures changes in losses due solely to inflation.

EXPLANATORY NOTES TO EXHIBIT C10 (cont'd)

PART B: COMPUTATION OF THE LOSS PROJECTION FACTORS

LOSS PROJECTION FACTOR

The loss projection factor is calculated by fitting a least squares exponential curve to the appropriate number of points (where the appropriate number of points is determined based on judgment and an examination of the goodness of fit as determined by the R-squared values subject to a maximum of 12 quarterly points for property damage and time element).

The table displays the indices for those points used in fitting the curve. The relevant equations are shown and the annual rate of change in the indices based on the exponential fit is developed. This annual rate of change is projected over the period which extends from the latest period of cost information to the average accident date of the projection period.

PART C: CALCULATION OF CURRENT COST FACTORS (CCF'S)

CALENDAR YEAR AVERAGES

The calendar year averages are the averages of the Xactware, PPI and Time Element indices for the given year. These average indices measure the average cost level of each year relative to the base.

CURRENT COST FACTORS

The current cost factors are the ratios of the indices for the latest period of cost information divided by the average indices for each calendar year. These factors measure the changes in cost levels which have occurred from the midpoint of the given year to the latest point of cost information. In this regard, they represent average factors which would result if each year's losses were distributed evenly throughout the year.

For buildings, the index for the latest point is based on the latest available Xactware point.

Since losses are trended on a record by record basis, these calendar year factors are not actually used in ISO's trend calculations. Instead, factors are calculated from the bi-monthly or quarterly indices and applied to the unit losses based on the date of occurrence.

EXPLANATORY NOTES TO EXHIBIT C11

SUMMARY OF LOSS TREND ADJUSTMENTS (LTA'S)

COLUMN (1)

COVERAGE

The LTA's vary by coverage (buildings, contents, and time element) and line of business (BG I, BG II, and SCL).

COLUMN (2)

FIVE-YEAR INCURRED LOSSES

The five-year multistate incurred losses are used as weights to determine the annual LTA for all lines of business and coverages combined.

COLUMN (3)

ANNUAL LTA's

The LTA's are the factors which are applied to losses to supplement the external indices in order to correctly reflect cost level and claim frequency changes. These are shown here as annual factors. However, they are applied over the entire length of the trend period, i.e. from the date of loss occurrence to the anticipated average accident date under the revised loss costs. The severity portion of the LTA is applied on an individual record basis in the same manner as the CCF's and LPF's. The frequency portion of the LTA is applied to the aggregate losses.

OVERVIEW

DEVELOPMENT OF LOSS TREND ADJUSTMENTS

INTRODUCTION

In order to supplement the external indices reflected in CCF's and LPF's, loss trend adjustments (LTA's) have been developed based on internal loss data. This is necessary because the external indices alone have been insufficient in reflecting cost level and claim frequency changes in Commercial Property Insurance. The following tables show the calculations used to develop these LTA's. Please note the development of the LTA's for the 2023 COMFAL reviews is based on internal commercial property experience through 12/31/2021 and external cost indices through 12/31/2021. Therefore, the CCF's and LPF's shown on Exhibit C12 will not necessarily match those shown on Exhibit C10. ISO has determined that the selected LTAs are appropriate to be used with the latest external indices shown on Exhibit C10.

EXPLANATORY NOTES TO EXHIBIT C12

DEVELOPMENT OF LOSS TREND ADJUSTMENTS (LTA'S)

I. EXTERNAL RATE OF CHANGE

COLUMN (1), (2)
AND (3)

CURRENT COST FACTORS

The CCF's underlying the LTA analysis are based on external cost indices through 12/31/2021 for buildings, contents and time element.

COLUMNS (4)
AND (5)

WEIGHTS

The standard review weights are shown for each line of business.

LINES (6)

AVERAGE CURRENT COST FACTORS

The average CCF's for the experience period are calculated based on the weights shown in columns (4) and (5).

LINE (7)

LOSS PROJECTION FACTORS

The LPF's underlying the LTA analysis are shown here.

LINE (8)

TOTAL TREND

The total trend is the product of the average CCF and the LPF.

LINE (9)

EXTERNAL ANNUAL RATE OF CHANGE

The total trend is converted to an annual basis by raising it to the reciprocal of the number of years between the weighted midpoint of the experience period and the anticipated average accident date. For BG I and SCL the weighted midpoint of the experience period is 01/01/2020, for BG II it is 01/01/2017. Accordingly, there are 54 and 90 months, respectively, to the anticipated average accident date of 07/01/2024.

II. INTERNAL ANNUAL RATES OF CHANGES

LINE (10)

SELECTED COMFAL

The displayed annual rates of change in the average claim costs for BG I, BG II, and SCL were selected based on several least squares exponential fits of the annual claim costs for each subline. This was done to the most recent ten years of Commercial Property data using all companies in the ratemaking data base.

EXPLANATORY NOTES TO EXHIBIT C12 (cont'd)

III. LTA CALCULATION

COLUMN (11)

ANNUAL EXTERNAL

The annual external rates of change from column (9) are shown here.

COLUMN (12)

ANNUAL INTERNAL

The adjusted annual internal rates of change in average loss from line (10) are shown here.

COLUMN (13)

INDICATED SEVERITY LTA

The indicated severity LTA's are calculated by dividing the annual internal rates of change by the annual external rates of change.

COLUMN (14)

FORMULA SEVERITY LTA

The severity LTA's in column (13) are then selected to temper the full effect of internal trend data. Without such tempering, full weight would in effect be given to the internal data without any consideration of the external cost indices.

COLUMN (15)

FREQUENCY EFFECT

The displayed annual rates of change in claim frequency for BG I and SCL were selected based on several least squares exponential fits of the claim frequency by subline. No frequency trend was selected for BG II and SCL buildings due to the extremely volatile nature of the coverage.

COLUMN (16)

FINAL LTA

The final LTA is the combination of the severity and frequency trend adjustments, calculated as column (14) times column (15), in factor form.

EXPLANATORY NOTES TO EXHIBIT C13
EXPOSURE AND PREMIUM TREND FACTORS

Exhibit C13 contains Exposure trend factors, Premium trend factors for Basic Group I, Basic Group II and Special Causes of Loss respectively, building and contents. As annual written exposures increase (decrease), the resulting limit of insurance factors used for rating decrease (increase) and the combined effect should be reflected when trending premiums to future level. There are separate premium trend factor tables for Basic Group I, Basic Group II and Special Causes of Loss since there are separate limit of insurance curves for BG I, BG II and SCL.

For Time Element, exposure trend factors are also used to trend premiums, i.e., there are not separate Time Element premium trend factors because Time Element does not use limit of insurance factors for rating.

COLUMNS (1)
AND (5)

ANNUAL WRITTEN INCREASE

The annual written increases for buildings, contents, and time element are calculated from the actual changes in amount of insurance from one year to the next for a sample of renewal policies (based on BG I experience). The change in amount of insurance for each policy in the sample was weighted with its prior year's premiums to obtain a weighted average change for each year. The Annual Written Increase in Premiums (Exhibit C13) are calculated as the Annual Written Increase in Exposure tempered by the change in Limit of Insurance factor.

COLUMNS (2)
AND (6)

07/01/2022 WRITTEN FACTORS

The written factors for a given year are the product of the written annual changes for all years subsequent to that year. Although the 2022 written changes are based on two quarters of data, the consistency of this experience allows for the assumption that written changes for the first half of 2022 are applicable for the entire year.

COLUMNS (3)
AND (7)

03/01/2025 PROJECTED FACTORS

The 03/01/2025 factors are calculated by applying a factor to adjust the 07/01/2022 written factors to the amount of insurance level at the average date of writing, 03/01/2025. This is done using the selected annual changes in exposure or premium.

COLUMNS (4)
AND (8)

03/01/2025 EARNED EXPOSURES/PREMIUM FACTORS

The projected earned factors at the 03/01/2025 level (where 03/01/2025 is the average date of writing in the effective period) are calculated by earning the written factors assuming all one-year policies. The earning factors are shown in footnote (c).

EXPLANATORY NOTES TO EXHIBITS C14, C15 AND C16

BG I, BG II, AND SCL ADDITIONAL INFORMATION ON TREND ADJUSTMENTS

COLUMN (1) UNADJUSTED INCURRED LOSSES

The unadjusted incurred losses are the reported losses prior to any adjustment.

COLUMN (2) TRENDED INCURRED LOSSES

The trended incurred losses are the aggregate of the individual losses trended on a unit record basis.

COLUMN (3) AVERAGE TREND FACTOR

The average trend factors are the trended incurred losses in column (2) divided by the unadjusted incurred losses in column (1). Although average factors could be calculated from the information contained in Exhibits C10 through C12, they would differ from the factors shown in this table for the following reasons:

- (1) In calculating such averages, the usual assumption is that the losses are spread evenly throughout the year, yielding the midpoint of each year as the average date of loss. A predominance of losses at a certain time of the year could shift the average accident date away from the midpoint.
- (2) The average trend factors will be slightly higher due to the impact of trend on the deductible.

COLUMN (4) PERCENTAGE SPLIT BETWEEN BUILDINGS, CONTENTS, AND TIME ELEMENT

The current cost factors and loss projection factors are different for buildings, contents, and time element. Therefore, in addition to the reasons cited above, the average trend factors will differ from state to state depending on the buildings/contents/time element split. Companies with splits substantially different from the industrywide averages shown here may find it appropriate to develop trend factors which reflect their own coverage mix.

LOSS DEVELOPMENT

INTRODUCTION

For Commercial Property, losses are evaluated as of December 31, 2022, three months after the end of the latest experience year used in the review. In order to account for development of losses beyond fifteen months and to reflect overall loss development patterns, loss development was incorporated into the adjustment process of incurred losses to their ultimate settlement value.

LOSS DEVELOPMENT PROCEDURES

The application of loss development factors recognizes the fact that not all of the Commercial Property losses for a particular accident year have been finally determined at the time the experience is compiled.

The incurred losses underlying the statewide loss cost level indications were evaluated as of December 31, 2022.

Accident year ended September 30, 2022 includes all losses paid on accidents from October 1, 2021 to September 30, 2022 and all losses outstanding on those accidents as of December 31, 2022, fifteen months after the inception of the accident year. Similarly, accident years ended 2021, 2020, 2019 and 2018 include all losses paid and outstanding as of 27, 39, 51 and 63 months, respectively, after the inception of the accident year.

Thus, the immature experience reported as of 15, 27, 39 or 51 months must be adjusted to an ultimate settlement basis. This adjustment is accomplished through the use of loss development factors based on the historic multistate Basic Group I, Basic Group II, and Special Causes of Loss incurred losses as shown in Exhibit C17.

EXPLANATORY NOTES TO EXHIBIT C17

LOSS DEVELOPMENT

INTRODUCTION

Exhibit C17 shows multistate incurred loss development exhibits for Basic Group I, Basic Group II and Special Causes of Loss. The exhibits on Exhibit C17 are arranged identically for each subline and can be summarized as listing the following information: incurred losses by accident year and age, age-to-age factors by accident year, and age-to-ultimate factors.

INCURRED LOSSES

The multistate incurred losses are shown by accident year and age at the top of Exhibit C17. The multistate incurred losses are evaluated as of 15, 27, 39, 51 and 63 months. For Basic Group II, losses due to hurricanes reflected in the modeled hurricane loss costs have been removed from the experience for each rating territory and loss month.

AGE-TO-AGE DEVELOPMENT FACTORS

Age-to-age development factors or link ratios are calculated for each accident year. These age-to-age factors are calculated by dividing the incurred losses evaluated at each age by the incurred losses evaluated at the immediately preceding age. For example, 27:15 month age-to-age factors are calculated by taking the losses evaluated as of 27 months and dividing them by the losses evaluated as of 15 months, for each accident year. Age-to-age development factors are also calculated for 39:27 months, 51:39 months and 63:51 months. Latest five-year averages are then determined for each age-to-age interval.

AGE-TO-ULTIMATE DEVELOPMENT FACTORS

Age-to-ultimate factors are then calculated for the latest four years by multiplying the five-year average age-to-age development factors. These age-to-ultimate factors are then used in the adjustment of incurred losses to develop losses to their ultimate settlement value.

EXCESS LOSS PROCEDURES

INTRODUCTION

If not addressed, the presence or absence of large losses during the review period can produce significant fluctuations in loss cost levels. In order to develop a more stable body of experience, large losses have been smoothed. This procedure removes any excess losses from the experience and applies excess loss factors to the resultant state normal losses to generate the adjusted incurred losses. The adjusted losses developed in this manner replace the incurred losses in the loss cost level evaluation.

BASIC GROUP I

First, the excess portion of each large loss is removed from the trended loss experience.

Individual claim amounts that result from the same occurrence are grouped together, and if the total loss for one occurrence exceeds the normal loss cutoff (at 2005 cost levels), the total loss is identified as a large loss. Each large loss is then split into its normal and excess portions based on the normal loss cutoff.

The Basic Group I normal loss cutoff begins at \$250,000 and varies with the size of loss up to a maximum normal amount (approached asymptotically) of \$1,250,000. (The formula and a graph are shown on Exhibit C18.) The portion of each large loss exceeding the cutoff is considered excess and the portion of any loss up to the cutoff is considered normal.

As noted above, the excess loss procedure is performed on trended loss experience (i.e. loss experience adjusted to prospective cost levels by the current cost factors, loss projection factors, and loss trend adjustment factors (for claim cost only) shown in Exhibits C10 through C11). The loss trend adjustment for frequency trend is not reflected at this step in the process. The normal breakpoint of \$250,000 for BGI and the parameters in the normal loss formula are at 2005 cost levels and therefore have been similarly adjusted to prospective cost levels.

Both the normal and total incurred losses are aggregated over all states by construction, protection, and amount of insurance intervals. The most recent ten years of experience are used in this analysis. Excess loss factors by construction, protection and amount of insurance are then calculated as the ratios of the ten year multistate incurred losses to the ten-year multistate normal losses.

These factors are then smoothed by fitting curves (by amount of insurance intervals) to the indicated factors. The resulting factors are then balanced so the original ten-year multistate incurred loss level is maintained.

EXCESS LOSS PROCEDURES (cont'd)

BASIC GROUP I (cont'd)

The excess factors are then applied to the state normal losses, which are maintained in the same detail (construction, protection and amount of insurance) as well as by year, territory, rating group and TOP. The state normal losses used in this calculation have also been trended for frequency.

The excess loss factors vary by construction, protection and the amount of insurance because these are the most significant severity-related rating variables.

BASIC GROUP II

Since catastrophic wind losses affect both the frequency and severity of loss, the Basic Group II excess procedure identifies periods of overall adverse experience, rather than individual large losses. Also, due to the extreme volatility of windstorm losses, a long-term review period (1950 - present) is used to estimate the expected excess losses.

Loss ratio cutoffs are used to determine normal losses, state excess losses, and regional excess losses for each year in the long-term review period. The application of these cutoffs is detailed in the explanatory notes to Exhibit C20. The state excess losses are used to determine the state excess component of the state excess multiplier, and the regional excess losses are used to determine the regional excess component. ("BASIC GROUP II REGIONS" is a list of states by region.) The state excess multiplier is derived in such a manner as to provide an estimate of the expected excess loss dollars per normal loss dollar.

The state excess multiplier is applied to each accident year in the ten-year experience period used in the review. In this way, a review database is created reflecting both the current normal loss experience and the average excess loss experience based on the long-term review. This allows a concurrent evaluation of both the normal and the excess components of the BG II loss cost level.

SPECIAL CAUSES OF LOSS

Similar to Basic Group II, the Special Causes of Loss (SCL) smoothing procedure uses a loss ratio approach to reflect both the frequency and severity of unusual loss events which may produce significant fluctuations in loss cost levels. The excess procedure uses longer term statewide SCL experience (1986 - present) to account for the volatile nature of weather related losses (water damage from bursting pipes, or the weight of ice, sleet, or snow) which are the predominant cause of large SCL losses in a given experience period. A monthly normal loss ratio cutoff of 2.0 is used to define normal and excess losses. The resulting ratio of excess to normal losses over the long-term experience period is then applied to the normal losses used in the loss cost level review. SCL has a lower loss ratio cutoff than that used in Basic Group II in order to reflect the less catastrophic nature of unusual SCL loss events. The calculations underlying the smoothing procedure are described in the Explanatory Notes to Exhibit C21.

EXPLANATORY NOTES TO EXHIBIT C18

COUNTRYWIDE BASIC GROUP I EXCESS LOSS FACTORS

EXCESS LOSS
FACTORS

The multistate excess loss factors are the ratios of the ten-year multistate adjusted incurred losses to the ten-year multistate adjusted normal losses (both adjusted for severity trend). They are determined separately by construction, protection and amount of insurance range. Due to credibility considerations, both constructions and protections have been consolidated as shown. The amount of insurance ranges are also shown.

EXPLANATORY NOTES TO EXHIBIT C19

BASIC GROUP I ADDITIONAL EXCESS LOSS INFORMATION

COLUMN (1) TRENDED INCURRED LOSSES

The trended incurred losses are the aggregate of all individually-trended loss records prior to any adjustment for large losses. They are shown here fully trended for severity.

COLUMN (2) TRENDED NORMAL LOSSES

The normal losses are the aggregate of the normal portions of each loss occurrence. These are also fully trended.

COLUMN (3) STATE NORMAL PERCENTAGE

The state normal percentages are the statewide normal losses divided by the statewide trended incurred losses. These percentages can be used in conjunction with the multistate percentages and actual dollar amounts of normal losses to assess the state loss experience. For example, consistently lower state normal percentages relative to multistate normal percentages could indicate that the state has a greater propensity for large losses.

COLUMN (4) MULTISTATE NORMAL PERCENTAGES

The multistate normal percentages are the multistate normal losses divided by the multistate trended incurred losses. As noted above these can be used as a yardstick against which the statewide experience can be measured.

COLUMN (5) SMOOTHED INCURRED LOSSES

The smoothed incurred losses are the totals across all constructions, protections and exposures of the fully trended normal losses multiplied by the excess loss factors.

COLUMN (6) STATE AVERAGE EXCESS FACTOR

The state average excess factors are the smoothed incurred losses in column (5) divided by the normal losses in column (2). These factors represent the annual averages of the factors calculated separately by construction, protection and amount of insurance. The average excess factor reflects the normal loss mix by construction, protection and exposure. Heavy concentration in those subsets of the data with high excess factors will result in large average factors.

EXPLANATORY NOTES TO EXHIBIT C20

COLUMN (1)

EARNED PREMIUMS

The unadjusted earned premiums are shown for each year.

COLUMN (2)

INCURRED LOSSES

The unadjusted incurred losses are shown for each year.

COLUMN (3)

NORMAL INCURRED LOSSES

Normal losses which are shown for each year are defined as follows:

- for losses reported under CSP (for which month of loss detail is available), that portion of each month's losses which does not exceed 2.5 times that month's earned premiums.
- for losses reported under CRSP, SCOH and SMP (for which month of loss detail is not available), that part of each year's losses which does not exceed 0.722 times that year's earned premiums.

COLUMN (4)

NORMAL LOSS RATIO

For each year in the excess review period, the normal loss ratio is calculated as the ratio of the normal losses (for CSP data the sum of each month's normal losses) to the earned premiums for the same year.

COLUMN (5)

STATE EXCESS LOSS RATIO

The state excess loss ratio is the ratio of the state excess losses to the unadjusted earned premium. The state excess losses are determined by the following formulas:

$$\cdot \quad EP \times \frac{20(LR-2.5)}{(LR-2.5)+20} \text{ if } LR > 2.5; \text{ otherwise } 0$$

for CSP, where EP = the monthly earned premiums, LR = the monthly loss ratio and the yearly state excess losses are the sum of the monthly state excess losses.

$$\cdot \quad EP \times \frac{2.2(LR-0.722)}{(LR-0.722)+2.2} \text{ if } LR > 0.722; \text{ otherwise } 0$$

for CRSP, SCOH, SMP, where EP = the earned premiums and LR = the yearly loss ratio.

EXPLANATORY NOTES TO EXHIBIT C20 (cont'd)

COLUMN (6)

REGIONAL EXCESS LOSS RATIO

If $LR > NLR$, then the regional excess loss ratio is:

regional excess loss ratio = $LR - SELR - NLR$

where $SELR$ = the state excess loss ratio,
 NLR = the normal loss ratio, and
 LR = the loss ratio

LINE (7)

STATE EXCESS COMPONENT

The state excess component is determined by dividing the sum of all state excess loss ratios by the sum of all normal loss ratios (where the sum is taken across all accident years).

LINE (8)

REGIONAL EXCESS COMPONENT

The regional excess component is determined by dividing the weighted average (determined, in each case, against the latest year unadjusted premium distribution) of the sum of regional excess loss ratios of all the states in the region by the weighted average of the sum of all loss ratio points retained by a state (normal and state excess loss ratios) of all the states in the region. See the following page for the appropriate BG II region for the state.

LINE (9)

STATE EXCESS MULTIPLIER

The state excess multiplier is derived by taking the product of the state excess component and the regional excess component.

BASIC GROUP II REGIONS

NORTHEAST REGION

CONNECTICUT
DELAWARE
DIST OF COLUMBIA
MAINE
MARYLAND
MASSACHUSETTS
NEW HAMPSHIRE
NEW JERSEY
NEW YORK
PENNSYLVANIA
RHODE ISLAND
VERMONT
VIRGINIA

PLAINS REGION

ARKANSAS
COLORADO
IOWA
KANSAS
MINNESOTA
MISSOURI
MONTANA
NEBRASKA
NORTH DAKOTA
OKLAHOMA
SOUTH DAKOTA
WYOMING

SOUTHEAST REGION

ALABAMA
FLORIDA
GEORGIA
LOUISIANA
MISSISSIPPI
NORTH CAROLINA
SOUTH CAROLINA
HAWAII

MIDWEST REGION

ILLINOIS
INDIANA
KENTUCKY
MICHIGAN
OHIO
TENNESSEE
WEST VIRGINIA
WISCONSIN

WEST REGION

ARIZONA
CALIFORNIA
IDAHO
NEVADA
NEW MEXICO
OREGON
UTAH
WASHINGTON
ALASKA

EXPLANATORY NOTES TO EXHIBIT C21

SPECIAL CAUSES OF LOSS ADDITIONAL EXCESS LOSS FACTOR

COLUMN (1) EARNED PREMIUMS

These are the unadjusted earned premiums for each year.

COLUMN (2) INCURRED LOSSES

These are the unadjusted incurred losses for each year.

COLUMN (3) NORMAL INCURRED LOSSES

The normal incurred losses are shown for each year. The normal incurred losses are defined to be that portion of each month's losses which does not exceed 2.0 times the monthly earned premiums.

COLUMN (4) NORMAL LOSS RATIO

The normal loss ratio for each year is the ratio of the normal incurred losses for each year divided by the earned premiums for the year.

Column (4) = Column (3) ÷ Column (1)

COLUMN (5) EXCESS LOSS RATIO

The excess loss ratio for each year is the ratio of the excess losses to the earned premium for the year. The excess losses are calculated as the incurred losses minus the normal incurred losses for each year.

LINE (6) EXCESS COMPONENT

The excess component is determined by dividing the sum of the excess loss ratios by the sum of the normal loss ratios, where the sums are taken across all years in the excess review period.

LINE (7) EXCESS MULTIPLIER

The excess multiplier is derived by adding unity to the excess component.

OVERVIEW

APPLICATION OF CREDIBILITY

INTRODUCTION

Credibility, Z , is a weight given to the most recent body of data. The complement of credibility, $1-Z$, is the weight assigned to net trend. The final estimate is a weighted average obtained by using the formula $C = Z \times R + (1-Z) \times N$, where:

Z = credibility

C = final estimate

R = estimate based on the most recent data

N = net trend

Credibility may range from 0 to 1, where $Z=1$ is full credibility and $Z=0$ is no credibility. The actual numerical value of Z is calculated by considering how the state's volume of experience compares with an established full credibility standard. Credibility is capped at 25% if the credibility calculated is below 25%. See Exhibits C22, C23, and C24 for a complete explanation of the credibility standards for Basic Group I, Basic Group II, and Special Causes of Loss.

EXPLANATORY NOTES TO EXHIBITS C22, C23 AND C24

BASIC GROUP I, BASIC GROUP II, AND SPECIAL CAUSES OF LOSS
STATEWIDE CREDIBILITY CALCULATION

LINE (1a)
(BGI only)

Full Credibility Claims Standard of Frequency

Based on a Poisson distribution, the minimum sample size of claims is determined such that the probability that the actual number of claims will be within 5% of the expected number of claims is greater than 95%.

LINE (1b)
(BGI only)

Severity Modification Factor

This factor, defined as $(1 + S^2 / M^2)$, is used to modify the claims standard to reflect variance due to severity, where S is the standard deviation and M is the mean of the loss severity distribution (on a normal loss basis).

LINE (1c) - BGI
LINE (1) - BGII, SCL

Full Credibility Claims Standard

For Basic Group I, this standard is the product of the frequency standard in line (1a) and the severity modification factor in line (1b). For Basic Group II and Special Causes of Loss, standards for full credibility of 30,000 claims for BGII and 25,000 claims for SCL were selected to balance stability and responsiveness.

LINE (2)

Multistate Experience Period Ratio of Earned Risks to Claims

This ratio was determined based on Commercial Statistical Plan data for the latest experience period (Five years for Basic Group I and Special Causes of Loss; Ten years for Basic Group II).

LINE (3)

Full Credibility Earned Risks Standard

To translate the claims standard to an equivalent standard based on earned risks, the claims standard (line (1c) for BGI, (1) for BGII and SCL) is multiplied by the multistate experience period ratio of earned risks to claims (line (2)).

LINE (4)

Experience Period Statewide Earned Risks

This is the number of earned risks in the state for the experience period.

EXPLANATORY NOTES TO EXHIBITS C22, C23 AND C24 (cont'd)

LINE (5) Experience Period Aggregate Loss Costs

These are the state's experience period adjusted aggregate loss costs.

LINE (6) Statewide Experience Period Ratio of Aggregate Loss Costs to Earned Risks

This ratio is determined by dividing the state's experience period adjusted aggregate loss costs by its experience period earned risks.

LINE (7) Full Credibility Aggregate Loss Costs Standard

To translate the risk standard into an aggregate loss cost standard on a state by state basis, the ratio (line (6)) is multiplied by the full credibility earned risks standard (line (3)).

LINE (8) Credibility

The state's credibility is calculated by using the square root credibility formula:

$$Z = \sqrt{\frac{P}{C}}$$

where Z = credibility,
P = statewide five-year adjusted aggregate loss costs (line (5)), and
C = full credibility aggregate loss costs standard (line (7)).

When the indicated credibility is below 25%, a minimum cap of 25% is assigned to the state credibility in order to reasonably reflect the state's experience in the coverage change calculation.

OVERVIEW

LOSS ADJUSTMENT EXPENSE FACTORS

OBJECTIVE	The reported indemnity losses must be loaded for any loss adjustment expenses (LAE) that are not reported in statistical detail to ISO.
PROPERTY COVERAGES	For the property coverages, only the incurred indemnity losses are reported to ISO under the Commercial Statistical Plan. All loss adjustment expenses must be loaded in. A factor representing the ratio of incurred losses plus all LAE to incurred losses was selected based on multistate financial data (see Exhibit D6 for the underlying data).
EXPERIENCE INCLUDED	Fire and Allied Lines incurred loss and loss adjustment expense experience for 2017-2021 is displayed on Exhibit D6. The experience is based on Insurance Expense Exhibit information compiled by A.M. Best. For Allied Lines, the loss adjustment expense ratios [Exhibit D6, line (3)(b)] for a few years are distorted by unusual catastrophe-related losses and loss adjustment expenses. The selected Allied Lines loss adjustment expense factor used for this review was selected after consideration of this distortion and based on a review of average loss adjustment expense ratios over a longer time period.
SELECTED FACTORS	The following factors have been used in this review to load incurred losses for all loss adjustment expenses:

Basic Group I	1.090
Basic Group II	1.105
Special Causes of Loss	1.105

MINNESOTA

SUMMARY OF MONOLINE PROSPECTIVE LOSS COST CHANGES (A)

<u>Coverage</u>	<u>Indications</u>	<u>Selections</u>	<u>Aggregate Loss Costs At Current Level</u>
Basic Group I	+11.7%	+11.7%	34,736,651
Minneapolis	+30.6%	+30.6%	
Saint Paul	+19.2%	+19.2%	
Balance Of State (Minnesota)	+9.8%	+9.8%	
Basic Group II	+10.3%	+10.3%	38,175,471
Special Causes of Loss	+11.9%	+11.9%	17,124,833
All Coverages Combined	+11.1%	+11.1%	90,036,955

(A) For trend purposes, the period of use for this revision is assumed to begin on 09/01/2024.

MINNESOTA

SPECIAL CAUSES OF LOSS PROSPECTIVE LOSS COST CHANGES BY CATEGORY

<u>Category</u>	<u>Description</u>	<u>Entire State</u>
01	Buildings	+11.8%
02	Res. Apts. And Condos	+11.6%
03	Offices	+11.7%
04	Mercantile - High	+12.9%
05	Mercantile - Medium	+13.8%
06	Mercantile - Low	+12.2%
07	Motels And Hotels	+11.7%
08	Institutional - High	+13.4%
09	Institutional - Low	+12.1%
10	Indust-Proc - High	+11.9%
11	Indust-Proc - Low	+12.9%
12	Service - High	+11.5%
13	Service - Low	+12.0%
14	Contractors	+12.3%
	Statewide Total	+11.9%

MINNESOTA

POTENTIAL IMPACT OF BG I, BG II, AND SCL MONOLINE REVISIONS
ON COMMERCIAL PACKAGE POLICY

	(1)	(2)	(3)	(4)
		Basic	Basic	Special
	Type of Policy	Group I	Group II	Causes
				of Loss
31	Motel/Hotel	10.7%	10.3%	11.8%
32	Apartment	14.2%	10.3%	11.8%
33	Office	11.9%	10.3%	11.8%
34	Mercantile	11.9%	10.3%	12.2%
35	Institutional	11.3%	10.3%	11.9%
36	Services	10.9%	10.3%	11.8%
37	Indust/Processing	10.9%	10.3%	12.1%
38	Contractors	10.3%	10.3%	12.0%

Basic Group I, Basic Group II, and Special Causes of Loss monoline changes by type of policy (TOP) are displayed. They are calculated by taking a weighted average of the loss cost changes by territory (where applicable) for BGI, or by category for SCL, using the latest year multiline aggregate loss costs as weights. Basic Group II monoline changes do not vary by TOP because the same monoline loss cost change is applied statewide.

MINNESOTA

STATEWIDE BASIC GROUP I
COVERAGE LOSS COST LEVEL EVALUATION

(1)	(2)	(3)	(4)	(5)
	Aggregate*	Adjusted**	Experience	
<u>Year</u>	<u>Loss Costs</u>	<u>Incurred Losses</u>	<u>Ratio</u> <u>(3)/(2)</u>	<u>Weights</u>
2018	30,192,084	35,840,339	1.187	0.10
2019	31,015,285	38,799,736	1.251	0.15
2020	31,369,702	56,376,168	1.797	0.20
2021	31,845,296	48,764,721	1.531	0.25
2022	34,736,651	36,357,934	1.047	0.30
(6) Weighted Experience Ratio				= 1.363
(7) Credibility				= 0.309
(8) Expected Experience Ratio				= 1.039
(9) Credibility Weighted Experience Ratio				= 1.139
(0.309 X 1.363) + (0.691 X 1.039)				
(10) Indicated Coverage Loss Cost Change				= 1.139
				OR 13.9%

* Aggregate Loss Costs are adjusted to current ISO Loss Cost Level and 03/01/2025 Amount of Insurance levels.

** Incurred Losses are adjusted to 09/01/2025 cost levels including Loss Development and all Loss Adjustment Expenses.

MINNESOTA

STATEWIDE BASIC GROUP II
COVERAGE LOSS COST LEVEL EVALUATION

(1)	(2)	(3)	(4)	(5)
	Aggregate*	Adjusted**	Experience	
<u>Year</u>	<u>Loss Costs</u>	<u>Incurred Losses</u>	<u>Ratio</u>	<u>Weights</u>
			<u>(3)/(2)</u>	
2013	35,914,754	37,696,759	1.050	0.10
2014	34,793,575	35,880,313	1.031	0.10
2015	32,194,821	46,425,464	1.442	0.10
2016	31,308,657	43,007,188	1.374	0.10
2017	32,141,156	50,400,832	1.568	0.10
2018	33,088,598	38,653,061	1.168	0.10
2019	34,626,697	66,818,629	1.930	0.10
2020	35,211,754	67,961,700	1.930	0.10
2021	35,698,555	41,982,807	1.176	0.10
2022	38,175,471	69,821,097	1.829	0.10
(6) Weighted Experience Ratio			=	1.450
(7) Credibility			=	0.392
(8) Expected Experience Ratio			=	1.054
(9) Credibility Weighted Experience Ratio				
(0.392 X 1.450) + (0.608 X 1.054)			=	1.209
(10) Indicated Coverage Loss Cost Change			=	1.209
			OR	20.9%

* Aggregate Loss Costs are adjusted to current ISO Loss Cost Level and 03/01/2025 Amount of Insurance levels.

** Incurred Losses are adjusted to 09/01/2025 cost levels including Loss Development and all Loss Adjustment Expenses.

MINNESOTA

STATEWIDE SPECIAL CAUSES OF LOSS
COVERAGE LOSS COST LEVEL EVALUATION

(1)	(2)	(3)	(4)	(5)
	Aggregate*	Adjusted**	Experience	
<u>Year</u>	<u>Loss Costs</u>	<u>Incurred Losses</u>	<u>Ratio</u> <u>(3)/(2)</u>	<u>Weights</u>
2018	14,618,357	14,699,122	1.006	0.10
2019	14,884,316	24,111,038	1.620	0.15
2020	15,864,962	16,789,590	1.058	0.20
2021	16,316,777	15,472,362	0.948	0.25
2022	17,124,833	20,882,404	1.219	0.30
(6) Weighted Experience Ratio				= 1.158
(7) Credibility				= 0.271
(8) Expected Experience Ratio				= 1.047
(9) Credibility Weighted Experience Ratio				= 1.077
(0.271 X 1.158) + (0.729 X 1.047)				
(10) Indicated Coverage Loss Cost Change				= 1.077
				OR 7.7%

* Aggregate Loss Costs are adjusted to current ISO Loss Cost Level and 03/01/2025 Amount of Insurance levels.

** Incurred Losses are adjusted to 09/01/2025 cost levels including Loss Development and all Loss Adjustment Expenses.

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	Statewide Coverage Loss Cost Change Of	1.139 13.9%
<u>TOP</u>	<u>\$ Lst Sq Formula Relativity</u>	<u>Credibility Z</u>	<u>Credibility Weighted Relativity</u>	<u>Balanced Relativity</u>	<u>Or</u>	
10	0.775	0.130	0.967	0.981		
31	3.521	0.031	1.040	1.055		
32	1.097	0.155	1.014	1.028		
33	0.472	0.044	0.968	0.982		
34	1.003	0.251	1.001	1.015		
35	0.768	0.190	0.951	0.964		
36	1.416	0.196	1.071	1.086		
37	0.627	0.224	0.901	0.914		
38	0.945	0.073	0.996	1.010		

Statewide Monoline Loss Cost Level Change: 11.7%

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>Territory</u>	<u>\$ Lst Sq Formula Relativity</u>	<u>Credibility Z</u>	<u>Credibility Weighted Relativity</u>	<u>Balanced Relativity</u>	<u>Indicated Monoline Loss Cost Level Change</u>	<u>Off- Balance Factor</u>	<u>Indicated Territorial Multiplier Change</u>	<u>Current Territorial Multiplier</u>	<u>Revised Territorial Multiplier</u>
Minneapolis	1.824	0.186	1.118	1.169	30.6%	1.000	0.189	0.774	0.920
Saint Paul	1.296	0.078	1.02	1.067	19.2%	1.000	0.085	0.760	0.825
Bal. Of State	0.918	0.721	0.94	0.983	9.8%	1.000	0.000	1.000	1.000

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS

Sample Loss Cost Level Change Calculation for Minneapolis:

Statewide Coverage Loss Cost Change	=	1.139
Territorial Relativity	=	1.169
Monoline (TOP 10) Relativity	=	0.981

Indicated Monoline Loss Cost Level Change		
= 1.139 X 1.169 X 0.981	=	1.306
	or	30.6%

MINNESOTA
SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	Statewide Coverage Loss Cost Change Of	1.077 7.7%
<u>TOP</u>	<u>\$ Lst Sq Formula Relativity</u>	<u>Credibility Z</u>	<u>Credibility Weighted Relativity</u>	<u>Balanced Relativity</u>	<u>or</u>	
10	1.228	0.157	1.033	1.039		
31	1.127	0.040	1.005	1.011		
32	0.963	0.180	0.993	0.999		
33	0.925	0.108	0.992	0.998		
34	0.861	0.296	0.957	0.963		
35	0.954	0.298	0.986	0.992		
36	1.047	0.210	1.010	1.016		
37	1.171	0.153	1.024	1.030		
38	1.026	0.099	1.003	1.009		

	(1)	(2)	(3)	(4)	(5)
<u>Category</u>	<u>\$ Lst Sq Formula Relativity</u>	<u>Credibility Z</u>	<u>Credibility Weighted Relativity</u>	<u>Balanced Relativity</u>	<u>Indicated Monoline Loss Cost Level Change</u>
01	0.996	0.787	0.997	0.999	11.8%
02	0.950	0.091	0.995	0.997	11.6%
03	0.970	0.126	0.996	0.998	11.7%
04	1.052	0.146	1.007	1.009	12.9%
05	1.135	0.114	1.015	1.017	13.8%
06	1.014	0.083	1.001	1.003	12.2%
07	0.836	0.024	0.996	0.998	11.7%
08	1.075	0.152	1.011	1.013	13.4%
09	0.995	0.089	1.000	1.002	12.1%
10	0.955	0.037	0.998	1.000	11.9%
11	1.052	0.143	1.007	1.009	12.9%
12	0.969	0.185	0.994	0.996	11.5%
13	0.988	0.076	0.999	1.001	12.0%
14	1.024	0.102	1.002	1.004	12.3%

Statewide Monoline Loss Cost Level Change: 11.9%

MINNESOTA
SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

Sample Loss Cost Level Change Calculation:

Statewide Coverage Loss Cost Change	=	1.077
Monoline (TOP 10) Relativity	=	1.039
Category 1 Relativity	=	0.999
Indicated Monoline Loss Cost Level Change for Category 1	=	1.118
	OR	11.8%

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

Type Of Policy	(1) Accident Year Ending 09/30/2022 Aggregate Loss <u>Costs</u>	(2) 5 - Year Aggregate <u>Loss Costs</u>	(3) 5 - Year Experience <u>Ratio</u>	(4) 5 - Year Exp. Ratio <u>Relativity</u>
Minneapolis				
10 Monoline	287,324	1,080,612	3.463	2.520
31 Multiline Motel/Hotel	28,840	124,855	0.000	0.000
32 Multiline Apartment	974,264	3,775,199	2.321	1.689
33 Multiline Office	79,501	400,133	15.229	11.084
34 Multiline Mercantile	558,716	3,084,404	2.454	1.786
35 Multiline Institutional	305,714	1,429,230	3.204	2.332
36 Multiline Services	239,665	1,292,213	2.433	1.771
37 Multiline Indust/Process	262,174	1,185,893	4.518	3.288
38 Multiline Contractors	25,496	162,777	17.667	12.858
Total All Tops*	2,761,694	12,535,316	3.272	2.381
Saint Paul				
10 Monoline	32,320	186,266	5.191	3.778
31 Multiline Motel/Hotel	12,173	126,303	0.278	0.202
32 Multiline Apartment	302,692	1,116,140	2.409	1.753
33 Multiline Office	28,170	165,346	11.324	8.242
34 Multiline Mercantile	188,406	1,263,838	1.019	0.742
35 Multiline Institutional	123,131	555,462	1.901	1.384
36 Multiline Services	116,349	558,582	0.184	0.134
37 Multiline Indust/Process	84,664	528,469	1.246	0.907
38 Multiline Contractors	28,073	154,036	0.270	0.197
Total All Tops*	915,978	4,654,442	1.943	1.414

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Type Of Policy</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss <u>Costs</u>	(2) 5 - Year Aggregate <u>Loss Costs</u>	(3) 5 - Year Experience <u>Ratio</u>	(4) 5 - Year Exp. Ratio <u>Relativity</u>
Balance Of State (Minnesota)				
10 Monoline	3,131,174	13,720,271	0.901	0.656
31 Multiline Motel/Hotel	734,190	2,918,072	4.247	3.091
32 Multiline Apartment	3,967,351	13,450,371	1.345	0.979
33 Multiline Office	826,833	4,082,615	0.288	0.210
34 Multiline Mercantile	5,748,001	29,189,532	1.201	0.874
35 Multiline Institutional	4,734,804	21,448,401	0.908	0.661
36 Multiline Services	4,953,822	22,454,198	1.702	1.239
37 Multiline Indust/Process	5,364,909	27,106,094	0.737	0.536
38 Multiline Contractors	1,597,895	7,599,706	1.125	0.819
Total All Tops*	31,058,979	141,969,260	1.188	0.865

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Type Of Policy</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss <u>Costs</u>	(2) 5 - Year Aggregate <u>Loss Costs</u>	(3) 5 - Year Experience <u>Ratio</u>	(4) 5 - Year Exp. Ratio <u>Relativity</u>
Entire State				
10 Monoline	3,450,818	14,987,149	1.154	0.840
31 Multiline Motel/Hotel	775,203	3,169,230	4.027	2.931
32 Multiline Apartment	5,244,307	18,341,710	1.588	1.156
33 Multiline Office	934,504	4,648,094	1.892	1.377
34 Multiline Mercantile	6,495,123	33,537,774	1.304	0.949
35 Multiline Institutional	5,163,649	23,433,093	1.068	0.777
36 Multiline Services	5,309,836	24,304,993	1.702	1.239
37 Multiline Indust/Process	5,711,747	28,820,456	0.918	0.668
38 Multiline Contractors	1,651,464	7,916,519	1.366	0.994
Total All Tops*	34,736,651	159,159,018	1.374	1.000

MINNESOTA
SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Type Of Policy</u>	<u>Category</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
Entire State						
10 Monoline	01 Buildings	1,086,774	4,814,232	1.528	1.433	1.237
	02 Res. Apts. And Cond	21,275	68,072	0.520	1.110	0.959
	03 Offices	93,845	475,469	0.916	1.177	1.016
	04 Mercantile - High	116,289	568,139	0.472	1.039	0.897
	05 Mercantile - Medium	38,528	173,477	0.296	1.043	0.901
	06 Mercantile - Low	35,743	179,301	0.156	1.008	0.870
	07 Motels And Hotels	4,478	33,864	0.492	1.108	0.957
	08 Institutional - Hig	9,428	43,979	2.361	1.521	1.313
	09 Institutional - Low	28,427	119,583	0.478	1.094	0.945
	10 Indust-Proc - High	16,911	64,313	0.732	1.158	1.000
	11 Indust-Proc - Low	59,625	297,903	1.935	1.453	1.255
	12 Service - High	57,120	252,128	0.513	1.086	0.938
	13 Service - Low	55,598	286,436	1.256	1.275	1.101
	14 Contractors	14,440	63,118	1.141	1.250	1.079
	Total	1,638,481	7,440,014	1.288	1.340	1.157
31 Multiline Motel/Hotel	01 Buildings	338,713	1,309,529	2.818	1.305	1.127
	07 Motels And Hotels	68,932	341,142	1.087	1.096	0.946
	Total	407,645	1,650,671	2.525	1.270	1.096

MINNESOTA
SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Type Of Policy</u>	<u>Category</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
32 Multiline Apartment	01 Buildings	1,895,620	7,360,667	1.177	1.115	0.963
	02 Res. Apts. And Cond	626,620	1,438,008	0.829	1.064	0.919
	Total	2,522,240	8,798,675	1.091	1.102	0.952
33 Multiline Office	01 Buildings	667,471	3,321,432	0.897	1.066	0.921
	03 Offices	308,109	1,473,577	0.871	1.069	0.923
	04 Mercantile - High	308	2,533	52.128	5.884	5.081
	08 Institutional - Hig	1,067	5,662	0.000	0.994	0.858
	11 Indust-Proc - Low	454	2,825	0.000	0.995	0.859
	12 Service - High	183	45,960	0.000	0.994	0.858
	14 Contractors	742	2,071	0.000	0.995	0.859
	Total	978,334	4,854,060	0.903	1.068	0.923

MINNESOTA
SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Type Of Policy</u>	<u>Category</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
34 Multiline Mercantile	01 Buildings	2,346,307	11,928,224	0.746	0.995	0.859
	03 Offices	12,786	66,878	0.508	1.041	0.899
	04 Mercantile - High	360,970	1,794,340	1.269	1.120	0.967
	05 Mercantile - Medium	348,772	1,726,615	1.472	1.146	0.990
	06 Mercantile - Low	211,059	1,132,276	0.550	1.033	0.892
	08 Institutional - Hig	5	67	0.000	0.995	0.859
	10 Indust-Proc - High	605	2,597	0.000	0.995	0.859
	11 Indust-Proc - Low	2,573	7,775	5.798	1.539	1.329
	12 Service - High	9,504	61,722	0.922	1.081	0.934
	13 Service - Low	18,406	80,712	3.559	1.332	1.150
	14 Contractors	5,393	23,698	1.658	1.150	0.993
	Total	3,316,380	16,824,904	0.887	1.030	0.889
35 Multiline Institutional	01 Buildings	3,170,292	13,087,055	1.123	1.105	0.954
	03 Offices	11,912	26,310	0.146	1.008	0.870
	04 Mercantile - High	27	128	0.000	0.995	0.859
	06 Mercantile - Low	0	52	0.000	0.995	0.859
	08 Institutional - Hig	283,619	2,550,153	1.763	1.194	1.031
	09 Institutional - Low	231,165	1,302,245	1.210	1.111	0.959
	11 Indust-Proc - Low	3	11	0.000	0.995	0.859
	12 Service - High	521	2,835	2.079	1.190	1.028
	13 Service - Low	4,246	7,571	0.000	0.994	0.858
	14 Contractors	75	326	0.000	0.995	0.859
	Total	3,701,860	16,976,686	1.173	1.112	0.960

MINNESOTA
SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Type Of Policy</u>	<u>Category</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
36 Multiline Services	01 Buildings	1,345,954	6,522,427	1.120	1.213	1.047
	03 Offices	14,856	49,586	1.974	1.338	1.155
	04 Mercantile - High	9,260	41,668	10.189	2.108	1.820
	05 Mercantile - Medium	6,788	18,978	0.057	1.160	1.002
	06 Mercantile - Low	4,740	22,645	3.005	1.432	1.237
	08 Institutional - Hig	20,875	89,091	0.000	1.149	0.992
	09 Institutional - Low	8,918	44,860	1.326	1.277	1.103
	10 Indust-Proc - High	61	209	0.000	1.156	0.998
	11 Indust-Proc - Low	1,932	24,768	0.000	1.154	0.997
	12 Service - High	647,255	2,998,488	0.931	1.184	1.022
	13 Service - Low	158,403	823,993	0.902	1.219	1.053
	14 Contractors	5,418	18,010	0.000	1.155	0.997
	Total	2,224,460	10,654,723	1.080	1.209	1.044
37 Indust/Proc	01 Buildings	907,643	4,476,685	1.536	1.356	1.171
	03 Offices	1,839	9,910	2.779	1.410	1.218
	04 Mercantile - High	3,992	30,669	0.000	1.154	0.997
	05 Mercantile - Medium	984	2,870	0.000	1.156	0.998
	06 Mercantile - Low	0	423	43.173	5.082	4.389
	08 Institutional - Hig	7	25	0.000	1.156	0.998
	10 Indust-Proc - High	112,663	507,157	1.541	1.305	1.127
	11 Indust-Proc - Low	424,024	2,157,391	2.017	1.434	1.238
	12 Service - High	173	4,809	0.000	1.156	0.998
	13 Service - Low	1,575	11,204	0.886	1.237	1.068
	14 Contractors	778	2,561	0.000	1.156	0.998
	Total	1,453,678	7,203,704	1.671	1.374	1.186

MINNESOTA
SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Type Of Policy</u>	<u>Category</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss <u>Costs</u>	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience <u>Ratio</u>	(4) Credibility Weighted Experience <u>Ratio</u>	(5) Credibility Weighted <u>Relativity</u>
38 Multiline Contractors	01 Buildings	505,546	2,525,445	0.912	1.187	1.025
	03 Offices	11,786	70,487	1.914	1.333	1.151
	04 Mercantile - High	24,680	133,598	4.332	1.578	1.363
	05 Mercantile - Medium	307	1,583	0.000	1.156	0.998
	06 Mercantile - Low	3,464	31,302	0.000	1.154	0.997
	08 Institutional - Hig	71	273	0.000	1.156	0.998
	11 Indust-Proc - Low	384	3,632	0.000	1.156	0.998
	12 Service - High	9,178	36,844	4.186	1.544	1.333
	13 Service - Low	2,612	17,795	0.000	1.155	0.997
	14 Contractors	323,727	1,584,856	1.005	1.222	1.055
	Total	881,755	4,405,815	1.082	1.216	1.050
Total All TOPs	01 Buildings	12,264,320	55,345,696	1.151	1.152	0.994
	02 Res. Apts. And Cond	647,895	1,506,080	0.819	1.066	0.920
	03 Offices	455,133	2,172,217	0.922	1.106	0.955
	04 Mercantile - High	515,526	2,571,075	1.417	1.145	0.988
	05 Mercantile - Medium	395,379	1,923,523	1.328	1.136	0.982
	06 Mercantile - Low	255,006	1,365,999	0.533	1.039	0.897
	07 Motels And Hotels	73,410	375,006	1.051	1.097	0.947
	08 Institutional - Hig	315,072	2,689,250	1.658	1.200	1.036
	09 Institutional - Low	268,510	1,466,688	1.136	1.115	0.962
	10 Indust-Proc - High	130,240	574,276	1.428	1.284	1.109
	11 Indust-Proc - Low	488,995	2,494,305	2.015	1.435	1.239
	12 Service - High	723,934	3,402,786	0.940	1.179	1.018
	13 Service - Low	240,840	1,227,711	1.161	1.236	1.068
	14 Contractors	350,573	1,694,640	1.001	1.220	1.054
	Total	17,124,833	78,809,252	1.159	1.158	1.000

MINNESOTA

BASIC GROUP II RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Accident Year Ending 09/30/2022	Accident Years 2013-2022								Indicated Total
	Loss Costs	Experience Ratio	Formula		Credibility	Balanced	Normalized	Current	Indicated	Loss
	At Current	At Current	Relativity	Credibility	Weighted	Formula	Formula	Implicit	Implicit	Cost
	<u>Implicit PMF</u>	<u>PMF</u>	<u>(2)/ 1.452</u>	<u>(C)</u>	<u>Relativity (D)</u>	<u>Relativity (E)</u>	<u>Relativity (F)</u>	<u>PMF</u>	<u>PMF (G)</u>	<u>Adjustment</u>
Monoline	3,347,148	1.175	0.809	0.418	0.920	0.920	0.9122			10.3%
Multiline	34,828,323	1.479	1.019	0.874	1.017	1.017	1.0085			21.9%
Coverage	38,175,471	1.452	1.000			1.009	1.000			20.9%
<u>Multiline Top</u>										
31 Motel/Hotel	785,809	1.204	0.829	0.130	0.978	0.983	0.9747	1.116	1.192	17.8%
32 Apartment	6,217,362	1.391	0.958	0.532	0.978	0.983	0.9747	1.289	1.377	17.8%
33 Office	1,366,336	1.562	1.076	0.226	1.017	1.022	1.0134	0.832	0.924	22.5%
34 Mercantile	5,692,195	1.532	1.055	0.559	1.031	1.036	1.0273	0.760	0.856	24.2%
35 Institutional	10,848,046	1.498	1.032	0.661	1.021	1.026	1.0174	0.797	0.889	23.0%
36 Services	5,016,594	1.627	1.121	0.517	1.063	1.068	1.0590	1.046	1.214	28.0%
37 Indust/Process	3,339,917	1.219	0.840	0.417	0.933	0.938	0.9301	0.712	0.726	12.4%
38 Contractors	1,562,064	1.647	1.134	0.251	1.034	1.039	1.0302	1.018	1.150	24.6%
	34,828,323	1.479	1.019		1.012	1.017	1.009			21.9%

For Columns (2) - (10), the Multiline total is the average weighted by Column (1)

C - Credibility = $P/(P+K)$ where P represents the total 10-year adjusted loss costs and K = 45,000,000

D - $(5) = ((3) * (4)) + ((1.000 - (4)) * 1.000)$

E - $(6) = (5) * (1.017/1.012)$

F - $(7) = (6) / 1.0085$

G - $(9) = (7) * (8) / (0.9122)$

MINNESOTA
BASIC GROUP I
HISTORY OF STATEWIDE LOSS COST LEVEL CHANGES

Loss Cost Level History

(1)	(2)	(3)	(4)	(5)
Effective Date	Loss Cost Level Change	Loss Cost Level Index	Adjustment Factor	Weight
2000-10-01	-21.0%	0.790	0.805	0.250
2003-12-01	5.4%	0.833	0.764	0.083
2004-12-01	4.2%	0.868	0.733	0.083
2006-04-01	-10.8%	0.774	0.822	0.750
2008-04-01	-14.0%	0.666	0.955	0.750
2009-07-01	-18.9%	0.540	1.178	0.500
2010-04-01	-16.8%	0.449	1.416	0.750
2011-04-01	-6.4%	0.420	1.514	0.750
2013-04-01	-1.7%	0.413	1.540	0.750
2014-04-01	4.3%	0.431	1.476	0.750
2015-05-01	3.0%	0.444	1.432	0.667
2016-07-01	5.5%	0.468	1.359	0.500
2017-04-01	10.0%	0.515	1.235	0.750
2019-05-01	4.4%	0.538	1.182	0.667
2020-06-01	5.7%	0.568	1.120	0.583
2022-11-01	11.9%	0.636	1.000	0.167

Time Element Only Loss Cost Level History

(1)	(2)	(3)	(4)	(5)
Effective Date	Loss Cost Level Change	Loss Cost Level Index	Adjustment Factor	Weight
2013-04-01	-13.1%	0.869	1.000	0.750

MINNESOTA
BASIC GROUP II
HISTORY OF STATEWIDE LOSS COST LEVEL CHANGES

Loss Cost Level History

(1)	(2)	(3)	(4)	(5)
Effective Date	Loss Cost Level Change	Loss Cost Level Index	Adjustment Factor	Weight
2000-10-01	23.2%	1.232	1.869	0.250
2003-12-01	14.7%	1.413	1.630	0.083
2004-12-01	-0.8%	1.402	1.643	0.083
2006-04-01	13.5%	1.591	1.448	0.750
2008-04-01	-1.6%	1.566	1.471	0.750
2009-07-01	4.3%	1.633	1.410	0.500
2010-04-01	0.8%	1.646	1.399	0.750
2011-04-01	-10.2%	1.478	1.558	0.750
2013-04-01	9.5%	1.618	1.423	0.750
2014-04-01	10.8%	1.793	1.284	0.750
2015-05-01	7.9%	1.935	1.190	0.667
2016-07-01	5.3%	2.038	1.130	0.500
2017-04-01	1.9%	2.076	1.109	0.750
2019-05-01	4.5%	2.170	1.061	0.667
2020-06-01	5.3%	2.285	1.008	0.583
2022-11-01	0.8%	2.303	1.000	0.167

Time Element Only Loss Cost Level History

(1)	(2)	(3)	(4)	(5)
Effective Date	Loss Cost Level Change	Loss Cost Level Index	Adjustment Factor	Weight
2013-04-01	-13.3%	0.867	1.000	0.750

MINNESOTA
SPECIAL CAUSES OF LOSS
HISTORY OF STATEWIDE LOSS COST LEVEL CHANGES

Loss Cost Level History

(1)	(2)	(3)	(4)	(5)
Effective Date	Loss Cost Level Change	Loss Cost Level Index	Adjustment Factor	Weight
2000-10-01	15.1%	1.151	0.615	0.250
2003-12-01	-27.4%	0.836	0.847	0.083
2004-12-01	-19.9%	0.669	1.058	0.083
2006-04-01	-15.7%	0.564	1.255	0.750
2008-04-01	-10.6%	0.504	1.405	0.750
2009-07-01	-7.2%	0.468	1.513	0.500
2010-04-01	19.6%	0.560	1.264	0.750
2011-04-01	3.9%	0.582	1.216	0.750
2013-04-01	12.7%	0.656	1.079	0.750
2014-04-01	15.4%	0.757	0.935	0.750
2015-05-01	-3.3%	0.732	0.967	0.667
2016-07-01	3.5%	0.757	0.935	0.500
2017-04-01	-0.1%	0.756	0.937	0.750
2019-05-01	-5.2%	0.717	0.987	0.667
2020-06-01	-6.4%	0.671	1.055	0.583
2022-11-01	5.5%	0.708	1.000	0.167

Time Element Only Loss Cost Level History

(1)	(2)	(3)	(4)	(5)
Effective Date	Loss Cost Level Change	Loss Cost Level Index	Adjustment Factor	Weight
2013-04-01	-25.0%	0.750	1.000	0.750

MINNESOTA

HISTORY OF BASIC GROUP I
LOSS COST CHANGES BY TERRITORY, RATING ID AND RATING GROUP

TERRITORY: Minneapolis

(1)	(2)	(3)																				
Effective Date	Rating ID	Rating Group																				
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	17	18	19	20	21	22
2006-04-01	Specific	-30.8%	-30.8%	-25.6%	-27.2%	-29.4%	-30.8%	-30.8%	-30.8%	-28.1%	-30.0%	-30.6%	-30.4%	-26.5%	-28.7%	-28.1%	-30.7%	-28.7%	-30.0%	-29.7%	-30.8%	-29.3%
2006-04-01	Class	-21.0%	-19.7%	-9.9%	-11.8%	-14.5%	-17.3%	-17.7%	-16.1%	-12.9%	-15.3%	-15.9%	-15.7%	-11.0%	-13.6%	-12.9%	-16.0%	-28.7%	-15.3%	-29.7%	-30.8%	-14.4%
2008-04-01	Specific	-34.0%	-27.8%	-19.7%	-19.0%	-20.9%	-18.3%	-22.3%	-25.2%	-17.4%	-21.3%	-20.4%	-23.0%	-11.0%	-20.2%	-29.8%	-24.3%	-19.9%	-22.0%	-21.7%	-19.0%	-24.6%
2008-04-01	Class	-29.9%	-22.3%	-13.6%	-12.9%	-14.9%	-12.1%	-16.4%	-19.5%	-11.1%	-15.3%	-14.3%	-17.1%	-4.2%	-14.1%	-24.4%	-18.5%	-19.9%	-16.1%	-21.7%	-19.0%	-18.9%
2009-07-01	Specific	-38.9%	-31.2%	-13.3%	-15.6%	-22.3%	-27.7%	-33.1%	-21.1%	-18.7%	-23.0%	-23.1%	-23.0%	-16.1%	-24.0%	-25.0%	-24.8%	-20.3%	-22.4%	-22.1%	-15.6%	-21.8%
2009-07-01	Class	-38.9%	-30.5%	-12.4%	-14.7%	-21.5%	-27.0%	-32.5%	-20.3%	-17.9%	-22.2%	-22.3%	-22.2%	-15.3%	-23.2%	-24.2%	-24.0%	-20.3%	-21.7%	-22.1%	-15.6%	-21.0%
2010-04-01	Specific	-23.0%	-22.6%	-14.1%	-15.9%	-18.0%	-22.5%	-23.2%	-16.9%	-16.8%	-19.0%	-19.2%	-18.7%	-12.8%	-19.4%	-19.3%	-19.0%	-18.5%	-18.6%	-18.6%	-17.7%	-17.9%
2010-04-01	Class	-33.9%	-33.5%	-26.2%	-27.8%	-29.5%	-33.4%	-34.0%	-28.6%	-28.5%	-30.4%	-30.6%	-30.1%	-25.1%	-30.8%	-30.6%	-30.4%	-18.5%	-30.1%	-18.6%	-17.7%	-29.4%
2011-04-01	Specific	-3.9%	-0.7%	16.0%	16.0%	7.8%	-0.4%	-10.1%	6.7%	4.3%	14.3%	4.7%	4.3%	5.9%	4.3%	3.4%	8.0%	5.6%	5.5%	5.5%	7.1%	2.7%
2011-04-01	Class	-26.4%	-26.4%	-18.4%	-18.4%	-24.1%	-26.4%	-26.4%	-24.9%	-26.4%	-19.6%	-26.3%	-26.4%	-25.5%	-26.4%	-26.4%	-23.9%	5.6%	-25.7%	5.5%	7.1%	-26.4%
2013-04-01	Specific	-15.1%	-14.7%	-15.1%	-8.2%	-14.7%	-15.1%	-15.1%	-15.1%	-15.1%	-14.5%	-15.1%	-15.1%	-14.1%	-15.1%	-15.1%	-11.3%	-15.1%	-15.1%	-15.1%	-12.3%	-15.1%
2013-04-01	Class	-4.5%	-0.9%	-4.6%	6.7%	-0.9%	-7.6%	-15.1%	-2.9%	-4.1%	-0.7%	-6.4%	-2.1%	-0.1%	-2.1%	-3.2%	3.1%	-15.1%	-2.4%	-15.1%	-12.3%	-4.7%
2014-04-01	Specific	0.4%	6.3%	1.9%	6.7%	5.8%	6.2%	-1.4%	3.0%	0.4%	3.7%	3.6%	4.2%	5.4%	4.2%	3.7%	7.0%	3.1%	3.4%	3.7%	2.5%	4.3%
2014-04-01	Class	11.0%	17.5%	12.6%	18.0%	16.9%	17.4%	9.0%	13.9%	11.0%	14.7%	14.6%	15.2%	16.5%	15.2%	14.7%	18.3%	3.1%	14.3%	3.7%	2.5%	15.4%
2015-05-01	Specific	9.5%	22.2%	9.4%	18.1%	16.3%	14.5%	8.3%	11.4%	10.0%	15.6%	11.5%	12.6%	12.4%	12.6%	13.4%	16.1%	14.1%	14.0%	14.4%	15.4%	15.4%
2015-05-01	Class	-4.6%	6.5%	-4.7%	3.0%	1.4%	-0.2%	-5.6%	-2.9%	-4.1%	0.8%	-2.8%	-1.8%	-2.0%	-1.8%	-1.1%	1.2%	14.1%	-0.6%	14.4%	15.4%	0.6%
2016-07-01	Specific	-6.6%	6.7%	-2.2%	4.0%	2.3%	4.5%	1.4%	2.3%	5.0%	1.1%	0.8%	-0.8%	4.0%	-0.8%	2.6%	1.0%	1.8%	1.5%	1.8%	-0.7%	3.3%
2016-07-01	Class	-3.6%	10.1%	0.8%	7.3%	5.5%	7.8%	4.6%	5.5%	8.3%	4.3%	4.0%	2.3%	7.3%	2.3%	5.8%	4.2%	1.8%	4.7%	1.8%	-0.7%	6.6%
2017-04-01	Specific	-20.0%	-2.9%	-13.0%	-4.5%	-7.4%	-3.4%	-9.8%	-8.5%	-5.6%	-8.5%	-7.5%	-9.0%	-6.1%	-9.0%	-8.3%	-9.0%	-8.0%	-8.1%	-7.5%	-8.1%	-4.9%
2017-04-01	Class	-12.2%	10.3%	-1.1%	8.5%	5.2%	9.8%	2.5%	4.0%	7.3%	4.0%	5.1%	3.5%	6.7%	3.5%	4.2%	3.5%	-8.0%	4.5%	-7.5%	-8.1%	8.1%
2019-05-01	Specific	-9.6%	-5.7%	-6.5%	-5.4%	-5.9%	-6.5%	-6.6%	-12.0%	-8.7%	-6.2%	-6.0%	-7.0%	0.1%	-7.0%	-3.8%	-4.0%	-3.4%	-5.9%	-5.3%	-12.5%	-0.8%
2019-05-01	Class	-9.6%	-5.7%	-6.5%	-5.4%	-5.9%	-6.5%	-6.6%	-12.0%	-8.7%	-6.2%	-6.0%	-7.0%	0.1%	-7.0%	-3.8%	-4.0%	-3.4%	-5.9%	-5.3%	-12.5%	-0.8%
2020-06-01	Specific	-8.6%	7.8%	2.7%	5.8%	5.4%	6.0%	7.0%	-0.8%	2.5%	4.9%	6.9%	5.9%	13.0%	5.9%	9.5%	6.2%	7.6%	5.1%	6.1%	-3.8%	10.9%
2020-06-01	Class	-8.6%	7.8%	2.7%	5.8%	5.4%	6.0%	7.0%	-0.8%	2.5%	4.9%	6.9%	5.9%	13.0%	5.9%	9.5%	6.2%	7.6%	5.1%	6.1%	-3.8%	10.9%
2022-11-01	Specific	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%
2022-11-01	Class	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%	16.8%

MINNESOTA

HISTORY OF BASIC GROUP I
LOSS COST CHANGES BY TERRITORY, RATING ID AND RATING GROUP

TERRITORY: Saint Paul

(1) Effective Date	(2) Rating ID	(3) Rating Group																				
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	17	18	19	20	21	22
2006-04-01	Specific	-25.2%	-25.2%	-19.6%	-21.3%	-23.7%	-25.2%	-25.2%	-25.1%	-22.2%	-24.4%	-25.0%	-24.7%	-20.6%	-22.9%	-22.2%	-25.1%	-22.9%	-24.4%	-24.0%	-25.2%	-23.6%
2006-04-01	Class	-14.6%	-13.3%	-2.6%	-4.7%	-7.5%	-10.6%	-11.1%	-9.3%	-5.8%	-8.4%	-9.1%	-8.8%	-3.8%	-6.6%	-5.8%	-9.2%	-22.9%	-8.4%	-24.0%	-25.2%	-7.5%
2008-04-01	Specific	-26.0%	-19.0%	-10.0%	-9.2%	-11.3%	-8.4%	-12.9%	-16.1%	-7.4%	-11.7%	-10.7%	-13.6%	-0.2%	-10.5%	-21.2%	-15.1%	-10.2%	-12.5%	-12.2%	-9.2%	-15.4%
2008-04-01	Class	-21.4%	-12.9%	-3.1%	-2.3%	-4.6%	-1.4%	-6.3%	-9.8%	-0.3%	-5.0%	-3.9%	-7.0%	7.4%	-3.7%	-15.2%	-8.6%	-10.2%	-5.9%	-12.2%	-9.2%	-9.0%
2009-07-01	Specific	-32.9%	-24.5%	-4.7%	-7.2%	-14.6%	-20.6%	-26.6%	-13.2%	-10.7%	-15.3%	-15.4%	-15.3%	-7.8%	-16.4%	-17.5%	-17.3%	-12.4%	-14.7%	-14.4%	-7.2%	-14.0%
2009-07-01	Class	-32.9%	-23.7%	-3.8%	-6.3%	-13.7%	-19.8%	-25.9%	-12.3%	-9.8%	-14.5%	-14.6%	-14.5%	-6.8%	-15.6%	-16.7%	-16.4%	-12.4%	-13.9%	-14.4%	-7.2%	-13.2%
2010-04-01	Specific	-17.5%	-17.1%	-7.9%	-9.9%	-12.1%	-16.9%	-17.7%	-11.0%	-10.8%	-13.3%	-13.4%	-12.9%	-6.6%	-13.7%	-13.5%	-13.3%	-12.7%	-12.8%	-12.8%	-11.9%	-12.0%
2010-04-01	Class	-29.1%	-28.8%	-20.9%	-22.6%	-24.5%	-28.6%	-29.3%	-23.5%	-23.4%	-25.5%	-25.6%	-25.2%	-19.8%	-25.8%	-25.7%	-25.5%	-12.7%	-25.1%	-12.8%	-11.9%	-24.4%
2011-04-01	Specific	1.1%	4.6%	22.1%	22.1%	13.5%	4.9%	-5.3%	12.3%	9.7%	20.3%	10.2%	9.7%	11.4%	9.7%	8.8%	13.8%	11.2%	11.1%	11.1%	12.8%	8.0%
2011-04-01	Class	-22.5%	-22.5%	-14.0%	-14.0%	-20.1%	-22.5%	-22.5%	-20.9%	-22.5%	-15.3%	-22.4%	-22.5%	-21.5%	-22.5%	-22.5%	-19.9%	11.2%	-21.7%	11.1%	12.8%	-22.5%
2013-04-01	Specific	-21.7%	-21.3%	-21.7%	-15.3%	-21.3%	-21.7%	-21.7%	-21.7%	-21.7%	-21.1%	-21.7%	-21.7%	-20.6%	-21.7%	-21.7%	-18.2%	-21.7%	-21.7%	-21.7%	-19.1%	-21.7%
2013-04-01	Class	-11.9%	-8.5%	-12.0%	-1.6%	-8.5%	-14.7%	-21.7%	-10.5%	-11.6%	-8.3%	-13.7%	-9.7%	-7.8%	-9.7%	-10.8%	-4.9%	-21.7%	-10.0%	-21.7%	-19.1%	-12.1%
2014-04-01	Specific	-8.4%	-3.0%	-7.1%	-2.7%	-3.5%	-3.1%	-10.1%	-6.1%	-8.4%	-5.4%	-5.5%	-4.9%	-3.9%	-4.9%	-5.4%	-2.4%	-6.0%	-5.7%	-5.4%	-6.5%	-4.8%
2014-04-01	Class	1.3%	7.2%	2.7%	7.6%	6.7%	7.1%	-0.6%	3.9%	1.3%	4.6%	4.5%	5.1%	6.3%	5.1%	4.6%	7.9%	-6.0%	4.3%	-5.4%	-6.5%	5.2%
2015-05-01	Specific	6.3%	18.6%	6.1%	14.6%	12.9%	11.1%	5.2%	8.1%	6.8%	12.2%	8.2%	9.3%	9.1%	9.3%	10.1%	12.7%	10.8%	10.7%	11.0%	12.0%	12.0%
2015-05-01	Class	-7.4%	3.4%	-7.5%	-0.1%	-1.6%	-3.1%	-8.3%	-5.7%	-6.9%	-2.2%	-5.6%	-4.7%	-4.9%	-4.7%	-4.0%	-1.8%	10.8%	-3.5%	11.0%	12.0%	-2.4%
2016-07-01	Specific	-2.2%	11.7%	2.3%	8.8%	7.0%	9.4%	6.1%	7.0%	9.9%	5.8%	5.5%	3.8%	8.8%	3.8%	7.4%	5.7%	6.5%	6.2%	6.5%	3.9%	8.1%
2016-07-01	Class	0.8%	15.2%	5.5%	12.3%	10.4%	12.8%	9.4%	10.4%	13.4%	9.1%	8.8%	7.0%	12.3%	7.0%	10.7%	9.0%	6.5%	9.5%	6.5%	3.9%	11.5%
2017-04-01	Specific	-12.5%	6.2%	-4.8%	4.5%	1.3%	5.7%	-1.3%	0.1%	3.3%	0.1%	1.2%	-0.4%	2.7%	-0.4%	0.3%	-0.4%	0.7%	0.6%	1.2%	0.6%	4.1%
2017-04-01	Class	-4.0%	20.6%	8.2%	18.7%	15.1%	20.1%	12.2%	13.7%	17.4%	13.7%	15.0%	13.2%	16.7%	13.2%	14.0%	13.2%	0.7%	14.3%	1.2%	0.6%	18.3%
2019-05-01	Specific	1.5%	5.9%	5.0%	6.2%	5.7%	5.0%	4.9%	-1.1%	2.6%	5.4%	5.6%	4.4%	12.4%	4.4%	8.0%	7.8%	8.5%	5.7%	6.3%	-1.7%	11.5%
2019-05-01	Class	1.5%	5.9%	5.0%	6.2%	5.7%	5.0%	4.9%	-1.1%	2.6%	5.4%	5.6%	4.4%	12.4%	4.4%	8.0%	7.8%	8.5%	5.7%	6.3%	-1.7%	11.5%
2020-06-01	Specific	-4.7%	12.4%	7.1%	10.3%	9.9%	10.5%	11.6%	3.4%	6.9%	9.4%	11.5%	10.4%	17.9%	10.4%	14.2%	10.7%	12.2%	9.6%	10.6%	0.3%	15.6%
2020-06-01	Class	-4.7%	12.4%	7.1%	10.3%	9.9%	10.5%	11.6%	3.4%	6.9%	9.4%	11.5%	10.4%	17.9%	10.4%	14.2%	10.7%	12.2%	9.6%	10.6%	0.3%	15.6%
2022-11-01	Specific	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%
2022-11-01	Class	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%

MINNESOTA

HISTORY OF BASIC GROUP I
LOSS COST CHANGES BY TERRITORY, RATING ID AND RATING GROUP

TERRITORY: Balance Of State (Minnesota)

(1) Effective Date	(2) Rating ID	(3) Rating Group																				
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	17	18	19	20	21	22
2006-04-01	Specific	-18.8%	-18.8%	-12.7%	-14.6%	-17.2%	-18.8%	-18.8%	-18.6%	-15.6%	-17.8%	-18.5%	-18.2%	-13.8%	-16.3%	-15.6%	-18.5%	-16.3%	-17.8%	-17.5%	-18.8%	-17.1%
2006-04-01	Class	-7.2%	-5.7%	5.8%	3.5%	0.5%	-2.8%	-3.3%	-1.4%	2.3%	-0.4%	-1.2%	-0.9%	4.5%	1.4%	2.3%	-1.3%	-16.3%	-0.4%	-17.5%	-18.8%	0.5%
2008-04-01	Specific	-30.3%	-23.8%	-15.2%	-14.5%	-16.5%	-13.8%	-18.0%	-21.0%	-12.8%	-16.9%	-15.9%	-18.6%	-6.0%	-15.7%	-25.8%	-20.0%	-15.4%	-17.6%	-17.3%	-14.5%	-20.4%
2008-04-01	Class	-26.0%	-18.0%	-8.8%	-8.0%	-10.1%	-7.2%	-11.7%	-15.0%	-6.1%	-10.6%	-9.5%	-12.4%	1.2%	-9.3%	-20.2%	-14.0%	-15.4%	-11.4%	-17.3%	-14.5%	-14.3%
2009-07-01	Specific	-36.2%	-28.1%	-9.4%	-11.8%	-18.8%	-24.5%	-30.1%	-17.5%	-15.1%	-19.5%	-19.6%	-19.5%	-12.3%	-20.6%	-21.6%	-21.4%	-16.7%	-18.9%	-18.6%	-11.8%	-18.3%
2009-07-01	Class	-36.2%	-27.4%	-8.4%	-10.9%	-18.0%	-23.8%	-29.4%	-16.7%	-14.2%	-18.7%	-18.8%	-18.7%	-11.5%	-19.8%	-20.8%	-20.6%	-16.7%	-18.1%	-18.6%	-11.8%	-17.5%
2010-04-01	Specific	-14.8%	-14.3%	-4.8%	-6.9%	-9.2%	-14.1%	-14.9%	-8.0%	-7.8%	-10.3%	-10.5%	-10.0%	-3.5%	-10.8%	-10.6%	-10.3%	-9.7%	-9.9%	-9.9%	-8.9%	-9.1%
2010-04-01	Class	-26.8%	-26.4%	-18.2%	-20.0%	-21.9%	-26.2%	-26.9%	-20.9%	-20.8%	-23.0%	-23.1%	-22.6%	-17.1%	-23.3%	-23.2%	-23.0%	-9.7%	-22.6%	-9.9%	-8.9%	-21.9%
2011-04-01	Specific	-2.3%	1.0%	17.9%	17.9%	9.7%	1.3%	-8.6%	8.5%	6.1%	16.3%	6.5%	6.1%	7.6%	6.1%	5.2%	9.9%	7.4%	7.3%	7.3%	8.9%	4.5%
2011-04-01	Class	-25.1%	-25.1%	-16.9%	-16.9%	-22.7%	-25.1%	-25.1%	-23.6%	-25.1%	-18.2%	-25.0%	-25.1%	-24.2%	-25.1%	-25.1%	-22.6%	7.4%	-24.4%	7.3%	8.9%	-25.1%
2013-04-01	Specific	-7.5%	-7.0%	-7.5%	0.1%	-7.0%	-7.5%	-7.5%	-7.5%	-7.5%	-6.8%	-7.5%	-7.5%	-6.3%	-7.5%	-7.5%	-3.3%	-7.5%	-7.5%	-7.5%	-4.3%	-7.5%
2013-04-01	Class	4.0%	8.2%	3.9%	16.3%	8.2%	0.8%	-7.5%	5.8%	4.5%	8.4%	2.1%	6.7%	9.0%	6.7%	5.4%	12.4%	-7.5%	6.3%	-7.5%	-4.3%	3.8%
2014-04-01	Specific	-4.2%	1.4%	-2.8%	1.8%	0.9%	1.3%	-6.0%	-1.7%	-4.2%	-1.0%	-1.1%	-0.5%	0.5%	-0.5%	-1.0%	2.1%	-1.6%	-1.3%	-1.0%	-2.2%	-0.4%
2014-04-01	Class	5.9%	12.1%	7.5%	12.6%	11.6%	12.0%	4.0%	8.6%	5.9%	9.4%	9.3%	10.0%	11.2%	10.0%	9.4%	12.9%	-1.6%	9.1%	-1.0%	-2.2%	10.1%
2015-05-01	Specific	6.8%	19.2%	6.7%	15.2%	13.4%	11.7%	5.7%	8.7%	7.3%	12.8%	8.8%	9.9%	9.7%	9.9%	10.7%	13.2%	11.3%	11.2%	11.6%	12.6%	12.6%
2015-05-01	Class	-6.9%	3.9%	-7.0%	0.4%	-1.1%	-2.7%	-7.9%	-5.3%	-6.4%	-1.7%	-5.2%	-4.2%	-4.4%	-4.2%	-3.5%	-1.3%	11.3%	-3.0%	11.6%	12.6%	-1.9%
2016-07-01	Specific	-3.5%	10.3%	1.0%	7.4%	5.7%	8.0%	4.7%	5.7%	8.5%	4.4%	4.1%	2.4%	7.4%	2.4%	6.0%	4.3%	5.2%	4.8%	5.2%	2.5%	6.7%
2016-07-01	Class	-0.5%	13.7%	4.2%	10.8%	9.0%	11.4%	8.0%	9.0%	11.9%	7.7%	7.4%	5.7%	10.8%	5.7%	9.3%	7.6%	5.2%	8.1%	5.2%	2.5%	10.1%
2017-04-01	Specific	-8.6%	10.9%	-0.6%	9.1%	5.8%	10.3%	3.1%	4.5%	7.8%	4.5%	5.7%	4.0%	7.2%	4.0%	4.7%	4.0%	5.1%	5.0%	5.7%	5.0%	8.7%
2017-04-01	Class	0.3%	25.9%	13.0%	23.9%	20.2%	25.3%	17.1%	18.8%	22.5%	18.8%	20.1%	18.2%	21.8%	18.2%	19.0%	18.2%	5.1%	19.4%	5.7%	5.0%	23.4%
2019-05-01	Specific	2.0%	6.4%	5.5%	6.7%	6.2%	5.5%	5.4%	-0.6%	3.1%	5.9%	6.1%	5.0%	13.0%	5.0%	8.5%	8.3%	9.1%	6.2%	6.9%	-1.3%	12.0%
2019-05-01	Class	2.0%	6.4%	5.5%	6.7%	6.2%	5.5%	5.4%	-0.6%	3.1%	5.9%	6.1%	5.0%	13.0%	5.0%	8.5%	8.3%	9.1%	6.2%	6.9%	-1.3%	12.0%
2020-06-01	Specific	-7.2%	9.5%	4.3%	7.4%	7.0%	7.6%	8.6%	0.7%	4.1%	6.5%	8.5%	7.5%	14.8%	7.5%	11.2%	7.8%	9.3%	6.7%	7.7%	-2.4%	12.5%
2020-06-01	Class	-7.2%	9.5%	4.3%	7.4%	7.0%	7.6%	8.6%	0.7%	4.1%	6.5%	8.5%	7.5%	14.8%	7.5%	11.2%	7.8%	9.3%	6.7%	7.7%	-2.4%	12.5%
2022-11-01	Specific	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%
2022-11-01	Class	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%

MINNESOTA

SPECIAL CAUSES OF LOSS

HISTORY OF LOSS COST LEVEL CHANGES BY CATEGORY

(1) Effective Date	(2) Category													
	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>
2006-04-01	-13.4%	-21.7%	-13.7%	-25.7%	-21.4%									
2008-04-01	-15.4%	-9.4%	8.9%	12.0%	-2.4%									
2009-07-01	-11.9%	-9.4%	-0.7%	11.4%	2.1%									
2010-04-01	17.5%	15.9%	12.5%	35.5%	16.1%									
2011-04-01	3.7%	1.3%	1.7%	7.6%	9.9%	4.6%	1.7%	-3.7%	0.2%	5.9%	11.0%	5.4%	2.6%	-0.3%
2013-04-01	18.8%	3.3%	1.7%	-2.7%	7.0%	9.5%	8.4%	-1.2%	4.4%	14.2%	5.7%	22.4%	13.1%	8.6%
2014-04-01	17.6%	12.7%	5.7%	4.6%	15.1%	15.6%	11.8%	0.3%	8.1%	21.4%	14.6%	24.4%	15.4%	11.2%
2015-05-01	-0.4%	-11.7%	-6.3%	-7.9%	-7.1%	-3.7%	-6.5%	-14.7%	-10.1%	-4.7%	-7.8%	-1.1%	-4.1%	-9.0%
2016-07-01	6.5%	-4.4%	1.4%	-3.5%	-1.7%	1.6%	0.1%	-13.0%	-3.8%	1.4%	-1.2%	2.9%	0.9%	-2.1%
2017-04-01	1.4%	-4.9%	-1.8%	-2.1%	-2.1%	-0.6%	-2.4%	-8.0%	-3.3%	-0.8%	-0.4%	-4.4%	-2.3%	-2.7%
2019-05-01	-2.4%	-12.4%	-8.0%	-10.8%	-7.3%	-7.4%	-10.1%	-11.3%	-10.0%	-8.1%	-9.2%	-17.6%	-11.4%	-6.7%
2020-06-01	-5.3%	-8.8%	-7.4%	-8.3%	-6.6%	-8.0%	-8.0%	-8.3%	-9.2%	-8.1%	-9.6%	-11.8%	-9.2%	-5.8%
2022-11-01	6.7%	1.7%	5.9%	2.5%	7.3%	2.6%	3.7%	7.1%	0.1%	3.3%	0.6%	0.1%	2.9%	3.1%

MINNESOTA

BASIC GROUP I IMPLICIT PACKAGE
MODIFICATION FACTORS (IPMFS) AND IPMF CAPS

<u>TOP</u>	<u>Description</u>	<u>IPMF</u>	<u>Low</u> <u>Cap</u>	<u>High</u> <u>Cap</u>
31	Motel/Hotel	0.962	0.500	1.500
32	Apartment	0.787	0.500	1.500
33	Office	1.368	0.500	1.500
34	Mercantile	0.950	0.500	1.500
35	Institutional	0.819	0.500	1.500
36	Services	1.106	0.500	1.500
37	Indust/Processing	1.037	0.500	1.500
38	Contractors	1.027	0.500	1.500

MINNESOTA

BASIC GROUP II IMPLICIT PACKAGE
MODIFICATION FACTORS (IPMFS) AND IPMF CAPS

<u>TOP</u>	<u>Description</u>	<u>IPMF</u>	<u>Low</u> <u>Cap</u>	<u>High</u> <u>Cap</u>
31	Motel/Hotel	1.116	0.500	1.500
32	Apartment	1.289	0.500	1.500
33	Office	0.832	0.500	1.500
34	Mercantile	0.760	0.500	1.500
35	Institutional	0.797	0.500	1.500
36	Services	1.046	0.500	1.500
37	Indust/Processing	0.712	0.500	1.500
38	Contractors	1.018	0.500	1.500

MINNESOTA

SPECIAL CAUSES OF LOSS IMPLICIT PACKAGE
MODIFICATION FACTORS (IPMFS) AND IPMF CAPS

<u>TOP</u>	<u>Description</u>	<u>IPMF</u>	Low <u>Cap</u>	High <u>Cap</u>
31	Motel/Hotel	0.819	0.500	1.500
32	Apartment	0.861	0.500	1.500
33	Office	1.094	0.500	1.500
34	Mercantile	0.756	0.500	1.500
35	Institutional	0.586	0.500	1.500
36	Services	0.765	0.500	1.500
37	Indust/Processing	0.519	0.500	1.500
38	Contractors	0.933	0.500	1.500

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DEVELOPMENT OF CURRENT COST FACTORS AND LOSS PROJECTION FACTORS

Period ending September 30, 2023

Part A: Quarterly Indices for Buildings, Contents and Time Element

Building - Xactware Commercial Index (XCI) (Base: 2009 = 100.0)

Contents - Producer Price Index (PPI) from U.S. Dept. of Labor (Finished Goods Less Energy) (Base: 2009 = 100.0)

Time Element Combined Index - Weighted average of IMSEP and RSALES indices ^(a)

Quarter	Buildings	Contents	IMSEP	RSALES	Time Element
					Combined Index
Q4-2020	129.8	122.9	1.034	1.018	1.023
Q1-2021	130.7	123.9	1.051	1.034	1.039
Q2-2021	135.9	126.7	1.073	1.061	1.065
Q3-2021	137.7	129.1	1.100	1.083	1.088
Q4-2021	140.9	131.8	1.130	1.113	1.118
Q1-2022	145.2	135.4	1.166	1.149	1.154
Q2-2022	146.2	139.7	1.205	1.174	1.183
Q3-2022	147.6	142.1	1.220	1.183	1.194
Q4-2022	149.6	144.7	1.229	1.185	1.198
Q1-2023	152.6	145.2	1.236	1.188	1.202
Q2-2023	154.5	145.5	1.240	1.192	1.206
Q3-2023	156.9	145.9	1.247	1.195	1.211

Part B: Computation of Loss Projection Factor (LPF) based on 12 points

	<u>Buildings</u>	<u>Contents</u>	<u>Time Element</u>
Annual Rate of Change (AROC)	+7.19%	+7.42%	+6.87%
Coefficient of Determination (R ²)	0.979	0.954	0.912
Loss Projection Factor = $(1.0 + \text{AROC})^{(24.5/12)}$	1.1523	1.1574	1.1453

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DEVELOPMENT OF CURRENT COST FACTORS AND LOSS PROJECTION FACTORS

Period ending September 30, 2023

Part C: Calculation of Current Cost Factors (CCF)

<u>Calendar Year Averages</u>				<u>Current Cost Factors Based on Average Index Values for Period ending September 30, 2023</u>		
<u>Year</u>	<u>XCI</u>	<u>PPI</u>	<u>Index</u>	<u>Buildings</u>	<u>Contents</u>	<u>Time Element</u>
2013	102.7	109.7	1.022	156.9 / 102.7 = 1.528	145.9 / 109.7 = 1.329	1.211 / 1.022 = 1.185
2014	104.7	112.5	1.024	156.9 / 104.7 = 1.499	145.9 / 112.5 = 1.296	1.211 / 1.024 = 1.183
2015	109.1	113.8	1.003	156.9 / 109.1 = 1.438	145.9 / 113.8 = 1.282	1.211 / 1.003 = 1.208
2016	111.1	114.4	0.991	156.9 / 111.1 = 1.412	145.9 / 114.4 = 1.275	1.211 / 0.991 = 1.222
2017	114.3	116.4	1.000	156.9 / 114.3 = 1.373	145.9 / 116.4 = 1.253	1.211 / 1.000 = 1.211
2018	117.8	118.4	1.013	156.9 / 117.8 = 1.332	145.9 / 118.4 = 1.232	1.211 / 1.013 = 1.196
2019	121.5	120.9	1.018	156.9 / 121.5 = 1.292	145.9 / 120.9 = 1.206	1.211 / 1.018 = 1.190
2020	127.2	122.5	1.016	156.9 / 127.2 = 1.233	145.9 / 122.5 = 1.190	1.211 / 1.016 = 1.193
2021	136.3	127.9	1.078	156.9 / 136.3 = 1.151	145.9 / 127.9 = 1.141	1.211 / 1.078 = 1.124
2022	147.2	140.5	1.182	156.9 / 147.2 = 1.066	145.9 / 140.5 = 1.038	1.211 / 1.182 = 1.024

(a) 30% weight for IMSEP and 70% weight for RSALES. IMSEP & RSALES indices were rescaled to a 2012 year base.

(b) Assuming a rate or loss cost revision date of 9/01/2024, and all one year policies, the time interval between the midpoint of the latest period (8/15/2023) and the average date of accident (9/01/2025) would be 24.5 months.

MINNESOTA

SUMMARY OF LOSS TREND ADJUSTMENTS (LTA'S)

(1)	(2)	(3)	(4)
<u>Coverage</u>	<u>Subline</u>	<u>5-Year Incurred</u>	<u>LTA's*</u>
Buildings	Basic Group I	3,657,062,915	-0.3%
	Basic Group II	4,450,315,838	0.5%
	Special Causes of Loss	2,327,811,519	0.2%
	Total	10,435,190,272	0.2%
Contents	Basic Group I	1,034,779,617	0.3%
	Basic Group II	486,799,243	3.1%
	Special Causes of Loss	800,403,105	-0.2%
	Total	2,321,981,965	0.7%
Time Element	Basic Group I	544,184,465	1.6%
	Basic Group II	296,823,948	2.3%
	Special Causes of Loss	242,926,481	1.6%
	Total	1,083,934,894	1.8%
Grand Total		13,841,107,130	0.4%

*The LTA's are based on internal severity and frequency data. They apply to both the historical period and projection period.

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DEVELOPMENT OF LTA'SI. EXTERNAL RATE OF CHANGE^a

Calendar Year	(1) Buildings Current Cost Factor	(2) Contents Current Cost Factor	(3) Time Element Cost Factor	(4) Basic Group I (BGI)& Special Causes of Loss (SCL) Weights	(5) Basic Group II (BGII) Weights
2012	1.395	1.221	1.097		0.10
2013	1.372	1.201	1.094		0.10
2014	1.346	1.171	1.092		0.10
2015	1.291	1.158	1.115		0.10
2016	1.268	1.152	1.128		0.10
2017	1.233	1.133	1.118	0.10	0.10
2018	1.196	1.113	1.104	0.15	0.10
2019	1.160	1.090	1.099	0.20	0.10
2020	1.108	1.076	1.101	0.25	0.10
2021	1.034	1.031	1.038	0.30	0.10

(6) AVERAGE CURRENT COST FACTORS

	Buildings	Contents	Time Element
Basic Group I and Special Causes of Loss (Weighted on Column (4))	1.122	1.076	1.084
Basic Group II (Weighted on Column (5))	1.240	1.135	1.099

(7) LOSS PROJECTION FACTORS

	Buildings	Contents	Time Element
Annual Rate of Change	0.060	0.029	0.030
Loss Projection Factor: ^b $(1.0 + \text{Annual Rate of Change})^{(X/12)}$	1.164	1.078	1.080

(8) TOTAL TREND FACTOR (Average Current Cost Factor \times Loss Projection Factor)

	Buildings	Contents	Time Element
Basic Group I and Special Causes of Loss	1.306	1.160	1.171
Basic Group II	1.444	1.223	1.187

(9) EXTERNAL ANNUAL RATE OF CHANGE^c

	Buildings	Contents	Time Element
Basic Group I and Special Causes of Loss: $(\text{Total Trend Factor})^{12/54}$	1.061	1.034	1.036
Basic Group II: $(\text{Total Trend Factor})^{12/90}$	1.050	1.027	1.023

(a) The Current Cost Factors and Loss Projection Factors on this exhibit are based on external economic indices through December 31, 2021 for Buildings, Contents and Time Element.

(b) Assuming a loss cost revision date of July 1, 2023, the time interval between the midpoint of the latest period of external trend information (November 15, 2021) and the prospective average date of loss (July 1, 2024) is 31.5 months for Buildings, Contents and Time Element.

(c) The time interval from the weighted midpoint of the experience period to the prospective average date of loss (July 1, 2024) is 54 months for BG I and SCL, and 90 months for BG II. The weighted midpoint is January 1, 2020 for BG I and SCL, and January 1, 2017 for BG II.

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II. INTERNAL ANNUAL RATES OF CHANGE:

(10) SELECTED COMFAL

Severity	Buildings	Contents	Time Element
Basic Group I (BGI)	1.075	1.060	1.070
Basic Group II (BGII)	1.060	1.090	1.070
Special Causes of Loss	1.065	1.050	1.070

Frequency	Buildings	Contents	Time Element
Basic Group I (BGI)	0.990	0.990	1.000
Basic Group II (BGII)	1.000	1.000	1.000
Special Causes of Loss	1.000	0.990	1.000

III. LTA CALCULATION:

CALCULATION OF LTAs - BUILDINGS

	(11)	(12)	(13)	(14)	(15)	(16)
	External	Internal	Indicated	Formula	Frequency	Final
	Rate of	Rate of	Severity LTA	Severity	Effect	Final
	<u>Change^d</u>	<u>Change</u>	<u>[(12)/(11)-1.0]</u>	<u>LTA^e</u>	<u>Effect</u>	<u>LTA^f</u>
Basic Group I (BGI)	1.061	1.075	1.3	0.7	-1.0	-0.3
Basic Group II (BGII)	1.050	1.060	1.0	0.5	0.0	0.5
Special Causes of Loss	1.061	1.065	0.4	0.2	0.0	0.2

CALCULATION OF LTAs - CONTENTS

	(11)	(12)	(13)	(14)	(15)	(16)
	External	Internal	Indicated	Formula	Frequency	Final
	Rate of	Rate of	Severity LTA	Severity	Effect	Final
	<u>Change^d</u>	<u>Change</u>	<u>[(12)/(11)-1.0]</u>	<u>LTA^e</u>	<u>Effect</u>	<u>LTA^f</u>
Basic Group I (BGI)	1.034	1.060	2.5	1.3	-1.0	0.3
Basic Group II (BGII)	1.027	1.090	6.1	3.1	0.0	3.1
Special Causes of Loss	1.034	1.050	1.5	0.8	-1.0	-0.2

CALCULATION OF LTAs - TIME ELEMENT

	(11)	(12)	(13)	(14)	(15)	(16)
	External	Internal	Indicated	Formula	Frequency	Final
	Rate of	Rate of	Severity LTA	Severity	Effect	Final
	<u>Change^d</u>	<u>Change</u>	<u>[(12)/(11)-1.0]</u>	<u>LTA^e</u>	<u>Effect</u>	<u>LTA^f</u>
Basic Group I (BGI)	1.036	1.070	3.3	1.6	0.0	1.6
Basic Group II (BGII)	1.023	1.070	4.6	2.3	0.0	2.3
Special Causes of Loss	1.036	1.070	3.3	1.6	0.0	1.6

(d) The external rates of change are based on external economic indices through December 31, 2021 for Buildings, Contents and Time Element.

(e) The formula severity LTA for Buildings, Contents and Time Element is calculated as one-half of the indicated severity LTA. This is equivalent to calculating the overall severity trend giving 50% weight to the external trend and 50% weight to the selected internal trend.

(f) The final LTA is calculated as the product (in factor form) of the formula severity LTA and frequency effect.

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EXPOSURE TREND
DEVELOPMENT OF CURRENT AND PROJECTED EARNED EXPOSURE FACTORS

Year	Buildings				Contents			
	(1) ^a Annual Written Increase	(2) ^a 7/1/2022 Written Factors	(3) ^b 3/1/2025 Projected Factors	(4) ^c 3/1/2025 Earned Factors	(5) ^a Annual Written Increase	(6) ^a 7/1/2022 Written Factors	(7) ^b 3/1/2025 Projected Factors	(8) ^c 3/1/2025 Earned Factors
2010	2.5%	1.379	1.563	1.592	1.7%	1.274	1.371	1.389
2011	2.5%	1.345	1.524	1.553	1.8%	1.252	1.348	1.365
2012	2.7%	1.310	1.484	1.514	1.8%	1.230	1.324	1.342
2013	2.6%	1.277	1.447	1.475	2.1%	1.204	1.296	1.317
2014	2.5%	1.246	1.412	1.438	2.1%	1.180	1.270	1.290
2015	2.3%	1.218	1.380	1.404	1.9%	1.158	1.246	1.264
2016	2.1%	1.193	1.352	1.373	1.8%	1.137	1.224	1.241
2017	2.1%	1.168	1.324	1.345	1.8%	1.117	1.202	1.219
2018	2.7%	1.137	1.288	1.315	1.9%	1.096	1.180	1.197
2019	2.9%	1.105	1.252	1.279	2.2%	1.073	1.155	1.174
2020	2.2%	1.082	1.226	1.246	2.1%	1.051	1.131	1.149
2021	3.2%	1.048	1.188	1.216	2.2%	1.028	1.107	1.125
2022	4.8%	1.000	1.133	1.174	2.8%	1.000	1.076	1.099

Notes

- a The percentages in columns (1) and (5) represent the change in written exposures from 07/01/n-1 to 07/01/n. Columns (2) and (6) contain the cumulative changes in written exposures for each year relative to the latest year.
- b The selected average annual changes in Amount of Insurance for projection purposes are 4.8% and 2.8% for Buildings and Contents, respectively. Consequently, the written factors at 7/1/2022 levels in column (2) and column (6) are brought to the level of the average date of writing in the effective period, 3/1/2025 (i.e., 6 months beyond an assumed revision date of 9/1/2024), by applying a factor of $(1.048)^{(32/12)}$ for Buildings and $(1.028)^{(32/12)}$ for Contents.
- c Written factors are earned into each accident year ending 12/31 using the following factors which assume all one year policies:

Year	Earning Factors (All Years)
n-2	1/32
n-1	11/16
n	9/32

For example, the factors used to adjust earned exposures for the period from 01/01/2022 to 12/31/2022 to the projected level are 1.174 for Buildings and 1.099 for Contents.

EXPOSURE TREND
DEVELOPMENT OF CURRENT AND PROJECTED EARNED EXPOSURE FACTORS

Time Element				
	(1) ^a	(2) ^a	(3) ^b	(4) ^c
	Annual	7/1/2022	3/1/2025	3/1/2025
	Written	Written	Projected	Earned
<u>Year</u>	<u>Increase</u>	<u>Factors</u>	<u>Factors</u>	<u>Factors</u>
2010	0.7%	1.127	1.176	1.182
2011	0.8%	1.118	1.166	1.173
2012	0.8%	1.109	1.157	1.164
2013	0.9%	1.099	1.147	1.154
2014	1.0%	1.088	1.135	1.144
2015	1.1%	1.076	1.123	1.132
2016	1.1%	1.065	1.111	1.120
2017	0.9%	1.055	1.101	1.109
2018	0.7%	1.048	1.093	1.099
2019	1.0%	1.037	1.082	1.090
2020	0.9%	1.028	1.072	1.080
2021	1.2%	1.016	1.060	1.069
2022	1.6%	1.000	1.043	1.056

Notes

- a The percentages in columns (1) and (5) represent the change in written exposures from 07/01/n-1 to 07/01/n. Columns (2) and (6) contain the cumulative changes in written exposures for each year relative to the latest year.
- b The selected average annual change in Net Income (Time Element exposure) for projection purposes is 1.6%. Consequently, the written factors at 7/1/2022 levels in column (2) are brought to the level of the average date of writing in the effective period, 3/1/2025 (i.e., 6 months beyond an assumed revision date of 9/1/2024), by applying a factor of $(1.016)^{(32/12)}$ for Time Element.
- c Written factors are earned into each accident year ending 12/31 using the following factors which assume all one year policies:

<u>Year</u>	<u>Earning Factors (All Years)</u>
n-2	1/32
n-1	11/16
n	9/32

For example, the factors used to adjust earned exposures for the period from 01/01/2022 to 12/31/2022 to the projected level is 1.056 for Time Element

PREMIUM TREND - BASIC GROUP I
DEVELOPMENT OF CURRENT AND PROJECTED EARNED PREMIUM FACTORS

Year	Buildings				Contents			
	(1) ^a	(2) ^a	(3) ^b	(4) ^c	(5) ^a	(6) ^a	(7) ^b	(8) ^c
	Annual Written Increase	7/1/2022 Written Factors	3/1/2025 Projected Factors	3/1/2025 Earned Factors	Annual Written Increase	7/1/2022 Written Factors	3/1/2025 Projected Factors	3/1/2025 Earned Factors
2010	2.0%	1.298	1.437	1.459	1.4%	1.225	1.302	1.316
2011	2.0%	1.273	1.410	1.430	1.5%	1.207	1.282	1.297
2012	2.2%	1.245	1.379	1.402	1.5%	1.189	1.263	1.277
2013	2.1%	1.220	1.351	1.372	1.8%	1.168	1.241	1.257
2014	2.0%	1.196	1.324	1.344	1.8%	1.148	1.220	1.236
2015	1.9%	1.173	1.299	1.318	1.6%	1.130	1.201	1.215
2016	1.7%	1.154	1.278	1.294	1.5%	1.113	1.183	1.197
2017	1.7%	1.135	1.257	1.273	1.5%	1.097	1.166	1.179
2018	2.2%	1.110	1.229	1.250	1.6%	1.079	1.146	1.161
2019	2.3%	1.085	1.202	1.222	1.8%	1.060	1.126	1.141
2020	1.8%	1.066	1.180	1.197	1.8%	1.041	1.106	1.121
2021	2.6%	1.039	1.151	1.173	1.8%	1.023	1.087	1.101
2022	3.9%	1.000	1.107	1.140	2.3%	1.000	1.063	1.081

Notes

- a The percentages in columns (1) and (5) represent the change in written premium (reflecting the combined effect of change in exposures and limit of insurance factors) from 07/01/n-1 to 07/01/n. Columns (2) and (6) contain the cumulative changes in written premiums for each year relative to the latest year.
- b The average annual changes in Premium for projection purposes are 3.9% and 2.3% for Buildings and Contents, respectively. Consequently, the written factors at 7/1/2022 levels in column (2) and column (6) are brought to the level of the average date of writing in the effective period, 3/1/2025 (i.e., 6 months beyond an assumed revision date of 9/1/2024), by applying a factor of $(1.039)^{(32/12)}$ for Buildings and $(1.023)^{(32/12)}$ for Contents.
- c Written factors are earned into each accident year ending 12/31 using the following factors which assume all one year policies:

Year	Earning Factors (All Years)
n-2	1/32
n-1	11/16
n	9/32

For example, the factors used to adjust earned exposures for the period from 01/01/2022 to 12/31/2022 to the projected level are 1.14 for Buildings and 1.081 for Contents.

PREMIUM TREND - BASIC GROUP II - OTHER THAN SOUTHEAST
DEVELOPMENT OF CURRENT AND PROJECTED EARNED PREMIUM FACTORS

	Buildings				Contents			
	(1) ^a	(2) ^a	(3) ^b	(4) ^c	(5) ^a	(6) ^a	(7) ^b	(8) ^c
Year	Annual Written Increase	7/1/2022 Written Factors	3/1/2025 Projected Factors	3/1/2025 Earned Factors	Annual Written Increase	7/1/2022 Written Factors	3/1/2025 Projected Factors	3/1/2025 Earned Factors
2010	1.9%	1.271	1.393	1.413	1.3%	1.204	1.273	1.286
2011	1.9%	1.247	1.367	1.387	1.4%	1.187	1.255	1.268
2012	2.0%	1.222	1.339	1.360	1.4%	1.171	1.238	1.251
2013	1.9%	1.200	1.315	1.333	1.6%	1.152	1.218	1.233
2014	1.9%	1.177	1.290	1.309	1.6%	1.134	1.199	1.213
2015	1.7%	1.158	1.269	1.285	1.4%	1.119	1.183	1.195
2016	1.6%	1.139	1.248	1.264	1.4%	1.103	1.166	1.179
2017	1.6%	1.121	1.229	1.243	1.4%	1.088	1.150	1.162
2018	2.0%	1.099	1.205	1.223	1.4%	1.073	1.134	1.146
2019	2.1%	1.077	1.180	1.199	1.7%	1.055	1.115	1.129
2020	1.6%	1.060	1.162	1.176	1.6%	1.038	1.097	1.111
2021	2.4%	1.035	1.134	1.155	1.7%	1.021	1.079	1.093
2022	3.5%	1.000	1.096	1.124	2.1%	1.000	1.057	1.073

Notes

- a The percentages in columns (1) and (5) represent the change in written premium (reflecting the combined effect of change in exposures and limit of insurance factors) from 07/01/n-1 to 07/01/n. Columns (2) and (6) contain the cumulative changes in written premiums for each year relative to the latest year.
- b The average annual changes in Premium for projection purposes are 3.5% and 2.1% for Buildings and Contents, respectively. Consequently, the written factors at 7/1/2022 levels in column (2) and column (6) are brought to the level of the average date of writing in the effective period, 3/1/2025 (i.e., 6 months beyond an assumed revision date of 9/1/2024), by applying a factor of $(1.035)^{(32/12)}$ for Buildings and $(1.021)^{(32/12)}$ for Contents.
- c Written factors are earned into each accident year ending 12/31 using the following factors which assume all one year policies:

<u>Year</u>	<u>Earning Factors (All Years)</u>
n-2	1/32
n-1	11/16
n	9/32

For example, the factors used to adjust earned exposures for the period from 01/01/2022 to 12/31/2022 to the projected level are 1.124 for Buildings and 1.073 for Contents.

PREMIUM TREND - SPECIAL CAUSES OF LOSS
DEVELOPMENT OF CURRENT AND PROJECTED EARNED PREMIUM FACTORS

	Buildings				Contents			
	(1) ^a Annual Written Increase	(2) ^a 7/1/2022 Written Factors	(3) ^b 3/1/2025 Projected Factors	(4) ^c 3/1/2025 Earned Factors	(5) ^a Annual Written Increase	(6) ^a 7/1/2022 Written Factors	(7) ^b 3/1/2025 Projected Factors	(8) ^c 3/1/2025 Earned Factors
Year								
2010	1.9%	1.281	1.411	1.432	1.1%	1.172	1.229	1.240
2011	1.9%	1.257	1.385	1.405	1.2%	1.158	1.214	1.225
2012	2.1%	1.231	1.356	1.378	1.2%	1.145	1.201	1.211
2013	2.0%	1.207	1.330	1.350	1.4%	1.129	1.184	1.197
2014	1.9%	1.184	1.304	1.324	1.4%	1.113	1.167	1.180
2015	1.8%	1.163	1.281	1.298	1.2%	1.100	1.154	1.164
2016	1.6%	1.145	1.261	1.276	1.2%	1.087	1.140	1.150
2017	1.6%	1.127	1.242	1.256	1.2%	1.074	1.126	1.137
2018	2.1%	1.104	1.216	1.235	1.2%	1.061	1.113	1.123
2019	2.2%	1.080	1.190	1.210	1.4%	1.047	1.098	1.109
2020	1.7%	1.062	1.170	1.185	1.4%	1.032	1.082	1.094
2021	2.4%	1.037	1.142	1.163	1.4%	1.018	1.068	1.079
2022	3.7%	1.000	1.102	1.132	1.8%	1.000	1.049	1.063

Notes

- a The percentages in columns (1) and (5) represent the change in written premium (reflecting the combined effect of change in exposures and limit of insurance factors) from 07/01/n-1 to 07/01/n. Columns (2) and (6) contain the cumulative changes in written premiums for each year relative to the latest year.
- b The average annual changes in Premium for projection purposes are 3.7% and 1.8% for Buildings and Contents, respectively. Consequently, the written factors at 7/1/2022 levels in column (2) and column (6) are brought to the level of the average date of writing in the effective period, 3/1/2025 (i.e., 6 months beyond an assumed revision date of 9/1/2024), by applying a factor of $(1.037)^{(32/12)}$ for Buildings and $(1.018)^{(32/12)}$ for Contents.
- c Written factors are earned into each accident year ending 12/31 using the following factors which assume all one year policies:

<u>Year</u>	<u>Earning Factors (All Years)</u>
n-2	1/32
n-1	11/16
n	9/32

For example, the factors used to adjust earned exposures for the period from 01/01/2022 to 12/31/2022 to the projected level are 1.132 for Buildings and 1.063 for Contents.

MINNESOTA

BASIC GROUP I

ADDITIONAL INFORMATION ON TREND ADJUSTMENTS

<u>Year</u>	(1)	(2)	(3)	(4)		
	Unadjusted	Trended	Average	Split %		
	Incurred	Incurred	Total Loss			
	<u>Losses</u>	<u>Losses</u>	Trend Factor			
			(2) / (1)	<u>Buildings</u>	<u>Contents</u>	<u>Time</u>
						<u>Element</u>
2018	17,384,706	28,460,928	1.637	83.3%	12.5%	4.2%
2019	19,663,756	30,892,674	1.571	72.5%	20.0%	7.5%
2020	34,040,722	51,063,686	1.500	72.2%	23.5%	4.3%
2021	26,892,999	38,628,188	1.436	79.3%	15.7%	5.0%
2022	22,566,968	28,987,578	1.285	81.3%	16.7%	2.0%

MINNESOTA

BASIC GROUP II

ADDITIONAL INFORMATION ON TREND ADJUSTMENTS

<u>Year</u>	(1) Unadjusted Incurred <u>Losses</u>	(2) Trended Incurred <u>Losses</u>	(3) Average Total Loss Trend Factor <u>(2) / (1)</u>	(4) Split %		
				<u>Buildings</u>	<u>Contents</u>	<u>Time Element</u>
2013	31,388,799	60,341,661	1.922	87.8%	11.9%	0.3%
2014	11,422,952	21,618,422	1.893	93.7%	3.5%	2.8%
2015	15,427,717	27,972,037	1.813	93.0%	6.1%	0.9%
2016	14,625,617	25,912,470	1.772	91.1%	8.4%	0.5%
2017	31,531,669	53,801,224	1.706	92.1%	6.5%	1.4%
2018	14,264,458	23,289,055	1.633	91.8%	6.9%	1.3%
2019	32,149,182	50,101,991	1.558	98.2%	1.7%	0.1%
2020	43,637,519	65,562,310	1.502	76.1%	20.3%	3.6%
2021	17,342,040	24,205,998	1.396	88.4%	11.4%	0.2%
2022	77,607,140	99,297,432	1.279	92.7%	6.9%	0.4%

MINNESOTA

SPECIAL CAUSES OF LOSS

ADDITIONAL INFORMATION ON TREND ADJUSTMENTS

<u>Year</u>	(1) Unadjusted Incurred <u>Losses</u>	(2) Trended Incurred <u>Losses</u>	(3) Average Total Loss Trend Factor <u>(2) / (1)</u>	(4) Split %		
				<u>Buildings</u>	<u>Contents</u>	<u>Time Element</u>
2018	7,190,523	11,547,793	1.606	66.2%	22.7%	11.1%
2019	15,045,833	23,579,527	1.567	76.3%	21.1%	2.6%
2020	8,761,380	13,133,048	1.499	72.8%	25.2%	2.0%
2021	8,517,639	12,120,190	1.423	69.9%	25.0%	5.1%
2022	12,767,987	16,344,491	1.280	61.4%	30.5%	8.1%

MINNESOTA

INCURRED LOSS DEVELOPMENT
LOSS YEARS 2013-2022
EVALUATED AS OF 12/2022

Basic Group I

Year Ending	Losses as of				
	15 Months	27 Months	39 Months	51 Months	63 Months
9/30/2013	931,921,894	913,782,110	911,457,583	901,884,795	890,095,098
9/30/2014	913,671,866	904,851,389	891,707,624	878,804,119	878,188,834
9/30/2015	913,045,729	882,920,442	873,698,259	871,847,919	867,781,146
9/30/2016	906,197,413	898,675,648	882,057,173	882,499,411	884,907,911
9/30/2017	1,041,979,481	1,015,979,282	997,780,761	987,208,017	986,912,074
9/30/2018	1,217,059,300	1,163,314,151	1,109,177,681	1,095,942,471	1,113,362,476
9/30/2019	1,171,423,227	1,129,809,656	1,070,770,542	1,059,814,819	
9/30/2020	1,362,037,913	1,308,391,538	1,290,288,122		
9/30/2021	1,307,923,577	1,269,620,153			
9/30/2022	1,267,876,875				

Year Ending	Ratios			
	27:15 Months	39:27 Months	51:39 Months	63:51 Months
9/30/2013	0.981	0.997	0.989	0.987
9/30/2014	0.990	0.985	0.986	0.999
9/30/2015	0.967	0.990	0.998	0.995
9/30/2016	0.992	0.982	1.001	1.003
9/30/2017	0.975	0.982	0.989	1.000
9/30/2018	0.956	0.953	0.988	1.016
9/30/2019	0.964	0.948	0.990	
9/30/2020	0.961	0.986		
9/30/2021	0.971			
5 Point Average	0.965	0.970	0.993	1.003

Development Factors to Ultimate

15 Months to Ultimate =	0.932
27 Months to Ultimate =	0.966
39 Months to Ultimate =	0.996
51 Months to Ultimate =	1.003

MINNESOTA

INCURRED LOSS DEVELOPMENT
LOSS YEARS 2013-2022
EVALUATED AS OF 12/2022

Basic Group II

Year Ending	Losses as of				
	15 Months	27 Months	39 Months	51 Months	63 Months
9/30/2013	563,782,588	582,868,136	590,011,641	598,398,526	606,574,728
9/30/2014	566,643,413	589,188,450	602,890,368	608,912,069	613,407,031
9/30/2015	436,327,511	464,498,502	467,947,379	472,026,803	476,798,649
9/30/2016	679,016,200	722,461,232	736,141,237	741,451,045	745,047,106
9/30/2017	804,443,848	854,654,361	885,870,130	900,834,218	904,991,430
9/30/2018	659,202,044	706,141,649	731,495,725	743,196,671	750,581,982
9/30/2019	732,854,738	774,468,894	787,651,291	798,658,232	
9/30/2020	1,232,810,793	1,272,899,844	1,289,541,458		
9/30/2021	645,062,484	700,328,189			
9/30/2022	990,292,781				

RATIOS

Year Ending	27:15 Months	39:27 Months	51:39 Months	63:51 Months
9/30/2013	1.034	1.012	1.014	1.014
9/30/2014	1.040	1.023	1.010	1.007
9/30/2015	1.065	1.007	1.009	1.010
9/30/2016	1.064	1.019	1.007	1.005
9/30/2017	1.062	1.037	1.017	1.005
9/30/2018	1.071	1.036	1.016	1.010
9/30/2019	1.057	1.017	1.014	
9/30/2020	1.033	1.013		
9/30/2021	1.086			
5 Point Average	1.062	1.024	1.013	1.007

Development Factors to Ultimate

15 Months to Ultimate =	1.109
27 Months to Ultimate =	1.045
39 Months to Ultimate =	1.020
51 Months to Ultimate =	1.007

MINNESOTA

INCURRED LOSS DEVELOPMENT
LOSS YEARS 2013-2022
EVALUATED AS OF 12/2022

Special Causes of Loss

Year Ending	<u>Losses as of</u>				
	15 Months	27 Months	39 Months	51 Months	63 Months
9/30/2013	456,304,349	449,444,941	442,935,361	443,591,533	443,973,521
9/30/2014	677,793,324	675,827,256	673,286,704	671,491,006	669,352,957
9/30/2015	657,154,092	645,651,321	642,213,319	642,760,052	644,410,721
9/30/2016	403,789,920	416,077,122	419,691,817	419,395,880	418,538,622
9/30/2017	472,537,879	476,774,712	479,573,972	485,187,250	486,945,794
9/30/2018	623,427,980	611,899,776	596,668,027	594,246,128	594,209,683
9/30/2019	537,098,358	542,416,250	533,884,818	534,233,414	
9/30/2020	522,731,323	519,842,228	519,850,053		
9/30/2021	955,440,972	959,726,566			
9/30/2022	497,663,738				

RATIOS

Year Ending	27:15 Months	39:27 Months	51:39 Months	63:51 Months
9/30/2013	0.985	0.986	1.001	1.001
9/30/2014	0.997	0.996	0.997	0.997
9/30/2015	0.982	0.995	1.001	1.003
9/30/2016	1.030	1.009	0.999	0.998
9/30/2017	1.009	1.006	1.012	1.004
9/30/2018	0.982	0.975	0.996	1.000
9/30/2019	1.010	0.984	1.001	
9/30/2020	0.994	1.000		
9/30/2021	1.004			
5 Point Average	1.000	0.995	1.002	1.000

Development Factors to Ultimate

15 Months to Ultimate =	0.997
27 Months to Ultimate =	0.997
39 Months to Ultimate =	1.002
51 Months to Ultimate =	1.000

MINNESOTA

COUNTRYWIDE BASIC GROUP I EXCESS LOSS FACTORS
BY CONSTRUCTION, PROTECTION AND EXPOSURE

		Amount of Insurance *										
		1	2	3	4	5	6	7	8	9	10	11
Const. 1-3	Prot. 1-4	1.000	1.058	1.120	1.185	1.254	1.326	1.404	1.485	1.571	1.663	1.759
	Prot. 5-7	1.000	1.074	1.153	1.239	1.330	1.429	1.534	1.648	1.770	1.901	2.041
	Prot. 8-10	1.000	1.133	1.284	1.454	1.648	1.867	2.116	2.397	2.716	3.077	3.486

		Amount of Insurance *										
		1	2	3	4	5	6	7	8	9	10	11
Const. 4-6	Prot. 1-4	1.000	1.058	1.120	1.185	1.254	1.326	1.404	1.485	1.571	1.663	1.759
	Prot. 5-7	1.000	1.074	1.153	1.239	1.330	1.429	1.534	1.648	1.770	1.901	2.041
	Prot. 8-10	1.000	1.133	1.284	1.454	1.648	1.867	2.116	2.397	2.716	3.077	3.486

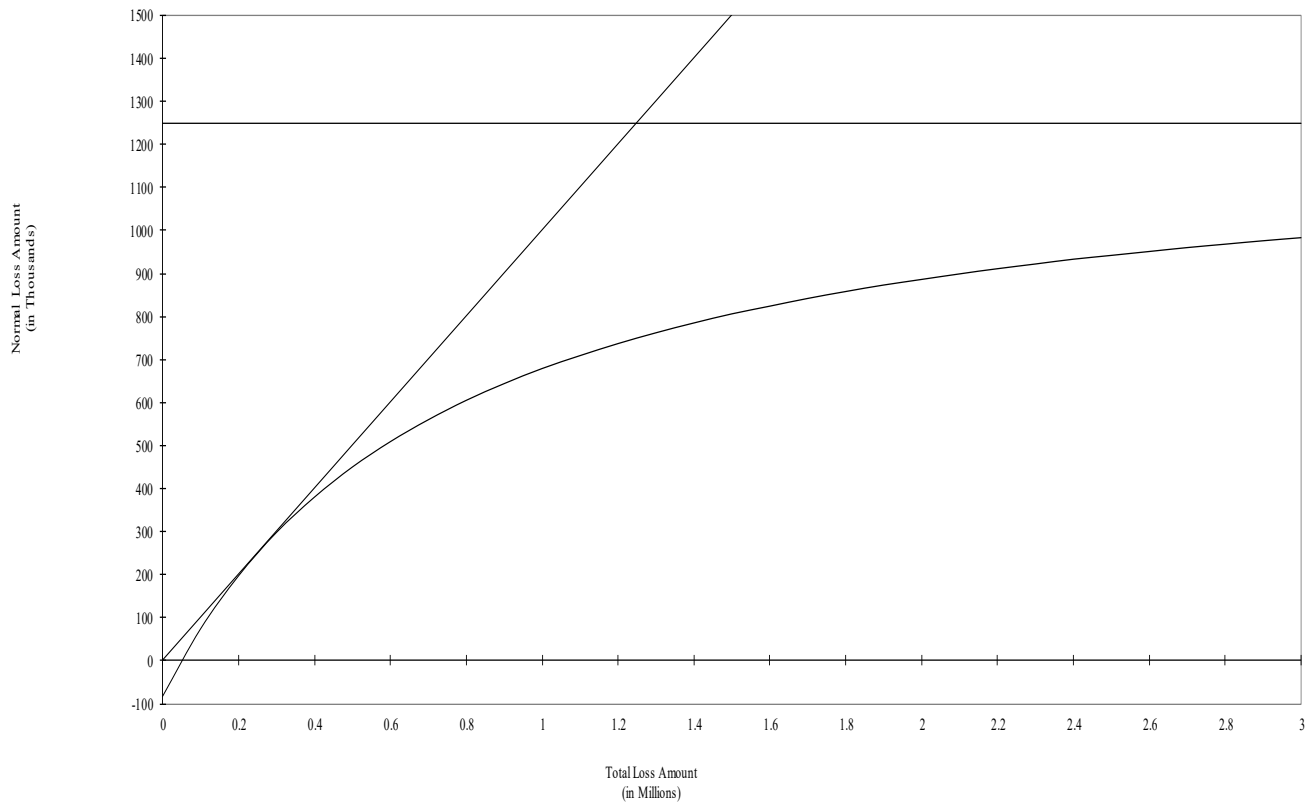
* Amount of
Insurance

Intervals

1	0 - 599,000
2	599,001 - 750,000
3	750,001 - 1,000,000
4	1,000,001 - 1,250,000
5	1,250,001 - 1,500,000
6	1,500,001 - 2,500,000
7	2,500,001 - 3,500,000
8	3,500,001 - 5,500,000
9	5,500,001 - 7,500,000
10	7,500,001 - 10,000,000
11	10,000,001 and over

Countrywide Basic Group I
Normal vs. Total Loss Amount

$$\text{Normal Loss} = \$1,250,000 \times (1 - (\$800,000 \div (\text{Total Loss} + \$750,000)))$$



MINNESOTA

BASIC GROUP I

ADDITIONAL EXCESS LOSS INFORMATION

	(1)	(2)	(3)	(4)	(5)	(6)
	Trended	Trended	State	Multi-	Smoothed	State
	Incurred	Normal	Normal %	State	Incurred	Average
<u>Year</u>	<u>Losses</u>	<u>Losses</u>	<u>(2)/(1)</u>	<u>Normal</u>	<u>Losses</u>	<u>Excess</u>
				<u>%</u>		<u>Factor</u>
						<u>(5)/(2)</u>
2018	28,460,928	24,293,569	85.4%	68.8%	35,314,014	1.454
2019	30,892,674	22,856,151	74.0%	70.4%	37,635,820	1.647
2020	51,063,686	35,447,435	69.4%	66.3%	54,659,153	1.542
2021	38,628,188	31,442,680	81.4%	70.7%	48,378,338	1.539
2022	28,987,578	25,037,736	86.4%	73.7%	37,010,304	1.478

MINNESOTA
DEVELOPMENT OF BASIC GROUP II EXCESS MULTIPLIER

	(1)	(2)	(3)	(4)	(5)	(6)
			Normal	Normal	State	Regional
	Earned	Incurred	Incurred	Loss	Excess	Excess
Year	<u>Premiums</u>	<u>Losses</u>	<u>Losses</u>	<u>Ratio</u>	<u>Ratio</u>	<u>Ratio</u>
1950	1,549,565	1,479,075	1,118,786	0.722	0.210	0.023
1951	1,697,452	1,968,220	1,225,560	0.722	0.365	0.073
1952	1,885,674	1,503,379	1,361,457	0.722	0.073	0.002
1953	1,892,862	835,808	835,808	0.442	0.000	0.000
1954	2,080,006	1,056,276	1,056,276	0.508	0.000	0.000
1955	2,212,756	976,717	976,717	0.441	0.000	0.000
1956	2,251,529	766,087	766,087	0.340	0.000	0.000
1957	2,356,325	888,403	888,403	0.377	0.000	0.000
1958	2,357,061	1,045,851	1,045,851	0.444	0.000	0.000
1959	2,476,701	1,270,375	1,270,375	0.513	0.000	0.000
1960	2,595,223	894,901	894,901	0.345	0.000	0.000
1961	2,583,792	1,006,858	1,006,858	0.390	0.000	0.000
1962	2,564,398	1,510,489	1,510,489	0.589	0.000	0.000
1963	2,441,663	2,498,729	1,762,881	0.722	0.265	0.036
1964	2,218,489	1,799,291	1,601,749	0.722	0.086	0.003
1965	2,074,141	2,652,366	1,497,530	0.722	0.444	0.113
1966	1,954,784	473,038	473,038	0.242	0.000	0.000
1967	2,121,525	5,197,802	1,531,741	0.722	0.968	0.760
1968	2,259,888	997,815	997,815	0.442	0.000	0.000
1969	3,062,945	1,125,290	1,125,290	0.367	0.000	0.000
1970	4,958,145	1,174,562	1,174,562	0.237	0.000	0.000
1971	5,645,657	1,416,482	1,416,482	0.251	0.000	0.000
1972	6,692,491	1,176,935	1,176,935	0.176	0.000	0.000
1973	6,334,759	1,540,371	1,540,371	0.243	0.000	0.000
1974	6,394,817	2,443,100	2,443,100	0.382	0.000	0.000
1975	7,537,022	4,314,983	4,314,983	0.573	0.000	0.000
1976	8,606,596	2,303,417	2,303,417	0.268	0.000	0.000
1977	9,390,285	3,164,001	3,164,001	0.337	0.000	0.000
1978	10,086,056	3,695,326	3,695,326	0.366	0.000	0.000
1979	9,780,714	10,094,564	6,487,168	0.663	0.290	0.079
1980	9,057,650	13,353,391	9,046,778	0.999	0.382	0.093
1981	8,260,828	8,426,600	4,320,687	0.523	0.380	0.117
1982	8,475,936	5,316,397	5,316,397	0.627	0.000	0.000
1983	9,545,964	8,074,926	6,110,297	0.640	0.183	0.023
1984	9,523,476	11,313,559	6,549,890	0.688	0.385	0.115
1985	13,979,304	5,111,019	5,111,019	0.366	0.000	0.000
1986	19,206,588	4,048,923	4,048,923	0.211	0.000	0.000
1987	17,555,169	2,850,192	2,850,192	0.162	0.000	0.000
1988	16,580,064	2,250,818	2,250,818	0.136	0.000	0.000
1989	13,967,430	2,002,462	2,002,462	0.143	0.000	0.000
1990	14,486,136	4,386,637	4,386,637	0.303	0.000	0.000
1991	14,211,918	2,968,541	2,968,541	0.209	0.000	0.000
1992	14,190,915	5,619,182	4,596,256	0.324	0.069	0.003
1993	12,221,070	3,567,205	3,567,205	0.292	0.000	0.000

MINNESOTA
DEVELOPMENT OF BASIC GROUP II EXCESS MULTIPLIER

	(1)	(2)	(3)	(4)	(5)	(6)
			Normal	Normal	State	Regional
	Earned	Incurred	Incurred	Loss	Excess	Excess
Year	<u>Premiums</u>	<u>Losses</u>	<u>Losses</u>	<u>Ratio</u>	<u>Ratio</u>	<u>Ratio</u>
1994	10,701,681	2,277,593	2,277,593	0.213	0.000	0.000
1995	9,358,719	2,755,506	2,755,506	0.294	0.000	0.000
1996	8,097,753	7,883,912	6,103,698	0.754	0.202	0.018
1997	7,462,893	9,843,594	4,470,293	0.599	0.502	0.218
1998	7,204,203	47,058,583	10,255,421	1.424	2.209	2.899
1999	7,726,815	4,581,052	4,581,052	0.593	0.000	0.000
2000	7,521,642	11,354,052	6,376,072	0.848	0.517	0.145
2001	8,552,532	9,974,799	7,333,270	0.857	0.264	0.045
2002	11,656,287	3,273,524	3,273,524	0.281	0.000	0.000
2003	14,227,806	3,239,887	3,239,887	0.228	0.000	0.000
2004	16,337,511	2,586,652	2,586,652	0.158	0.000	0.000
2005	18,152,892	12,574,804	6,040,624	0.333	0.296	0.064
2006	16,969,707	12,089,980	6,435,391	0.379	0.278	0.055
2007	18,780,240	20,846,531	17,679,837	0.941	0.157	0.012
2008	21,220,896	26,195,746	15,033,822	0.708	0.408	0.118
2009	23,559,309	8,538,541	8,538,541	0.362	0.000	0.000
2010	25,150,059	31,041,773	19,260,891	0.766	0.397	0.071
2012	42,447,324	37,195,014	27,438,703	0.646	0.203	0.027
2013	26,244,744	31,388,799	11,536,299	0.440	0.524	0.232
2014	28,110,537	11,422,952	11,422,952	0.406	0.000	0.000
2015	29,590,599	15,427,717	15,427,717	0.521	0.000	0.000
2016	30,387,957	14,625,617	14,625,617	0.481	0.000	0.000
2017	31,975,398	31,531,669	17,717,900	0.554	0.343	0.089
2018	33,440,775	14,264,458	14,264,458	0.427	0.000	0.000
2019	35,360,052	32,149,182	25,624,736	0.725	0.175	0.009
2020	38,292,534	43,637,519	26,680,369	0.697	0.391	0.052
2021	41,562,624	17,342,040	17,342,040	0.417	0.000	0.000
2022	46,023,933	77,607,140	29,442,651	0.640	0.646	0.400
Total				35.305	11.612	5.894
(7) State Excess Component = Total (5) ÷ Total (4) =					0.329	
(8) Regional Excess Component					0.130	
(9) State Excess Multiplier = (1.00 + (7)) * (1.00 + (8)) =					1.502	

MINNESOTA
DEVELOPMENT OF SPECIAL CAUSES OF LOSS EXCESS MULTIPLIER

	(1)	(2)	(3)	(4)	(5)
			Normal	Normal	State
	Earned	Incurred	Incurred	Loss	Excess
Year	Premiums	Losses	Losses	Ratio	Ratio
1986	6,586,758	3,233,446	3,233,446	0.491	-
1987	7,976,736	5,415,647	3,898,303	0.489	0.190
1988	7,935,510	23,092,586	3,912,848	0.493	2.417
1989	8,011,212	4,832,354	4,832,354	0.603	-
1990	10,705,407	5,800,525	5,647,684	0.528	0.014
1991	12,477,267	6,838,319	6,838,319	0.548	-
1992	11,256,135	7,805,650	7,475,594	0.664	0.029
1993	10,138,647	5,168,957	5,168,957	0.510	-
1994	9,964,728	4,857,891	4,857,891	0.488	-
1995	10,618,458	4,017,803	4,017,803	0.378	-
1996	10,493,307	6,077,072	6,077,072	0.579	-
1997	10,090,416	13,532,823	10,941,684	1.084	0.257
1998	10,524,234	8,131,611	7,600,174	0.722	0.051
1999	11,739,438	8,203,374	8,203,374	0.699	-
2000	13,746,303	7,191,624	7,191,624	0.523	-
2001	16,882,155	14,260,814	13,631,767	0.807	0.038
2002	21,275,730	7,772,425	7,772,425	0.365	-
2003	24,651,861	5,495,227	5,495,227	0.223	-
2004	28,360,899	6,432,536	6,432,536	0.227	-
2005	26,218,866	6,620,810	6,620,810	0.253	-
2006	19,992,168	6,166,342	6,166,342	0.308	-
2007	18,293,457	8,329,715	8,329,715	0.455	-
2008	16,185,795	9,214,162	9,214,162	0.569	-
2009	16,862,262	7,571,026	7,571,026	0.449	-
2010	17,898,501	12,643,822	12,454,835	0.696	0.010
2011	16,542,117	16,080,091	14,023,560	0.848	0.124
2012	16,019,604	6,708,110	6,708,110	0.419	-
2013	17,777,715	8,187,395	8,187,395	0.461	-
2014	18,370,035	11,157,532	11,157,532	0.607	-
2015	19,429,908	8,916,768	8,916,768	0.459	-
2016	19,230,519	7,365,471	7,365,471	0.383	-
2017	20,787,018	6,075,509	6,075,509	0.292	-
2018	19,635,057	7,190,523	7,190,523	0.366	-
2019	19,933,125	15,045,833	12,043,848	0.604	0.151
2020	21,504,183	8,761,380	8,761,380	0.407	-
2021	22,406,328	8,517,639	8,517,639	0.380	-
2022	24,102,714	12,767,987	12,767,987	0.530	-
Total	594,624,573	315,480,799	285,301,694	18.907	3.281

(6) State Excess Component = Total (5) ÷ Total (4) = 0.174

(7) State Excess Multiplier = 1.00 + (6) = 1.174

MINNESOTA
BASIC GROUP I STATEWIDE CREDIBILITY CALCULATION

(1A) Full Credibility Claims Standard For Frequency With (P,K) = (95.00% , 5.00%)	1,537
(1B) Severity Modification Factor	7.545
(1C) Full Credibility Claims Standard Adjusted For Severity ((1A) X (1B))	11,597
(2) Multistate Five Year Ratio Of Earned Risks To Claims	365.459
(3) Full Credibility Earned Risks Standard (1C)X(2)	4,238,228
(4) Five Year Statewide Earned Risks	403,897
(5) Five Year Aggregate Loss Costs	159,159,018
(6) Aggregate Loss Costs Per Earned Risk (5)/(4)	394.058
(7) Aggregate Loss Costs For 100% Credibility (3) X (6)	1,670,107,649
(8) Statewide Credibility ((5)/(7))**(5)	30.9%

MINNESOTA
BASIC GROUP II STATEWIDE CREDIBILITY CALCULATION

(1) Full Credibility Claims Standard	30,000
(2) Multistate Ten Year Ratio Of Earned Risks To Claims	176.134
(3) Full Credibility Earned Risks Standard (1)X(2)	5,284,020
(4) Ten Year Statewide Earned Risks	810,135
(5) Ten Year Aggregate Loss Costs	343,154,038
(6) Aggregate Loss Costs Per Earned Risk (5)/(4)	423.576
(7) Aggregate Loss Costs For 100% Credibility (3) X (6)	2,238,184,056
(8) Statewide Credibility ((5)/(7))**(.5)	39.2%

MINNESOTA
SPECIAL CAUSES OF LOSS STATEWIDE CREDIBILITY CALCULATION

(1) Full Credibility Claims Standard	25,000
(2) Multistate Ten Year Ratio Of Earned Risks To Claims	223.285
(3) Full Credibility Earned Risks Standard (1)X(2)	5,582,125
(4) Five Year Statewide Earned Risks	410,559
(5) Five Year Aggregate Loss Costs	78,809,245
(6) Aggregate Loss Costs Per Earned Risk (5)/(4)	191.956
(7) Aggregate Loss Costs For 100% Credibility (3) X (6)	1,071,522,387
(8) Statewide Credibility ((5)/(7))**(.5)	27.1%

MINNESOTA

BASIC GROUP I RATING GROUP DEFINITIONS

The following CSP Classes comprise the Basic Group I Rating Groups:

01 Apartments

- 0311 Apartments without Mercantile Occupancies - Up to 10 Units
- 0312 Apartments without Mercantile Occupancies - 11 to 30 Units
- 0313 Apartments without Mercantile Occupancies - Over 30 Units
- 0321 Apartments with Mercantile Occupancies - Up to 10 Units
- 0322 Apartments with Mercantile Occupancies - 11 to 30 Units
- 0323 Apartments with Mercantile Occupancies - Over 30 Units
- 0331 Residential Condominiums without Mercantile Occupancies - Up to 10 Units
- 0332 Residential Condominiums without Mercantile Occupancies - 11 to 30 Units
- 0333 Residential Condominiums without Mercantile Occupancies - Over 30 Units
- 0341 Residential Condominiums with Mercantile Occupancies - Up to 10 Units
- 0342 Residential Condominiums with Mercantile Occupancies - 11 to 30 Units
- 0343 Residential Condominiums with Mercantile Occupancies - Over 30 Units

02 OTHER HABITATIONAL

- 0074 Boarding and Lodging Houses, Rooming Houses, Fraternities and Sororities, Dormitories - Up to 10 Units
- 0075 Boarding and Lodging Houses, Rooming Houses, Fraternities and Sororities, Dormitories - 11 to 30 Units
- 0076 Boarding and Lodging Houses, Rooming Houses, Fraternities and Sororities, Dormitories - Over 30 Units
- 0077 Convents, Monasteries and Rectories, Orphan Homes, Nurses' Homes, Sisters' Homes - Up to 10 Units
- 0078 Convents, Monasteries and Rectories, Orphan Homes, Nurses' Homes, Sisters' Homes - 11 to 30 Units
- 0079 Convents, Monasteries and Rectories, Orphan Homes, Nurses' Homes, Sisters' Homes - Over 30 Units
- 0196 Dwellings Written in Conjunction with Commercial Risks from the Commercial Lines Manual - 1 Family
- 0197 Dwellings Written in Conjunction with Commercial Risks from the Commercial Lines Manual - 2 Family
- 0198 Dwellings Written in Conjunction with Commercial Risks from the Commercial Lines Manual - 3 and 4 Family
- 0300 Large Area Housing Developments (Special Rating Treatment)

03 RESTAURANTS & BARS

- 0541 Bars and Taverns
- 0542 Restaurants with Commercial Cooking
- 0545 Restaurants with Limited Cooking

BASIC GROUP I RATING GROUP DEFINITIONS04 OTHER MERCANTILES

- 0431 Sole Occupancy Mercantile, Over 15,000 Square Feet, Building Coverage, Other than Food Risks
- 0432 Sole Occupancy Mercantile, Over 15,000 Square Feet, Food Risks, Buildings and Personal Property
- 0433 Multiple Occupancy Mercantile, Over 15,000 Square Feet, Building Coverage Only, Not Fire Class Rated
- 0434 Multiple Occupancy Mercantile, Less than 15,000 Square Feet, Building Coverage Only, Not Fire Class Rated
- 0511 Risks Having Low Susceptibility Personal Property, NOC
- 0512 Tire, Battery and Accessory Dealers Without Tire Recapping and Vulcanizing
- 0520 Wearing Apparel, Textiles, Shoes
- 0531 Alcoholic Beverages other than Bars
- 0532 Food Products including Retail Bakeries (no baking and no cooking on premises; sales only); Beverages other than Alcoholic
- 0533 Retail Bakeries - Baking on Premises (No delivery to other outlets)
- 0534 Food Products with Limited Cooking, Excluding Bakeries
- 0535 Retail Bakeries - Baking on Premises (No delivery to other outlets) - Using Cannabis as an Ingredient
- 0550 Motor Vehicle (Auto, Aircraft, Marine) Sales, No Repair
- 0561 Boat and Marine Supply Dealers
- 0562 Drugs
- 0563 Electrical Goods, Hardware and Machinery
- 0564 Furniture and Home Furnishings other than Appliances
- 0565 Jewelry
- 0566 Sporting Goods
- 0567 Risks Having Moderate Susceptibility Personal Property, NOC
- 0570 Risks Having High Susceptibility Personal Property, NOC
- 0574 Cannabis containing Products Distributors or Retail Sales, Cannabis, NOC
- 0575 Mercantile - Cannabis - Growers other than Greenhouses - including hydroponics
- 0580 Greenhouses
- 0581 Multiple Occupancy Mercantile, Fire Class Rated, without furniture Occupant
- 0582 Multiple Occupancy Mercantile, Fire Class Rated, with furniture Occupant
- 0585 Greenhouses - Cannabis

05 PUBLIC BUILDINGS

- 0701 Governmental Offices
- 1000 Penal Institutions
- 1051 Museums, Libraries, Art Galleries (non-profit)
- 1070 Other Public Buildings, Fire Dept., Police, Water/Sewer

06 CHURCHES

- 0900 Churches and Synagogues

BASIC GROUP I RATING GROUP DEFINITIONS07 SCHOOLS

1052 Schools, Academic

08 OFFICE AND BANKS

0702 Non-Governmental Offices and Banks

09 RECREATIONAL FACILITIES

0755 Golf Clubs, Tennis Clubs and Similar Sports Facilities with Cooking

0756 Golf Clubs, Tennis Clubs and Similar Sports Facilities without Cooking

0757 Clubs, NOC, Including Fraternal and Union Halls

0831 Motion Picture Studios

0832 Theaters

0833 Drive-in Theaters

0834 Skating Rinks--Roller Rinks

0841 Bowling Alleys

0843 Halls and Auditoriums

0844 Recreational Facilities, NOC

0845 Boys' and Girls' Camps

0846 Dance Halls, Ballrooms & Discotheques

0951 Gambling Casinos with Restaurants

0952 Gambling Casinos without Restaurants

10 HOTELS & MOTELS

0742 Motels and Hotels with Restaurant - Up to 10 Units

0743 Motels and Hotels with Restaurant - 11 to 30 Units

0744 Motels and Hotels with Restaurant - Over 30 Units

0745 Motels and Hotels without Restaurant - Up to 10 Units

0746 Motels and Hotels without Restaurant - 11 to 30 Units

0747 Motels and Hotels without Restaurant - Over 30 Units

11 HOSPITALS & NURSING HOMES

0851 Hospitals

0852 Nursing and Convalescent Homes

BASIC GROUP I RATING GROUP DEFINITIONS12 BUILDINGS UNDER CONSTRUCTION

1150 Buildings Under Construction

0931 Auto Parking Garages, Car Washes

0932 Gasoline Service Stations

0933 Aircraft Hangars with Repairing, Motor Vehicle Repairing Including Auto Body Shops, with or without Sales

0934 Tire Recapping and Vulcanizing with or without Sales

0940 Aircraft Hangars without Repairing

14 OTHER NON-MANUFACTURING

0911 Dry Cleaner and Dyeing Plants, other than Self-Service

0912 Laundries, other than Self-Service

0913 Self-Service Laundries and Dry Cleaners

0921 Light Hazard Service Occupancies

0922 Services Occupancies, Other than Light Hazard, NOC

0923 Funeral Homes

1180 Vacant Buildings

1185 Billboards and Signs

1190 Yard Property, NOC, Including Property in the Open

15 STORAGE

1200 Piers, Wharves, Bridges

1211 Freight Terminals

1212 General Storage Warehouses - Bailee

1213 Miscellaneous Products Storage - (other than Retail or Wholesale or Cold Storage)

1220 Household Goods Storage

1230 Cold Storage Warehouses

1251 Farm Products (other than Grain, Cotton, Tobacco)

1252 Grain, Seed, Bean Warehouses

1255 Sales Warehouses - Cannabis

1300 Cotton Compresses and Storage

1400 Waste and Reclaimed Material, including Yards

1450 Whiskey and Liquor Warehouses in Connection with Distilleries

1501 Tobacco Warehouses, Storage

1502 Tobacco Sales Warehouses

1550 Grain Elevators - Terminal

1610 Grain Elevators - Country

1650 Building Supply Yards, including Retail Lumberyards, Coal and Coke Yards

1700 Mill Yards

1751 Oil Distributing, Oil Terminals and LPG Tank Farms, Including Stock

1752 Oil Distributing, Oil Terminals and LPG Tank Farms, Excluding Stock

BASIC GROUP I RATING GROUP DEFINITIONS17 FOOD MANUFACTURING

2000 Dairy Products
2059 Meat, Poultry and Fish Products
2150 Grain Milling, Including Feed, Stock, Flour Mills
2200 Bakeries and Bakery Products - other than Cannabis
2205 Bakeries and Bakery Products - Using Cannabis as an Ingredient
2215 Cannabis Processing or Manufacturing - No extraction
2250 Fruit, Nut and Vegetable Products
2300 Sugar, Molasses and Syrup Refining
2350 Beverages excluding Alcoholic Beverages
2400 Breweries
2459 Distilleries and Wineries
2550 Tobacco and Tobacco Products
2600 Food Products, NOC

18 WOOD MANUFACTURING

3809 Basic Wood Production including Veneer and Plywood Plants
3959 Furniture and Other Wood Products, NOC

19 WEARING APPAREL

2800 Textile Mill Products - Natural and Synthetic
3009 Clothing and Apparel including Furs and Finished Products

20 CHEMICAL MANUFACTURING

5000 Chemicals and Pharmaceuticals - Low Hazard
5050 Chemicals and Pharmaceuticals - Moderate Hazard
5100 Chemicals and Pharmaceuticals - High Hazard
5105 Cannabis Processing or Manufacturing - Extraction using noncombustible gases or chemicals
5155 Cannabis Processing or Manufacturing - Extraction using combustible gases or chemicals, or rapid burning

21 METAL MANUFACTURING

6810 Heavy Metalworking including Basic Metalwork
6850 Metalworking, NOC

BASIC GROUP I RATING GROUP DEFINITIONS22 OTHER MANUFACTURING

2750 Cotton Gins

3409 Leather and Leather Products

4400 Paper Manufacturing

4450 Paper and Paper Products Processing

4809 Printing

5500 Plastic Products

5759 Rubber Products

6009 Stone, Glass, Concrete, Gypsum, Brick, Tile and Clay Products, Abrasives, Plaster and Other Mineral, NOC

6210 Mining Other than Coal

6250 Coal Mining

6900 Precision Products, Electronic, Radio and Television Manufacturing

MINNESOTA

SPECIAL CAUSES OF LOSS CATEGORY DEFINITIONSCATEGORY 01 - BUILDING AND TIME ELEMENT COVERAGECATEGORY 02 - APARTMENT AND CONDOMINIUM CONTENTS COVERAGECATEGORY 03 - OFFICE CONTENTS COVERAGECATEGORIES 04, 05, & 06 - MERCANTILE CONTENTS COVERAGE

An establishment in which the principal business is the retail or wholesale buying or selling of goods, wares and merchandise. Included are bars, grills and restaurants.

CATEGORY 04 - MERCANTILE CONTENTS COVERAGE (HIGH)

Occupancy classes 0511, 0520, 0535, 0550, 0562, 0566, 0567, 0574, 0581, 0702, 1180, 1185, 1190, 1200, 1211, 1212, 1213, 1251, 1255, 1300, 1400, 1751, 1752, or 2205.

CATEGORY 05 - MERCANTILE CONTENTS COVERAGE (MEDIUM)

Occupancy classes not listed in Category 04 or Category 06

CATEGORY 06 - MERCANTILE CONTENTS COVERAGE (LOW)

Occupancy classes 0512, 0541, 0563, 0921, 0922, 0933, 0940, or 1230

CATEGORY 07 - MOTEL & HOTEL CONTENTS COVERAGE

Hotels, motels, motor inns, motor lodges, tourist courts and similar risks whose business is principally the providing of lodging accommodations for transients, including premises and operations necessary or incidental to such lodging accommodations.

CATEGORIES 08 & 09 - INSTITUTIONAL CONTENTS COVERAGE

An establishment principally occupied by an educational, religious, sanitary, charitable or governmental organization. It does not include buildings containing manufacturing of any kind, or sale, storage, processing, or repair of clothing or furniture, or paper or rag storage, or sorting or supplying of food or lodging to itinerants.

CATEGORY 08 - INSTITUTIONAL CONTENTS COVERAGE (HIGH)

Occupancy classes 0701, 0702, 0851, 0921, 1051, or 1052

SPECIAL CAUSES OF LOSS CATEGORY DEFINITIONSCATEGORY 09 - INSTITUTIONAL CONTENTS COVERAGE (LOW)

Occupancy classes not listed in Category 08

CATEGORIES 10 & 11 - INDUSTRIAL & PROCESSING CONTENTS COVERAGE

An establishment in which the principal activity is the manufacturing of goods and wares or processing of raw materials or finished goods.

CATEGORY 10 - INDUSTRIAL & PROCESSING CONTENTS COVERAGE (HIGH)

Occupancy classes 1252, 1300, 1400, 1700, 2000, 2059, 2150, 2200, 2215, 2250, 2300, 2350, 2400, 2459, 2550, 2600, 2750, 2800, 2805, 3009, 3409, 3809, 3959, 5105, or 5155.

CATEGORY 11 - INDUSTRIAL & PROCESSING CONTENTS COVERAGE (LOW)

Occupancy classes not listed in Category 10

CATEGORIES 12 & 13 - SERVICE CONTENTS COVERAGE

An establishment in which the principal operation is the providing of a personal or commercial service. Included are establishments providing entertainment or recreation; warehousing of property of others; and automobile risks, such as service, repair or garaging of automobiles and parking lots.

CATEGORY 12 - SERVICE CONTENTS COVERAGE (HIGH)

Occupancy classes 0520, 0542, 0545, 0550, 0567, 0702, 0755, 0831, 0832, 0911, 0912, 0913, 0921, 0931, 0932, 0934, 1213, or 4809

CATEGORY 13 - SERVICE CONTENTS COVERAGE (LOW)

Occupancy classes not listed in Category 12

CATEGORY 14 - CONTRACTOR CONTENTS COVERAGE

An establishment in which the principal operation is that of installation, construction, demolition or maintenance. This includes any owner/contractor, general contractor or sub-contractor whether or not he or she actually performs any part of such work or has employees on the site.

Minnesota

BASIC GROUP I

UNADJUSTED AGGREGATE LOSS COSTS, LOSSES, AND EXPERIENCE RATIOS

<u>Year</u>	<u>Total Unadjusted Loss Costs</u>	<u>Total Unadjusted Incurred Losses</u>	<u>Experience Ratio</u>
2018	14,111,153	17,384,706	1.232
2019	14,626,604	19,663,756	1.344
2020	16,063,016	34,040,722	2.119
2021	17,559,201	26,892,999	1.532
2022	20,068,633	22,566,968	1.124

MINNESOTA

BASIC GROUP II

UNADJUSTED AGGREGATE LOSS COSTS, LOSSES, AND EXPERIENCE RATIOS

<u>Year</u>	Total Unadjusted <u>Loss Costs</u>	Total Unadjusted <u>Incurred Losses</u>	Experience <u>Ratio</u>
2013	14,829,894	31,388,799	2.117
2014	15,884,348	11,422,952	0.719
2015	16,718,906	15,427,717	0.923
2016	17,169,378	14,625,617	0.852
2017	18,069,962	31,531,669	1.745
2018	18,895,004	14,264,458	0.755
2019	19,978,472	32,149,182	1.609
2020	21,640,955	43,637,519	2.016
2021	23,490,722	17,342,040	0.738
2022	26,003,896	77,607,140	2.984

MINNESOTA

SPECIAL CAUSES OF LOSS

UNADJUSTED AGGREGATE LOSS COSTS, LOSSES, AND EXPERIENCE RATIOS

<u>Year</u>	<u>Total Unadjusted Loss Costs</u>	<u>Total Unadjusted Incurred Losses</u>	<u>Experience Ratio</u>
2018	11,094,002	7,190,523	0.648
2019	11,262,364	15,045,833	1.336
2020	12,164,955	8,761,380	0.720
2021	12,675,035	8,517,639	0.672
2022	13,618,444	12,767,987	0.938

MINNESOTA

FIRE AND ALLIED LINES INSURANCE

COUNTRYWIDE LOSS ADJUSTMENT EXPENSE EXPERIENCE (A)

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>Selected</u>
(1) Fire						
(a) Direct Losses Incurred	7,748,589	8,518,012	7,422,977	9,568,271	11,503,724	
(b) Direct Loss Adjustment Expense Incurred	692,190	668,759	679,946	884,227	973,556	
(2) Allied Lines						
(a) Direct Losses Incurred	17,946,675	10,350,661	7,620,219	12,480,499	12,836,520	
(b) Direct Loss Adjustment Expense Incurred	1,157,440	998,273	973,445	1,234,938	1,362,840	
(3) Loss Adjustment Expense as a Ratio to Losses						
(a) Fire (1b) / (1a)	8.9%	7.9%	9.2%	9.2%	8.5%	9.0%
(b) Allied Lines (2b) / (2a)	6.4%	9.6%	12.8%	9.9%	10.6%	10.5%

NOTE: All dollar amounts are displayed in thousands.

(A) Items (1) and (2) are based on Insurance Expense Exhibit information compiled by A. M. Best.

MINNESOTA
COMMERCIAL PROPERTY INSURANCE

SECTION E - REVISED LOSS COST PAGES

Basic Group II Loss Costs.....	E2
Special Causes of Loss Loss Costs.....	E3
Basic Group I Loss Costs.....	E4-15

70. CAUSES OF LOSS – BASIC FORM

E. Rating Procedure**2. Property Damage – Group II Causes Of Loss****e. Loss Costs**

- (1) Determine the Basic Group II symbol from the specific publication or from Rule **70.E.2.a**.
- (2) For Symbols **AA**, **A**, **AB** and **B**, use the applicable rate.
- (3) For symbols with numerical prefixes, multiply the applicable rate by the prefix shown in Rule **70.E.2.a**.

Symbol		Loss Cost
AA	Buildings	<u>.107-097</u>
	Contents	<u>.090-082</u>
A	Buildings	<u>.116-105</u>
	Contents	<u>.105-095</u>
AB	Buildings	<u>.151-137</u>
	Contents	<u>.127-115</u>
B	Buildings	<u>.179-162</u>
	Contents	<u>.139-126</u>

72. CAUSES OF LOSS – SPECIAL FORM

E.2. Rating Procedure – Property Damage – Other than Builders' Risk**b.(1)** Building Coverage – Loss Cost: ~~.073.065~~**c.(2)** Personal Property Coverage – Loss Costs

Occupancy Category	Loss Cost
Residential Apartments and Condominiums	.143.428
Offices	.152.436
Mercantile – High	.193.471
Mercantile – Medium	.233.205
Mercantile – Low	.177.458
Motels and Hotels	.114.402
Institutional – High	.065.057
Institutional – Low	.059.053
Industrial and Processing – High	.248.222
Industrial and Processing – Low	.157.439
Service – High	.204.483
Service – Low	.142.427
Contractors	.234.208
Territory (Districts)	Territorial Multiplier
Hennepin, Ramsey	1.218
Remainder of State	1.000

COMMERCIAL LINES MANUAL
DIVISION FIVE
FIRE AND ALLIED LINES
LOSS COST PAGES

MINNESOTA (22)

85. BASIC GROUP I CLASS LOSS COSTS

All rates are subject to protection class and territorial multipliers.

CSP Class Codes And Description						
0074	Boarding and Lodging Houses, Rooming Houses, Fraternities and Sororities, Dormitories – Up to 10 Units					
0075	Boarding and Lodging Houses, Rooming Houses, Fraternities and Sororities, Dormitories – 11 to 30 Units					
0076	Boarding and Lodging Houses, Rooming Houses, Fraternities and Sororities, Dormitories – Over 30 Units					
0077	Convents, Monasteries and Rectories, Orphan Homes, Nurses' Homes, Sisters' Homes – Up to 10 Units					
0078	Convents, Monasteries and Rectories, Orphan Homes, Nurses' Homes, Sisters' Homes – 11 to 30 Units					
0079	Convents, Monasteries and Rectories, Orphan Homes, Nurses' Homes, Sisters' Homes – Over 30 Units					
0196	1 Family Dwellings (Lessor's Risk)					
0197	2 Family Dwellings (Lessor's Risk)					
0198	3 or 4 Family Dwellings (Lessor's Risk)					
0311	Apartments without Mercantile Occupancies – Up to 10 Units					
0312	Apartments without Mercantile Occupancies – 11 to 30 Units					
CSP Class Code	Coverage	Construction (Code)				
		Frame (1)	Joisted Masonry (2)	Non-Comb. (3)	Mas. Non-Comb. (4)	Mod. F.R. (5) Or Fire Res. (6)
0074	Building (1)	0.143	0.125	0.112	0.090	0.085
	Contents (2)	0.143	0.125	0.119	0.103	0.101
0075	Building (1)	0.143	0.125	0.112	0.090	0.085
	Contents (2)	0.143	0.125	0.119	0.103	0.101
0076	Building (1)	0.143	0.125	0.112	0.090	0.085
	Contents (2)	0.143	0.125	0.119	0.103	0.101
0077	Building (1)	0.125	0.116	0.103	0.085	0.075
	Contents (2)	0.132	0.119	0.115	0.101	0.096
0078	Building (1)	0.125	0.116	0.103	0.085	0.075
	Contents (2)	0.132	0.119	0.115	0.101	0.096
0079	Building (1)	0.125	0.116	0.103	0.085	0.075
	Contents (2)	0.132	0.119	0.115	0.101	0.096
0196	Building (1)	0.088	0.075	0.069	0.057	0.054
	Contents (2)	0.096	0.088	0.079	0.071	0.065
0197	Building (1)	0.088	0.075	0.069	0.057	0.054
	Contents (2)	0.096	0.088	0.079	0.071	0.065
0198	Building (1)	0.088	0.075	0.069	0.057	0.054
	Contents (2)	0.096	0.088	0.079	0.071	0.065
0311	Building (1)	0.197	0.179	0.157	0.128	0.117
	Contents (2)	0.226	0.201	0.189	0.168	0.155
0312	Building (1)	0.197	0.179	0.157	0.128	0.117
	Contents (2)	0.226	0.201	0.189	0.168	0.155
Territory					Territorial Multiplier	
Minneapolis					0.920	
Saint Paul					0.825	
Balance of State (Minnesota)					1.000	

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85. BASIC GROUP I CLASS LOSS COSTS (Cont'd)

All rates are subject to protection class and territorial multipliers.

CSP Class Codes And Description						
0313	Apartments without Mercantile Occupancies – Over 30 Units					
0321	Apartments with Mercantile Occupancies – Up to 10 Units					
0322	Apartments with Mercantile Occupancies – 11 to 30 Units					
0323	Apartments with Mercantile Occupancies – Over 30 Units					
0331	Residential Condominiums without Mercantile Occupancies – Up to 10 Units					
0332	Residential Condominiums without Mercantile Occupancies – 11 to 30 Units					
0333	Residential Condominiums without Mercantile Occupancies – Over 30 Units					
CSP Class Code	Coverage	Construction (Code)				
		Frame (1)	Joisted Masonry (2)	Non-Comb. (3)	Mas. Non-Comb. (4)	Mod. F.R. (5) Or Fire Res. (6)
0313	Building (1)	0.197	0.179	0.157	0.128	0.117
	Contents (2)	0.226	0.201	0.189	0.168	0.155
0321	Building (1)	0.304	0.276	0.244	0.197	0.181
	Contents (2)					
	A	0.450	0.406	0.385	0.340	0.317
	B&C	0.528	0.475	0.449	0.397	0.371
0322	Building (1)	0.304	0.276	0.244	0.197	0.181
	Contents (2)					
	A	0.450	0.406	0.385	0.340	0.317
	B&C	0.528	0.475	0.449	0.397	0.371
0323	Building (1)	0.304	0.276	0.244	0.197	0.181
	Contents (2)					
	A	0.450	0.406	0.385	0.340	0.317
	B&C	0.528	0.475	0.449	0.397	0.371
0331	Building (1)	0.111	0.099	0.089	0.071	0.066
	Contents (2)	0.098	0.086	0.083	0.071	0.066
0332	Building (1)	0.111	0.099	0.089	0.071	0.066
	Contents (2)	0.098	0.086	0.083	0.071	0.066
0333	Building (1)	0.111	0.099	0.089	0.071	0.066
	Contents (2)	0.098	0.086	0.083	0.071	0.066
Territory					Territorial Multiplier	
Minneapolis					0.920	
Saint Paul					0.825	
Balance of State (Minnesota)					1.000	

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85. BASIC GROUP I CLASS LOSS COSTS (Cont'd)

All rates are subject to protection class and territorial multipliers.

CSP Class Codes And Description						
0341	Residential Condominiums with Mercantile Occupancies – Up to 10 Units					
0342	Residential Condominiums with Mercantile Occupancies – 11 to 30 Units					
0343	Residential Condominiums with Mercantile Occupancies – Over 30 Units					
0511	Mercantile – Sole Occupancy Only – Not Otherwise Classified – Low Susceptibility					
0512	Mercantile – Sole Occupancy Only – Tire, Battery and Accessory Dealers without Tire Recapping and Vulcanizing					
0520	Mercantile – Sole Occupancy Only – Wearing Apparel, Textiles, Shoes					
0531	Mercantile – Sole Occupancy Only – Alcoholic Beverages other than Bars					
CSP Class Code	Coverage	Construction (Code)				
		Frame (1)	Joisted Masonry (2)	Non-Comb. (3)	Mas. Non-Comb. (4)	Mod. F.R. (5) Or Fire Res. (6)
0341	Building (1)	0.171	0.153	0.137	0.114	0.103
	Contents (2)					
	A	0.195	0.175	0.165	0.148	0.135
0342	Building (1)	0.171	0.153	0.137	0.114	0.103
	Contents (2)					
	A	0.195	0.175	0.165	0.148	0.135
0343	Building (1)	0.171	0.153	0.137	0.114	0.103
	Contents (2)					
	A	0.195	0.175	0.165	0.148	0.135
0511	Building (1)	0.175	0.159	0.143	0.112	0.107
	Contents (2)	0.249	0.226	0.212	0.187	0.175
0512	Building (1)	0.170	0.153	0.136	0.109	0.103
	Contents (2)	0.221	0.200	0.190	0.167	0.154
0520	Building (1)	0.211	0.190	0.170	0.139	0.125
	Contents (2)	0.325	0.296	0.279	0.246	0.227
0531	Building (1)	0.180	0.160	0.143	0.114	0.107
	Contents (2)	0.267	0.236	0.221	0.195	0.183
Territory					Territorial Multiplier	
Minneapolis					0.920	
Saint Paul					0.825	
Balance of State (Minnesota)					1.000	

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85. BASIC GROUP I CLASS LOSS COSTS (Cont'd)

All rates are subject to protection class and territorial multipliers.

CSP Class Codes And Description						
0532	Merc – Sole Occy Only – Food Products Inc. Retail Bakeries; Non-Alcoholic Beverages (Sales Only – No Baking or Cooking)					
0533	Mercantile – Sole Occupancy Only – Baking on Premises, No Delivery to Outlets					
0534	Mercantile – Sole Occupancy Only – Food Products with Limited Cooking, Excluding Bakeries					
0535	Mercantile – Sole Occupancy Only – Baking on Premises, No Delivery to Outlets – Using Cannabis as an Ingredient					
0541	Mercantile – Sole Occupancy Only – Bars and Taverns					
0545	Mercantile – Sole Occupancy Only – Restaurants with Limited Cooking					
0550	Mercantile – Sole Occupancy Only – Motor Vehicles, No Repair					
0561	Mercantile – Sole Occupancy Only – Boat and Marine Supply Dealers					
0562	Mercantile – Sole Occupancy Only – Drugs					
0563	Mercantile – Sole Occupancy Only – Electrical Goods, Hardware and Machinery					
CSP Class Code	Coverage	Construction (Code)				
		Frame (1)	Joisted Masonry (2)	Non-Comb. (3)	Mas. Non-Comb. (4)	Mod. F.R. (5) Or Fire Res. (6)
0532	Building (1)	0.275	0.247	0.216	0.175	0.165
	Contents (2)	0.325	0.296	0.279	0.246	0.227
0533	Building (1)	0.213	0.191	0.172	0.139	0.130
	Contents (2)	0.264	0.232	0.217	0.195	0.182
0534	Building (1)	0.300	0.270	0.237	0.194	0.180
	Contents (2)	0.275	0.247	0.229	0.203	0.191
0535	Building (1)	0.213	0.191	0.172	0.139	0.130
	Contents (2)	0.264	0.232	0.217	0.195	0.182
0541	Building (1)	0.578	0.523	0.464	0.377	0.348
	Contents (2)	0.620	0.559	0.527	0.464	0.432
0545	Building (1)	0.683	0.616	0.546	0.442	0.412
	Contents (2)	0.772	0.691	0.657	0.578	0.538
0550	Building (1)	0.160	0.143	0.130	0.107	0.096
	Contents (2)	0.270	0.246	0.229	0.203	0.190
0561	Building (1)	0.172	0.154	0.138	0.109	0.104
	Contents (2)	0.270	0.246	0.229	0.203	0.190
0562	Building (1)	0.191	0.173	0.154	0.125	0.114
	Contents (2)	0.299	0.270	0.255	0.226	0.211
0563	Building (1)	0.191	0.172	0.154	0.124	0.112
	Contents (2)	0.221	0.200	0.190	0.167	0.154
Territory					Territorial Multiplier	
Minneapolis					0.920	
Saint Paul					0.825	
Balance of State (Minnesota)					1.000	

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85. BASIC GROUP I CLASS LOSS COSTS (Cont'd)

All rates are subject to protection class and territorial multipliers.

CSP Class Codes And Description						
0564	Mercantile – Sole Occupancy Only – Furniture and Home Furnishings other than Appliances					
0565	Mercantile – Sole Occupancy Only – Jewelry					
0566	Mercantile – Sole Occupancy Only – Sporting Goods					
0567	Mercantile – Sole Occupancy Only – Not Otherwise Classified – Moderate Susceptibility					
0570	Mercantile – Sole Occupancy Only – Not Otherwise Classified – High Susceptibility					
0574	Mercantile – Sole Occupancy Only – Cannabis containing Products Distributors or Retail Sales, Cannabis, NOC					
0575	Mercantile – Sole Occupancy Only – Cannabis - Growers other than Greenhouses					
0580	Greenhouses – Sole Occupancy Only					
CSP Class Code	Coverage	Construction (Code)				
		Frame (1)	Joisted Masonry (2)	Non-Comb. (3)	Mas. Non-Comb. (4)	Mod. F.R. (5) Or Fire Res. (6)
0564	Building (1)	0.267	0.237	0.211	0.172	0.158
	Contents (2)	0.393	0.356	0.333	0.298	0.275
0565	Building (1)	0.175	0.158	0.141	0.112	0.107
	Contents (2)	0.216	0.195	0.183	0.165	0.154
0566	Building (1)	0.195	0.180	0.159	0.130	0.120
	Contents (2)	0.298	0.267	0.249	0.217	0.203
0567	Building (1)	0.175	0.159	0.143	0.112	0.107
	Contents (2)	0.249	0.226	0.212	0.187	0.175
0570	Building (1)	0.175	0.159	0.143	0.112	0.107
	Contents (2)	0.267	0.236	0.221	0.195	0.183
0574	Building (1)	0.175	0.159	0.143	0.112	0.107
	Contents (2)	0.249	0.226	0.212	0.187	0.175
0575	Building (1)	0.175	0.159	0.143	0.112	0.107
	Contents (2)	0.267	0.236	0.221	0.195	0.183
0580	Building (1)	0.175	0.159	0.143	0.112	0.107
	Contents (2)	0.275	0.248	0.232	0.203	0.191
Territory					Territorial Multiplier	
Minneapolis					0.920	
Saint Paul					0.825	
Balance of State (Minnesota)					1.000	

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85. BASIC GROUP I CLASS LOSS COSTS (Cont'd)

All rates are subject to protection class and territorial multipliers.

CSP Class Codes And Description						
0581	Mercantile – Multiple Occupancy without 0564 Occupant					
0582	Mercantile – Multiple Occupancy with 0564 Occupant					
0585	Greenhouses – Sole Occupancy Only – Cannabis					
0701	Government Offices					
0702	Banks and Offices other than Governmental					
CSP Class Code	Coverage	Construction (Code)				
		Frame (1)	Joisted Masonry (2)	Non-Comb. (3)	Mas. Non-Comb. (4)	Mod. F.R. (5) Or Fire Res. (6)
0581	Building (1)	0.190	0.170	0.149	0.122	0.112
	Contents (2)					
	A	0.267	0.236	0.221	0.195	0.183
	B	0.321	0.291	0.275	0.237	0.226
0582	Building (1)	0.206	0.187	0.167	0.138	0.124
	Contents (2)					
	A	0.232	0.212	0.200	0.175	0.165
	B	0.291	0.260	0.247	0.216	0.200
0585	Building (1)	0.175	0.159	0.143	0.112	0.107
	Contents (2)	0.275	0.248	0.232	0.203	0.191
0701	Building (1)	0.116	0.107	0.093	0.081	0.072
	Contents (2)					
	A	0.131	0.116	0.109	0.098	0.093
	B	0.193	0.175	0.165	0.142	0.135
0702	Building (1)	0.064	0.058	0.054	0.041	0.040
	Contents (2)					
	A	0.077	0.069	0.065	0.058	0.054
	B	0.108	0.097	0.093	0.082	0.076
	C	0.096	0.087	0.082	0.071	0.068
Territory					Territorial Multiplier	
Minneapolis					0.920	
Saint Paul					0.825	
Balance of State (Minnesota)					1.000	

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85. BASIC GROUP I CLASS LOSS COSTS (Cont'd)

All rates are subject to protection class and territorial multipliers.

CSP Class Codes And Description						
0742	Motels and Hotels with Limited Cooking Restaurant – Up to 10 Units					
0743	Motels and Hotels with Limited Cooking Restaurant – 11 to 30 Units					
0744	Motels and Hotels with Limited Cooking Restaurant – Over 30 Units					
0745	Motels and Hotels without Restaurant – Up to 10 Units					
0746	Motels and Hotels without Restaurant – 11 to 30 Units					
0747	Motels and Hotels without Restaurant – Over 30 Units					
0755	Golf, Tennis and Similar Sport Facilities with Limited Cooking					
0756	Golf, Tennis and Similar Sport Facilities without Cooking					
0757	Clubs, Not Otherwise Classified, Including Fraternal and Union Halls					
0831	Motion Picture Studios					
0832	Theaters Excluding Drive-in Theaters					
CSP Class Code	Coverage	Construction (Code)				
		Frame (1)	Joisted Masonry (2)	Non-Comb. (3)	Mas. Non-Comb. (4)	Mod. F.R. (5) Or Fire Res. (6)
0742	Building (1)	0.198	0.178	0.158	0.127	0.120
	Contents (2)	0.219	0.197	0.184	0.163	0.155
0743	Building (1)	0.198	0.178	0.158	0.127	0.120
	Contents (2)	0.219	0.197	0.184	0.163	0.155
0744	Building (1)	0.198	0.178	0.158	0.127	0.120
	Contents (2)	0.219	0.197	0.184	0.163	0.155
0745	Building (1)	0.087	0.076	0.068	0.054	0.052
	Contents (2)	0.094	0.085	0.077	0.068	0.066
0746	Building (1)	0.087	0.076	0.068	0.054	0.052
	Contents (2)	0.094	0.085	0.077	0.068	0.066
0747	Building (1)	0.087	0.076	0.068	0.054	0.052
	Contents (2)	0.094	0.085	0.077	0.068	0.066
0755	Building (1)	0.565	0.508	0.453	0.369	0.339
	Contents (2)	0.651	0.587	0.553	0.488	0.457
0756	Building (1)	0.229	0.208	0.181	0.150	0.137
	Contents (2)	0.261	0.238	0.223	0.198	0.181
0757	Building (1)	0.248	0.223	0.198	0.163	0.150
	Contents (2)	0.261	0.238	0.223	0.198	0.181
0831	Building (1)	0.194	0.176	0.153	0.124	0.116
	Contents (2)	0.223	0.200	0.187	0.169	0.157
0832	Building (1)	0.248	0.221	0.198	0.163	0.149
	Contents (2)	0.261	0.238	0.223	0.198	0.181
Territory					Territorial Multiplier	
Minneapolis					0.920	
Saint Paul					0.825	
Balance of State (Minnesota)					1.000	

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85. BASIC GROUP I CLASS LOSS COSTS (Cont'd)

All rates are subject to protection class and territorial multipliers.

CSP Class Codes And Description						
0833	Drive-in Theaters					
0834	Skating Rinks – Roller Rinks					
0841	Bowling Alleys without Cooking					
0843	Halls and Auditoriums					
0844	Recreational Facilities, Not Otherwise Classified					
0845	Boys' and Girls' Camps					
0846	Dance Halls, Ballrooms and Discotheques					
0851	Hospitals					
0852	Nursing and Convalescent Homes					
0900	Churches and Synagogues					
0911	Dry Cleaners and Dyeing Plants, other than Self-Service					
CSP Class Code	Coverage	Construction (Code)				
		Frame (1)	Joisted Masonry (2)	Non-Comb. (3)	Mas. Non-Comb. (4)	Mod. F.R. (5) Or Fire Res. (6)
0833	Building (1)	0.209	0.187	0.169	0.135	0.124
	Contents (2)	0.244	0.221	0.208	0.181	0.170
0834	Building (1)	0.336	0.301	0.269	0.221	0.203
	Contents (2)	0.343	0.307	0.292	0.258	0.240
0841	Building (1)	0.343	0.307	0.275	0.223	0.206
	Contents (2)	0.356	0.322	0.302	0.267	0.250
0843	Building (1)	0.170	0.153	0.135	0.112	0.100
	Contents (2)	0.180	0.164	0.153	0.135	0.124
0844	Building (1)	0.229	0.208	0.181	0.150	0.137
	Contents (2)	0.251	0.225	0.215	0.193	0.178
0845	Building (1)	0.153	0.135	0.121	0.094	0.092
	Contents (2)	0.176	0.157	0.150	0.130	0.121
0846	Building (1)	0.320	0.285	0.251	0.208	0.193
	Contents (2)	0.313	0.281	0.267	0.237	0.221
0851	Building (1)	0.167	0.149	0.133	0.108	0.099
	Contents (2)	0.193	0.176	0.163	0.144	0.135
0852	Building (1)	0.170	0.155	0.137	0.115	0.103
	Contents (2)	0.200	0.179	0.169	0.149	0.142
0900	Building (1)	0.108	0.101	0.089	0.071	0.067
	Contents (2)	0.117	0.104	0.101	0.087	0.083
0911	Building (1)	0.272	0.248	0.217	0.178	0.164
	Contents (2)	0.323	0.293	0.277	0.240	0.227
Territory					Territorial Multiplier	
Minneapolis					0.920	
Saint Paul					0.825	
Balance of State (Minnesota)					1.000	

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85. BASIC GROUP I CLASS LOSS COSTS (Cont'd)

All rates are subject to protection class and territorial multipliers.

CSP Class Codes And Description						
0912	Laundries, other than Self-Service					
0913	Self-Service Laundries and Dry Cleaners					
0921	Light Hazard Service Occupancies					
0922	Service Occupancies, other than Light Hazard					
0923	Funeral Homes					
0931	Auto Parking Garages, Car Washes					
0932	Gasoline Service Stations					
0933	Motor Vehicle and Aircraft Repair, with or without Sales					
0934	Tire Recapping and Vulcanizing, with or without Sales					
0940	Aircraft Hangars without Repair					
0951	Gambling Casinos with Limited Cooking Restaurants					
CSP Class Code	Coverage	Construction (Code)				
		Frame (1)	Joisted Masonry (2)	Non-Comb. (3)	Mas. Non-Comb. (4)	Mod. F.R. (5) Or Fire Res. (6)
0912	Building (1)	0.365	0.326	0.291	0.235	0.216
	Contents (2)	0.448	0.403	0.378	0.334	0.311
0913	Building (1)	0.239	0.214	0.187	0.155	0.142
	Contents (2)	0.281	0.251	0.237	0.208	0.194
0921	Building (1)	0.142	0.127	0.112	0.092	0.087
	Contents (2)	0.171	0.153	0.143	0.126	0.119
0922	Building (1)	0.157	0.142	0.126	0.103	0.094
	Contents (2)	0.194	0.173	0.164	0.144	0.138
0923	Building (1)	0.105	0.094	0.085	0.066	0.060
	Contents (2)	0.112	0.100	0.094	0.085	0.079
0931	Building (1)	0.159	0.142	0.125	0.103	0.096
	Contents (2)	0.183	0.165	0.159	0.136	0.126
0932	Building (1)	0.222	0.202	0.179	0.143	0.135
	Contents (2)	0.271	0.246	0.229	0.205	0.192
0933	Building (1)	0.189	0.168	0.150	0.121	0.115
	Contents (2)	0.239	0.215	0.203	0.179	0.165
0934	Building (1)	0.246	0.221	0.197	0.160	0.148
	Contents (2)	0.292	0.258	0.246	0.219	0.205
0940	Building (1)	0.117	0.107	0.098	0.077	0.074
	Contents (2)	0.148	0.132	0.125	0.112	0.105
0951	Building (1)	0.661	0.592	0.530	0.429	0.397
	Contents (2)	0.728	0.657	0.621	0.548	0.512
Territory					Territorial Multiplier	
Minneapolis					0.920	
Saint Paul					0.825	
Balance of State (Minnesota)					1.000	

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85. BASIC GROUP I CLASS LOSS COSTS (Cont'd)

All rates are subject to protection class and territorial multipliers.

CSP Class Codes And Description						
0952	Gambling Casinos without Restaurants					
1000	Penal Institutions					
1051	Museums, Libraries, Art Galleries (Non-Profit)					
1052	Schools, Academic					
1070	Fire Departments, Police, Sewage, Water Works and Other Public Buildings					
1150	Builders' Risk					
1180	Vacant Buildings – See CSP Class Code of previous or intended occupancy. Add loss cost of .015 unless Class Code of previous or intended occupancy is 0580, 0585, 0742-0747, 0833, 0834, 0841, 0843, 0844, 0846, 0900, 0951, 0952, 1051 or 1052.					
1211	Freight Terminals					
1212	General Storage Warehouses – Bailee					
1213	Miscellaneous Products Storage – (Other Than Retail Or Wholesale Or Cold Storage)					
1220	Household Goods Storage					
CSP Class Code	Coverage	Construction (Code)				
		Frame (1)	Joisted Masonry (2)	Non-Comb. (3)	Mas. Non-Comb. (4)	Mod. F.R. (5) Or Fire Res. (6)
0952	Building (1)	0.223	0.200	0.179	0.146	0.133
	Contents (2)	0.322	0.287	0.271	0.240	0.223
1000	Building (1)	0.115	0.101	0.093	0.075	0.072
	Contents (2)	0.099	0.089	0.083	0.076	0.072
1051	Building (1)	0.074	0.064	0.057	0.049	0.044
	Contents (2)	0.093	0.083	0.081	0.072	0.064
1052	Building (1)	0.082	0.074	0.067	0.051	0.049
	Contents (2)	0.093	0.083	0.078	0.071	0.067
1070	Building (1)	0.109	0.099	0.088	0.074	0.068
	Contents (2)	0.131	0.116	0.109	0.099	0.093
1150	Building (1)	0.180	0.161	0.143	0.116	0.108
1211	Building (1)	0.172	0.157	0.136	0.110	0.105
	Contents (2)	0.202	0.183	0.172	0.149	0.142
1212	Building (1)	0.136	0.124	0.109	0.086	0.082
	Contents (2)	0.168	0.149	0.142	0.124	0.119
1213	Building (1)	0.121	0.109	0.094	0.081	0.074
	Contents (2)	0.159	0.144	0.136	0.121	0.110
1220	Building (1)	0.144	0.130	0.111	0.089	0.085
	Contents (2)	0.173	0.157	0.149	0.130	0.124
Territory					Territorial Multiplier	
Minneapolis					0.920	
Saint Paul					0.825	
Balance of State (Minnesota)					1.000	

COMMERCIAL LINES MANUAL
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MINNESOTA (22)

85. BASIC GROUP I CLASS LOSS COSTS (Cont'd)

All rates are subject to protection class and territorial multipliers.

CSP Class Codes And Description						
1230	Cold Storage Warehouses					
1400	Waste and Reclaimed Materials Including Yards					
1650	Building Supply Yards, Including Retail Lumberyards, Coal and Coke Yards					
1700	Mill Yards					
1751	Oil Distributing, Oil Terminals and LPG Tank Farms – Including Stock					
1752	Oil Distributing, Oil Terminals and LPG Tank Farms – Excluding Stock					
2200	Baking on Premises, Delivery to Outlets					
2205	Baking on Premises, Delivery to Outlets, and Food Products Manufacturing – Using Cannabis as an Ingredient					
2350	Beverage Bottlers Excluding Alcoholic Beverages					
CSP Class Code	Coverage	Construction (Code)				
		Frame (1)	Joisted Masonry (2)	Non-Comb. (3)	Mas. Non-Comb. (4)	Mod. F.R. (5) Or Fire Res. (6)
1230	Building (1)	0.124	0.110	0.099	0.082	0.075
	Contents (2)	0.169	0.150	0.144	0.126	0.119
1400	Building (1)	0.369	0.335	0.296	0.240	0.223
	Contents (2)	0.450	0.405	0.386	0.343	0.315
	Yard	0.558		0.057		
1650	Building (1)	0.222	0.197	0.178	0.144	0.132
	Contents (2)	0.280	0.250	0.239	0.209	0.194
	Yard	0.157		0.020		
1700	Building (1)	0.183	0.163	0.146	0.119	0.109
	Contents (2)	0.277	0.244	0.233	0.206	0.193
	Yard	0.149		0.020		
1751	Building (1)	0.117	0.105	0.089	0.075	0.071
	Contents (2)	0.149	0.136	0.130	0.111	0.105
1752	Building (1)	0.109	0.099	0.086	0.074	0.066
	Contents (2)	0.109	0.099	0.089	0.082	0.075
2200	Building (1)	0.683	0.619	0.550	0.449	0.408
	Contents (2)	0.814	0.737	0.690	0.612	0.573
2205	Building (1)	0.683	0.619	0.550	0.449	0.408
	Contents (2)	0.814	0.737	0.690	0.612	0.573
2350	Building (1)	0.441	0.396	0.351	0.287	0.264
	Contents (2)	0.519	0.471	0.441	0.389	0.366
Territory					Territorial Multiplier	
Minneapolis					0.920	
Saint Paul					0.825	
Balance of State (Minnesota)					1.000	

COMMERCIAL LINES MANUAL
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85. BASIC GROUP I CLASS LOSS COSTS (Cont'd)

All rates are subject to protection class and territorial multipliers.

CSP Class Codes And Description						
2459	Distilleries and Wineries					
2800	Textile Mill Products					
3409	Leather and Leather Products					
4809	Printing					
CSP Class Code	Coverage	Construction (Code)				
		Frame (1)	Joisted Masonry (2)	Non-Comb. (3)	Mas. Non-Comb. (4)	Mod. F.R. (5) Or Fire Res. (6)
2459	Building (1)	0.287	0.257	0.224	0.184	0.169
	Contents (2)	0.366	0.332	0.315	0.280	0.257
2800	Building (1)	0.829	0.744	0.666	0.539	0.502
	Contents (2)	1.090	0.981	0.922	0.817	0.766
3409	Building (1)	0.172	0.160	0.141	0.112	0.105
	Contents (2)	0.204	0.182	0.171	0.150	0.141
4809	Building (1)	0.132	0.121	0.108	0.087	0.079
	Contents (2)	0.164	0.149	0.139	0.121	0.116
Territory					Territorial Multiplier	
Minneapolis					0.920	
Saint Paul					0.825	
Balance of State (Minnesota)					1.000	

PROPERTY CLAIMS SERVICES INFORMATION

ISO's Property Claims Services defines a catastrophe as an event that:

- reaches a threshold dollar amount of total insured property losses, and
- affects a significant number of property and casualty insurance policyholders and property and casualty insurers.

From 1949 to 1981, the threshold was \$1 million. From 1982 to 1996, it was \$5 million, and since January 1, 1997, the threshold has been \$25 million.

All of the events listed may not have resulted in unexpected loss experience for commercial property coverage in this state since catastrophes are defined based on total insured property losses spreading across state lines and lines of business.

For more information concerning Property Claims Services, please see "Persons to Contact" in the circular cover letter.

Minnesota
Commercial Property

The following events have been identified as catastrophes by ISO's Property Claims Services.

<u>From</u>	<u>To</u>	<u>Perils</u>
7/5/16	7/7/16	Flooding, Hail, Tornadoes, Wind
7/20/16	7/21/16	Flooding, Hail, Wind
9/19/16	9/23/16	Flooding, Hail, Tornadoes, Wind
3/6/17	3/9/17	Flooding, Hail, Tornadoes, Wind
5/15/17	5/18/17	Flooding, Hail, Tornadoes, Wind
6/11/17	6/11/17	Flooding, Hail, Wind
7/11/17	7/12/17	Flooding, Hail, Wind
5/29/18	6/1/18	Flooding, Hail, Tornadoes, Wind
8/27/18	8/28/18	Flooding, Hail, Tornadoes, Wind
9/20/18	9/21/18	Flooding, Hail, Tornadoes, Wind
1/29/19	2/1/19	Freezing, Ice, Snow, Wind
3/12/19	3/17/19	Flooding, Hail, Ice, Snow, Tornadoes, Wind
7/17/19	7/18/19	Flooding, Hail, Tornadoes, Wind
7/19/19	7/23/19	Flooding, Hail, Tornadoes, Wind
7/26/19	7/27/19	Flooding, Hail, Wind
8/4/19	8/5/19	Flooding, Hail, Wind
6/4/19	6/6/19	Flooding, Hail, Tornadoes, Wind
5/26/20	6/8/20	Riot; Civil Disorder
6/2/20	6/3/20	Flooding, Hail, Tornadoes, Wind
6/5/20	6/11/20	Flooding, Hail, Tornadoes, Wind
7/10/20	7/12/20	Flooding, Hail, Tornadoes, Wind
7/17/20	7/19/20	Flooding, Hail, Tornadoes, Wind
8/8/20	8/11/20	Flooding, Hail, Tornadoes, Wind
8/13/20	8/17/20	Flooding, Hail, Tornadoes, Wind
9/5/20	9/6/20	Flooding, Hail, Wind
3/9/21	3/11/21	Flooding, Hail, Wind
6/11/21	6/14/21	Flooding, Hail, Tornadoes, Wind
6/17/21	6/20/21	Flooding, Hail, Tornadoes, Wind
7/26/21	7/27/21	Flooding, Hail, Tornadoes, Wind
7/28/21	7/29/21	Flooding, Hail, Tornadoes, Wind
8/26/21	8/28/21	Flooding, Hail, Tornadoes, Wind
9/15/21	9/17/21	Flooding, Hail, Tornadoes, Wind
12/13/21	12/16/21	Flooding, Hail, Tornadoes, Wind
4/10/22	4/14/22	Flooding, Hail, Tornadoes, Wind
4/21/22	4/24/22	Flooding, Hail, Tornadoes, Wind
5/9/22	5/10/22	Flooding, Hail, Tornadoes, Wind
5/11/22	5/12/22	Flooding, Hail, Tornadoes, Wind
5/19/22	5/22/22	Flooding, Hail, Tornadoes, Wind
5/29/22	5/29/22	Flooding, Hail, Tornadoes, Wind
5/30/22	5/31/22	Flooding, Hail, Tornadoes, Wind
7/21/22	7/25/22	Flooding, Hail, Tornadoes, Wind
8/27/22	8/29/22	Flooding, Hail, Tornadoes, Wind
9/18/22	9/21/22	Flooding, Hail, Tornadoes, Wind
12/21/22	12/25/22	Flooding, Freezing, Ice, Power Outage, Snow, Wind
3/30/23	4/1/23	Flooding, Hail, Power Outage, Tornadoes, Wind
4/18/23	4/22/23	Flooding, Hail, Tornadoes, Wind
5/23/23	5/30/23	Flooding, Hail, Tornadoes, Wind
7/9/23	7/14/23	Flooding, Hail, Tornadoes, Wind
7/19/23	7/21/23	Flooding, Hail, Tornadoes, Wind

Minnesota
Commercial Property

The following events have been identified as catastrophes by ISO's Property Claims Services.

<u>From</u>	<u>To</u>	<u>Perils</u>
7/27/23	7/31/23	Flooding, Hail, Tornadoes, Wind
8/10/23	8/11/23	Flooding, Hail, Wind
10/23/23	10/24/23	Flooding, Hail, Wind

MINNESOTA

BASIC GROUP I PROSPECTIVE LOSS COST CHANGES
BY RATING GROUP AND TERRITORY (A)

Rating Group	Description	Minneapolis	Saint Paul	Balance of State (Minnesota)
01	Apartments	53.1%	40.5%	26.0%
02	Other Habitational	39.8%	28.3%	15.0%
03	Restaurants & Bars	28.0%	17.5%	5.3%
04	Other Mercantile Risks	29.1%	18.4%	6.2%
05	Public Buildings	30.2%	19.5%	7.2%
06	Churches	26.3%	15.9%	3.9%
07	Schools	18.5%	8.7%	-2.5%
08	Offices And Banks	18.6%	8.9%	-2.4%
09	Recreational Facilities	16.0%	6.5%	-4.5%
10	Hotels & Motels	30.0%	19.3%	7.0%
11	Hospitals & Nursing Homes	26.7%	16.3%	4.3%
12	Buildings Under Construction	25.0%	14.7%	2.9%
13	Motor Vehicle Risks	37.0%	25.8%	12.7%
14	Other Non-Manufacturing	25.0%	14.7%	2.9%
15	Storage	22.7%	12.6%	0.9%
17	Food Manufacturing	27.8%	17.2%	5.1%
18	Wood Manufacturing	30.5%	19.8%	7.4%
19	Wearing Apparel	30.5%	19.8%	7.4%
20	Chemical Manufacturing	31.9%	21.1%	8.6%
21	Metal Manufacturing	24.9%	14.6%	2.8%
22	Other Manufacturing	30.2%	19.5%	7.2%
	Total	36.4%	23.3%	6.9%

(A) For each rating group, the loss cost change for each CSP class in the rating group, by coverage and construction, is identical to the overall change shown for the rating group.

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	Statewide Coverage Loss Cost Change Of	1.139 13.9%
<u>TOP</u>	<u>\$ Lst Sq Formula Relativity</u>	<u>Credibility Z</u>	<u>Credibility Weighted Relativity</u>	<u>Balanced Relativity</u>	<u>Or</u>	
10	0.715	0.130	0.957	0.962		
31	2.172	0.031	1.024	1.030		
32	0.540	0.155	0.909	0.914		
33	1.017	0.044	1.001	1.007		
34	1.101	0.251	1.024	1.030		
35	1.182	0.190	1.032	1.038		
36	1.369	0.196	1.063	1.069		
37	0.826	0.224	0.958	0.963		
38	0.946	0.073	0.996	1.002		
Rating Group						
1	1.737	0.288	1.172	1.173		
2	1.991	0.098	1.070	1.071		
3	0.862	0.139	0.980	0.981		
4	0.974	0.471	0.988	0.989		
5	0.722	0.009	0.997	0.998		
6	0.806	0.157	0.967	0.968		
7	0.561	0.168	0.907	0.908		
8	0.619	0.202	0.908	0.909		
9	0.504	0.173	0.888	0.889		
10	0.933	0.079	0.995	0.996		
11	0.739	0.100	0.970	0.971		
13	1.222	0.238	1.049	1.050		
14	0.735	0.144	0.957	0.958		
15	0.646	0.145	0.939	0.940		
17	0.760	0.080	0.978	0.979		
18	0.986	0.082	0.999	1.000		
19	0.938	0.016	0.999	1.000		
20	1.388	0.030	1.010	1.011		
21	0.840	0.261	0.956	0.957		
22	0.971	0.119	0.997	0.998		
					Indicated Monoline Loss Cost Level	
<u>Territory</u>					<u>Change</u>	
Minneapolis	1.911	0.186	1.128	1.191	30.5%	
Saint Paul	1.560	0.078	1.035	1.093	19.8%	
Bal. Of State (Minnesot	0.902	0.721	0.928	0.980	7.4%	

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS

Sample Loss Cost Level Change Calculation for Minneapolis:

Statewide Coverage Loss Cost Change	=	1.139
Territorial Relativity	=	1.191
Monoline (TOP 10) Relativity	=	0.962
Rating Group 01 Relativity	=	1.173
Indicated Monoline Loss Cost Level Change		
= 1.139 x 1.191 x 0.962 x 1.173	=	1.531
	or	53.1%

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Territory</u>	<u>Type of Policy</u>	<u>Rating Group</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss <u>Costs</u>	(2) 5 - Year Aggregate Loss <u>Costs</u>	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
Minneapolis	TOP 10: Monoline	1 Apartments	152,215	351,487	8.999	4.370	3.192
		2 Other Habitational	4,519	73,364	2.162	3.256	2.378
		3 Restaurants & Bars	4,870	19,349	0.000	2.915	2.129
		4 Other Mercantile Risks	42,011	235,943	0.535	2.989	2.183
		5 Public Buildings	121	1,531	0.000	2.916	2.130
		6 Churches	1,418	10,044	2.250	3.271	2.389
		7 Schools	2,881	13,049	0.000	2.915	2.129
		8 Offices and Banks	19,567	67,310	0.154	2.937	2.145
		9 Recreational Facilities	6,067	49,028	0.000	2.913	2.128
		10 Hotels and Motels	0	8,659	0.000	2.916	2.130
		11 Hospitals and Nursing Homes	7,541	33,202	0.000	2.914	2.129
		13 Motor Vehicle Risks	4,957	34,942	0.000	2.914	2.129
		14 Other Non-Manufacturing	15,447	105,046	2.486	3.307	2.416
		15 Storage	2,553	8,512	0.000	2.916	2.130
		17 Food Manufacturing	3,100	9,128	0.000	2.916	2.130
		18 Wood Manufacturing	0	799	0.000	2.916	2.130
		20 Chemical Manufacturing	751	1,624	0.000	2.916	2.130
		21 Metal Manufacturing	16,683	53,251	0.000	2.913	2.128
		22 Other Manufacturing	2,623	4,344	0.000	2.916	2.130
		TOTAL	287,324	1,080,612	5.035	3.726	2.722
Minneapolis	TOP 31: Multiline Hotels/Motels	10 Hotels and Motels	28,840	124,855	0.000	2.435	1.779
		TOTAL	28,840	124,855	0.000	2.435	1.779
Minneapolis	TOP 32: Multiline Apartment	1 Apartments	889,923	3,371,858	2.036	2.367	1.729
		2 Other Habitational	84,341	403,341	4.706	3.547	2.591
		TOTAL	974,264	3,775,199	2.267	2.469	1.804

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Territory</u>	<u>Type of Policy</u>	<u>Rating Group</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
Minneapolis	TOP 33: Multiline Office	8 Offices and Banks	79,501	400,133	15.229	6.631	4.844
		TOTAL	79,501	400,133	15.229	6.631	4.844
Minneapolis	TOP 34: Multiline Mercantile	3 Restaurants & Bars	169,445	949,371	0.956	2.177	1.590
		4 Other Mercantile Risks	291,804	1,693,296	3.927	3.525	2.575
		8 Offices and Banks	35,953	175,942	0.000	2.380	1.738
		13 Motor Vehicle Risks	5,105	32,688	0.000	2.540	1.855
		14 Other Non-Manufacturing	12,906	58,154	0.000	2.510	1.833
		15 Storage	43,503	174,953	0.065	2.395	1.749
		TOTAL	558,716	3,084,404	2.346	2.922	2.134
Minneapolis	TOP 35: Multiline Institutional	2 Other Habitational	1,319	1,501	0.000	2.578	1.883
		5 Public Buildings	3,202	20,423	0.000	2.555	1.866
		6 Churches	125,861	692,370	0.535	2.135	1.560
		7 Schools	26,728	147,282	1.080	2.641	1.929
		8 Offices and Banks	50,810	210,022	1.186	2.623	1.916
		9 Recreational Facilities	6,458	30,339	0.000	2.543	1.858
		11 Hospitals and Nursing Homes	79,743	287,897	13.204	5.699	4.163
		13 Motor Vehicle Risks	40	4,993	0.000	2.574	1.880
		14 Other Non-Manufacturing	11,553	34,403	0.000	2.538	1.854
		TOTAL	305,714	1,429,230	3.956	3.220	2.352
Minneapolis	TOP 36: Multiline Services	3 Restaurants & Bars	6,447	38,057	0.000	3.720	2.717
		4 Other Mercantile Risks	8,266	37,027	0.277	3.758	2.745
		8 Offices and Banks	36,539	137,730	19.911	6.439	4.703
		9 Recreational Facilities	116,227	620,988	0.504	3.786	2.766
		13 Motor Vehicle Risks	35,295	239,029	0.272	3.756	2.744
		14 Other Non-Manufacturing	35,252	192,808	0.066	3.728	2.723
		15 Storage	649	15,747	0.000	3.721	2.718
		21 Metal Manufacturing	0	275	0.000	3.721	2.718
		22 Other Manufacturing	990	10,552	0.000	3.721	2.718
		TOTAL	239,665	1,292,213	3.339	4.174	3.049

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Territory</u>	<u>Type of Policy</u>	<u>Rating Group</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss <u>Costs</u>	(2) 5 - Year Aggregate Loss <u>Costs</u>	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
Minneapolis	TOP 37: Multiline Industrial/Processing						
		4 Other Mercantile Risks	5,170	25,139	2.673	4.085	2.984
		8 Offices and Banks	1,077	8,370	0.000	3.721	2.718
		14 Other Non-Manufacturing	5,588	28,394	0.000	3.720	2.717
		15 Storage	0	156,619	0.000	3.720	2.717
		17 Food Manufacturing	48,549	182,067	0.000	3.719	2.717
		18 Wood Manufacturing	17,356	109,148	0.418	3.777	2.759
		19 Wearing Apparel	3,735	13,776	0.475	3.785	2.765
		20 Chemical Manufacturing	69,084	138,935	14.047	5.638	4.118
		21 Metal Manufacturing	86,296	385,539	8.526	4.886	3.569
		22 Other Manufacturing	25,319	137,906	0.000	3.720	2.717
		TOTAL	262,174	1,185,893	6.595	4.621	3.375
Minneapolis	TOP 38: Multiline Contractors						
		4 Other Mercantile Risks	15,483	87,921	10.417	5.142	3.756
		8 Offices and Banks	4,833	34,973	0.000	3.720	2.717
		14 Other Non-Manufacturing	5,180	39,883	49.143	10.425	7.615
		TOTAL	25,496	162,777	16.310	5.946	4.343

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Territory</u>	<u>Type of Policy</u>	<u>Rating Group</u>	(1)	(2)	(3)	(4)	(5)
			Accident Year Ending 09/30/2022 Aggregate Loss Costs	5 - Year Aggregate Loss Costs	5 - Year Experience Ratio	Credibility Weighted Experience Ratio	Credibility Weighted Relativity
Minneapolis	TOP: All TOPS	1 Apartments	1,042,138	3,723,345	3.053	2.660	1.943
		2 Other Habitational	90,179	478,206	4.510	3.518	2.570
		3 Restaurants & Bars	180,762	1,006,777	0.896	2.252	1.645
		4 Other Mercantile Risks	362,734	2,079,326	3.710	3.545	2.590
		5 Public Buildings	3,323	21,954	0.000	2.568	1.876
		6 Churches	127,279	702,414	0.554	2.148	1.569
		7 Schools	29,609	160,331	0.975	2.668	1.948
		8 Offices and Banks	228,280	1,034,480	8.768	4.647	3.394
		9 Recreational Facilities	128,752	700,355	0.455	3.683	2.690
		10 Hotels and Motels	28,840	133,514	0.000	2.435	1.779
		11 Hospitals and Nursing Homes	87,284	321,099	12.063	5.458	3.987
		13 Motor Vehicle Risks	45,397	311,652	0.211	3.526	2.576
		14 Other Non-Manufacturing	85,926	458,688	3.437	3.713	2.712
		15 Storage	46,705	355,831	0.061	2.442	1.783
		17 Food Manufacturing	51,649	191,195	0.000	3.671	2.682
		18 Wood Manufacturing	17,356	109,947	0.418	3.777	2.759
		19 Wearing Apparel	3,735	13,776	0.475	3.785	2.765
		20 Chemical Manufacturing	69,835	140,559	13.896	5.609	4.097
		21 Metal Manufacturing	102,979	439,065	7.145	4.566	3.336
		22 Other Manufacturing	28,932	152,802	0.000	3.647	2.664
		TOTAL	2,761,694	12,535,316	3.741	3.278	2.395
Saint Paul	TOP 10: Monoline	1 Apartments	5,349	12,321	37.642	11.277	8.237
		2 Other Habitational	2,957	17,507	0.000	4.217	3.080
		3 Restaurants & Bars	1,381	2,575	0.000	4.218	3.081
		4 Other Mercantile Risks	1,938	27,038	0.131	4.242	3.099
		5 Public Buildings	0	245	0.000	4.218	3.081
		6 Churches	0	1,710	0.000	4.218	3.081
		7 Schools	208	2,602	0.000	4.218	3.081
		8 Offices and Banks	3,628	29,853	0.000	4.217	3.080
		9 Recreational Facilities	1,628	8,795	0.000	4.218	3.081
		11 Hospitals and Nursing Homes	4,201	19,522	0.000	4.217	3.080
		13 Motor Vehicle Risks	4,074	12,749	0.000	4.218	3.081
		14 Other Non-Manufacturing	3,266	22,141	0.586	4.327	3.161
		15 Storage	1,046	18,062	26.942	9.271	6.772
		18 Wood Manufacturing	1,726	9,266	0.000	4.218	3.081
		21 Metal Manufacturing	550	1,257	0.000	4.218	3.081
		22 Other Manufacturing	368	623	0.000	4.218	3.081
		TOTAL	32,320	186,266	7.169	5.562	4.063
Saint Paul	TOP 31: Multiline Hotels/Motels	10 Hotels and Motels	12,173	126,303	0.278	1.582	1.156
		TOTAL	12,173	126,303	0.278	1.582	1.156
Saint Paul	TOP 32: Multiline Apartment	1 Apartments	254,115	878,865	3.007	2.713	1.982
		2 Other Habitational	48,577	237,275	0.193	1.376	1.005
		TOTAL	302,692	1,116,140	2.555	2.498	1.825

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Territory</u>	<u>Type of Policy</u>	<u>Rating Group</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
Saint Paul	TOP 33: Multiline Office	8 Offices and Banks	28,170	165,346	11.324	5.260	3.842
		TOTAL	28,170	165,346	11.324	5.260	3.842
Saint Paul	TOP 34: Multiline Mercantile	3 Restaurants & Bars	41,946	373,944	0.435	1.327	0.969
		4 Other Mercantile Risks	125,200	783,019	0.297	0.976	0.713
		8 Offices and Banks	2,210	13,870	0.000	1.770	1.293
		13 Motor Vehicle Risks	1,158	13,250	1.002	1.948	1.423
		14 Other Non-Manufacturing	7,636	27,787	2.202	2.161	1.579
		15 Storage	10,256	51,968	15.741	5.204	3.801
		TOTAL	188,406	1,263,838	1.246	1.348	0.984
Saint Paul	TOP 35: Multiline Institutional	2 Other Habitational	2,932	9,882	0.000	1.782	1.302
		5 Public Buildings	2,548	8,525	3.587	2.394	1.749
		6 Churches	24,301	155,794	0.088	1.469	1.073
		7 Schools	5,169	71,814	0.113	1.646	1.202
		8 Offices and Banks	34,837	110,164	0.786	1.758	1.284
		9 Recreational Facilities	12,948	35,476	0.000	1.710	1.249
		11 Hospitals and Nursing Homes	32,864	135,884	6.737	3.584	2.618
		13 Motor Vehicle Risks	41	129	0.000	1.811	1.323
		14 Other Non-Manufacturing	7,491	27,794	0.057	1.742	1.272
		TOTAL	123,131	555,462	2.120	2.191	1.601
Saint Paul	TOP 36: Multiline Services	3 Restaurants & Bars	2,620	30,607	0.000	0.553	0.404
		4 Other Mercantile Risks	3,158	20,188	0.000	0.555	0.405
		8 Offices and Banks	15,613	64,199	0.000	0.548	0.400
		9 Recreational Facilities	49,692	228,884	0.333	0.586	0.428
		13 Motor Vehicle Risks	37,616	131,711	0.110	0.555	0.405
		14 Other Non-Manufacturing	4,378	27,981	0.000	0.554	0.405
		15 Storage	3,247	43,759	0.153	0.574	0.419
		21 Metal Manufacturing	16	1,216	4.287	1.145	0.836
		22 Other Manufacturing	9	10,037	0.000	0.557	0.407
		TOTAL	116,349	558,582	0.183	0.568	0.415
Saint Paul	TOP 37: Multiline Industrial/Processing	4 Other Mercantile Risks	2,305	24,050	0.000	0.555	0.405
		8 Offices and Banks	600	3,716	0.000	0.558	0.408
		14 Other Non-Manufacturing	3,119	16,210	0.000	0.556	0.406
		15 Storage	13	13	0.000	0.559	0.408
		17 Food Manufacturing	4,216	26,380	0.000	0.554	0.405
		18 Wood Manufacturing	6,347	61,580	0.000	0.548	0.400
		19 Wearing Apparel	0	5,010	0.000	0.558	0.408
		20 Chemical Manufacturing	16,375	24,037	0.000	0.555	0.405
		21 Metal Manufacturing	42,780	326,625	2.017	0.945	0.690
		22 Other Manufacturing	8,909	40,848	0.000	0.552	0.403
		TOTAL	84,664	528,469	1.019	0.751	0.548
Saint Paul	TOP 38: Multiline Contractors	4 Other Mercantile Risks	21,822	130,612	0.319	0.591	0.432
		8 Offices and Banks	2,575	10,835	0.000	0.557	0.407
		14 Other Non-Manufacturing	3,676	12,589	0.000	0.557	0.407
		TOTAL	28,073	154,036	0.248	0.583	0.426
Saint Paul	TOP: All TOPS						

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

Territory	Type of Policy	Rating Group	(1)	(2)	(3)	(4)	(5)
			Accident Year Ending 09/30/2022	5 - Year	5 - Year	Credibility	Credibility
			Aggregate Loss Costs	Aggregate Loss Costs	Experience Ratio	Weighted Experience Ratio	Weighted Relativity
		1 Apartments	259,464	891,186	3.721	2.890	2.111
		2 Other Habitational	54,466	264,664	0.172	1.552	1.134
		3 Restaurants & Bars	45,947	407,126	0.397	1.370	1.000
		4 Other Mercantile Risks	154,423	984,907	0.288	0.948	0.692
		5 Public Buildings	2,548	8,770	3.587	2.394	1.749
		6 Churches	24,301	157,504	0.088	1.469	1.073
		7 Schools	5,377	74,416	0.109	1.745	1.275
		8 Offices and Banks	87,633	397,983	3.953	2.727	1.992
		9 Recreational Facilities	64,268	273,155	0.257	0.904	0.661
		10 Hotels and Motels	12,173	126,303	0.278	1.582	1.156
		11 Hospitals and Nursing Homes	37,065	155,406	5.973	3.656	2.670
		13 Motor Vehicle Risks	42,889	157,839	0.124	0.942	0.688
		14 Other Non-Manufacturing	29,566	134,502	0.648	1.687	1.233
		15 Storage	14,562	113,802	13.056	4.460	3.257
		17 Food Manufacturing	4,216	26,380	0.000	0.554	0.405
		18 Wood Manufacturing	8,073	70,846	0.000	1.333	0.973
		19 Wearing Apparel	0	5,010	0.000	0.558	0.408
		20 Chemical Manufacturing	16,375	24,037	0.000	0.555	0.405
		21 Metal Manufacturing	43,346	329,098	1.992	0.987	0.720
		22 Other Manufacturing	9,286	51,508	0.000	0.697	0.509
		TOTAL	915,978	4,654,442	2.116	1.936	1.414
Balance of State	TOP 10: Monoline						
		1 Apartments	212,000	986,661	0.881	0.897	0.655
		2 Other Habitational	108,930	624,018	1.357	0.979	0.715
		3 Restaurants & Bars	40,627	186,956	0.554	0.846	0.618
		4 Other Mercantile Risks	1,029,711	4,361,184	0.773	0.864	0.631
		5 Public Buildings	55,584	108,423	0.000	0.762	0.557
		6 Churches	16,206	91,180	0.000	0.763	0.557
		7 Schools	4,723	71,400	0.255	0.802	0.586
		8 Offices and Banks	197,044	924,010	2.694	1.228	0.897
		9 Recreational Facilities	149,297	764,455	0.293	0.793	0.579
		10 Hotels and Motels	39,527	260,020	0.000	0.757	0.553
		11 Hospitals and Nursing Homes	178,077	655,859	0.629	0.853	0.623
		13 Motor Vehicle Risks	287,412	1,321,068	1.972	1.111	0.812
		14 Other Non-Manufacturing	132,090	625,279	0.576	0.845	0.617
		15 Storage	193,006	840,037	0.646	0.855	0.625
		17 Food Manufacturing	221,970	344,636	0.074	0.766	0.560
		18 Wood Manufacturing	33,215	145,277	2.545	1.156	0.844
		19 Wearing Apparel	11,871	282,743	0.000	0.756	0.552
		20 Chemical Manufacturing	16,823	59,962	0.000	0.764	0.558
		21 Metal Manufacturing	187,951	932,976	0.097	0.754	0.551
		22 Other Manufacturing	15,110	134,127	0.210	0.794	0.580
		TOTAL	3,131,174	13,720,271	0.872	0.895	0.654
Balance of State	TOP 31: Multiline Hotels/Motels						
		10 Hotels and Motels	734,190	2,918,072	4.247	2.643	1.931
		TOTAL	734,190	2,918,072	4.247	2.643	1.931

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Territory</u>	<u>Type of Policy</u>	<u>Rating Group</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
Balance of State	TOP 32: Multiline Apartment	1 Apartments	3,398,045	10,554,135	1.252	1.241	0.907
		2 Other Habitational	569,306	2,896,236	1.687	1.435	1.048
		TOTAL	3,967,351	13,450,371	1.314	1.269	0.927
Balance of State	TOP 33: Multiline Office	8 Offices and Banks	826,833	4,082,615	0.288	0.714	0.522
		TOTAL	826,833	4,082,615	0.288	0.714	0.522
Balance of State	TOP 34: Multiline Mercantile	3 Restaurants & Bars	901,262	4,489,815	1.324	1.275	0.931
		4 Other Mercantile Risks	3,475,258	17,738,793	1.445	1.402	1.024
		8 Offices and Banks	79,583	462,941	1.303	1.233	0.901
		13 Motor Vehicle Risks	400,934	2,225,038	0.324	0.839	0.613
		14 Other Non-Manufacturing	170,505	906,553	0.136	0.902	0.659
		15 Storage	720,459	3,366,392	0.606	0.909	0.664
		TOTAL	5,748,001	29,189,532	1.202	1.264	0.923
Balance of State	TOP 35: Multiline Institutional	2 Other Habitational	26,849	59,476	0.000	1.009	0.737
		5 Public Buildings	42,803	213,884	0.165	1.010	0.738
		6 Churches	1,466,101	6,507,703	1.264	1.245	0.909
		7 Schools	1,461,459	7,757,508	0.690	0.861	0.629
		8 Offices and Banks	113,023	498,867	0.003	0.928	0.678
		9 Recreational Facilities	351,527	1,222,076	2.078	1.494	1.091
		11 Hospitals and Nursing Homes	813,246	3,291,617	0.899	1.057	0.772
		13 Motor Vehicle Risks	37,013	105,541	0.000	1.000	0.730
		14 Other Non-Manufacturing	422,783	1,791,729	0.197	0.824	0.602
		TOTAL	4,734,804	21,448,401	0.932	1.062	0.776
Balance of State	TOP 36: Multiline Services	3 Restaurants & Bars	87,629	348,576	0.027	0.986	0.720
		4 Other Mercantile Risks	442,443	1,965,086	0.993	1.120	0.818
		8 Offices and Banks	450,154	1,995,395	0.320	0.935	0.683
		9 Recreational Facilities	1,419,873	5,381,506	0.392	0.831	0.607
		13 Motor Vehicle Risks	1,703,642	8,337,885	3.166	2.218	1.620
		14 Other Non-Manufacturing	405,966	1,933,247	2.659	1.572	1.148
		15 Storage	340,302	1,885,494	1.037	1.133	0.828
		21 Metal Manufacturing	47,961	331,198	0.000	0.983	0.718
		22 Other Manufacturing	55,852	275,811	0.083	1.001	0.731
		TOTAL	4,953,822	22,454,198	1.609	1.431	1.045
Balance of State	TOP 37: Multiline Industrial/Processing	4 Other Mercantile Risks	401,393	1,776,111	0.538	1.003	0.733
		8 Offices and Banks	41,266	174,912	0.000	0.998	0.729
		13 Motor Vehicle Risks	3,719	24,940	0.000	1.013	0.740
		14 Other Non-Manufacturing	97,085	518,997	0.119	0.986	0.720
		15 Storage	26,540	211,357	15.368	3.276	2.393
		17 Food Manufacturing	762,103	2,932,521	0.027	0.794	0.580
		18 Wood Manufacturing	628,935	3,244,941	0.842	1.056	0.771
		19 Wearing Apparel	55,252	346,435	0.083	0.995	0.727
		20 Chemical Manufacturing	209,682	993,914	0.091	0.943	0.689
		21 Metal Manufacturing	2,251,634	12,087,389	0.713	0.892	0.652
		22 Other Manufacturing	887,300	4,794,577	0.870	1.045	0.763
		TOTAL	5,364,909	27,106,094	0.669	0.948	0.693
Balance of State	TOP 38: Multiline Contractors						

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

Territory	Type of Policy	Rating Group	(1)	(2)	(3)	(4)	(5)
			Accident Year Ending 09/30/2022	5 - Year	5 - Year	Credibility	Credibility
			Aggregate Loss Costs	Aggregate Loss Costs	Experience Ratio	Weighted Experience Ratio	Weighted Relativity
Balance of State	TOP: All TOPS	4 Other Mercantile Risks	1,402,777	6,657,630	1.225	1.195	0.873
		8 Offices and Banks	112,606	566,865	0.561	1.060	0.774
		14 Other Non-Manufacturing	82,512	375,211	0.191	1.010	0.738
		TOTAL	1,597,895	7,599,706	1.125	1.176	0.859
Entire State	TOP 10: Monoline	1 Apartments	3,610,045	11,540,796	1.230	1.221	0.892
		2 Other Habitational	705,085	3,579,730	1.572	1.348	0.985
		3 Restaurants & Bars	1,029,518	5,025,347	1.183	1.233	0.901
		4 Other Mercantile Risks	6,751,582	32,498,804	1.213	1.235	0.902
		5 Public Buildings	98,387	322,307	0.072	0.870	0.636
		6 Churches	1,482,307	6,598,883	1.250	1.240	0.905
		7 Schools	1,466,182	7,828,908	0.689	0.861	0.629
		8 Offices and Banks	1,820,509	8,705,605	0.593	0.888	0.649
		9 Recreational Facilities	1,920,697	7,368,037	0.693	0.949	0.693
		10 Hotels and Motels	773,717	3,178,092	4.030	2.547	1.861
		11 Hospitals and Nursing Homes	991,323	3,947,476	0.850	1.020	0.745
		13 Motor Vehicle Risks	2,432,720	12,014,472	2.504	1.840	1.344
		14 Other Non-Manufacturing	1,310,941	6,151,016	0.984	1.092	0.797
		15 Storage	1,280,307	6,303,280	1.033	1.009	0.738
		17 Food Manufacturing	984,073	3,277,157	0.038	0.788	0.575
		18 Wood Manufacturing	662,150	3,390,218	0.927	1.061	0.775
		19 Wearing Apparel	67,123	629,178	0.068	0.953	0.696
		20 Chemical Manufacturing	226,505	1,053,876	0.084	0.930	0.679
		21 Metal Manufacturing	2,487,546	13,351,563	0.653	0.883	0.646
		22 Other Manufacturing	958,262	5,204,515	0.814	1.038	0.758
		TOTAL	31,058,979	141,969,260	1.158	1.182	0.864
		1 Apartments	369,564	1,350,469	4.757	2.478	1.810
		2 Other Habitational	116,406	714,889	1.354	1.150	0.840
		3 Restaurants & Bars	46,878	208,880	0.480	1.160	0.848
		4 Other Mercantile Risks	1,073,660	4,624,165	0.763	0.953	0.696
		5 Public Buildings	55,705	110,199	0.000	0.767	0.560
		6 Churches	17,624	102,934	0.181	0.965	0.704
		7 Schools	7,812	87,051	0.154	1.672	1.221
		8 Offices and Banks	220,239	1,021,173	2.424	1.429	1.044
		9 Recreational Facilities	156,992	822,278	0.279	0.910	0.665
		10 Hotels and Motels	39,527	268,679	0.000	0.757	0.553
		11 Hospitals and Nursing Homes	189,819	708,583	0.590	1.009	0.737
		13 Motor Vehicle Risks	296,443	1,368,759	1.912	1.184	0.865
		14 Other Non-Manufacturing	150,803	752,466	0.772	1.173	0.856
		15 Storage	196,605	866,611	0.778	0.927	0.677
		17 Food Manufacturing	225,070	353,764	0.073	0.796	0.582
		18 Wood Manufacturing	34,941	155,342	2.419	1.307	0.955
		19 Wearing Apparel	11,871	282,743	0.000	0.756	0.552
		20 Chemical Manufacturing	17,574	61,586	0.000	0.856	0.625
		21 Metal Manufacturing	205,184	987,484	0.089	0.939	0.686
		22 Other Manufacturing	18,101	139,094	0.175	1.171	0.855
		TOTAL	3,450,818	14,987,149	1.278	1.174	0.858

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Territory</u>	<u>Type of Policy</u>	<u>Rating Group</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
Entire State	TOP 31: Multiline Hotels/Motels	10 Hotels and Motels TOTAL	775,203 775,203	3,169,230 3,169,230	4.027 4.027	2.619 2.619	1.913 1.913
Entire State	TOP 32: Multiline Apartment	1 Apartments 2 Other Habitational TOTAL	4,542,083 702,224 5,244,307	14,804,858 3,536,852 18,341,710	1.504 1.946 1.563	1.544 1.685 1.563	1.128 1.230 1.142
Entire State	TOP 33: Multiline Office	8 Offices and Banks TOTAL	934,504 934,504	4,648,094 4,648,094	1.892 1.892	1.354 1.354	0.990 0.990
Entire State	TOP 34: Multiline Mercantile	3 Restaurants & Bars 4 Other Mercantile Risks 8 Offices and Banks 13 Motor Vehicle Risks 14 Other Non-Manufacturing 15 Storage TOTAL	1,112,653 3,892,262 117,746 407,197 191,047 774,218 6,495,123	5,813,130 20,215,108 652,753 2,270,976 992,494 3,593,313 33,537,774	1.234 1.594 0.881 0.322 0.209 0.776 1.302	1.414 1.547 1.593 0.863 1.061 1.049 1.409	1.033 1.130 1.164 0.631 0.775 0.767 1.029
Entire State	TOP 35: Multiline Institutional	2 Other Habitational 5 Public Buildings 6 Churches 7 Schools 8 Offices and Banks 9 Recreational Facilities 11 Hospitals and Nursing Homes 13 Motor Vehicle Risks 14 Other Non-Manufacturing TOTAL	31,100 48,553 1,616,263 1,493,356 198,670 370,933 925,853 37,094 441,827 5,163,649	70,859 242,832 7,355,867 7,976,604 819,053 1,287,891 3,715,398 110,663 1,853,926 23,433,093	0.000 0.334 1.190 0.695 0.443 1.969 2.166 0.000 0.189 1.140	1.148 1.185 1.318 0.896 1.507 1.520 1.547 1.003 0.884 1.217	0.839 0.865 0.962 0.654 1.101 1.110 1.130 0.732 0.646 0.889

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Territory</u>	<u>Type of Policy</u>	<u>Rating Group</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
Entire State	TOP 36: Multiline Services	3 Restaurants & Bars	96,696	417,240	0.024	1.157	0.845
		4 Other Mercantile Risks	453,867	2,022,301	0.973	1.164	0.850
		8 Offices and Banks	502,306	2,197,324	1.735	1.323	0.967
		9 Recreational Facilities	1,585,792	6,231,378	0.398	1.040	0.760
		13 Motor Vehicle Risks	1,776,553	8,708,625	3.044	2.213	1.617
		14 Other Non-Manufacturing	445,596	2,154,036	2.428	1.733	1.265
		15 Storage	344,198	1,945,000	1.027	1.133	0.828
		21 Metal Manufacturing	47,977	332,689	0.001	0.983	0.718
		22 Other Manufacturing	56,851	296,400	0.082	1.048	0.766
		TOTAL	5,309,836	24,304,993	1.656	1.536	1.122
Entire State	TOP 37: Multiline Industrial/Processing	4 Other Mercantile Risks	408,868	1,825,300	0.562	1.039	0.760
		8 Offices and Banks	42,943	186,998	0.000	1.060	0.774
		13 Motor Vehicle Risks	3,719	24,940	0.000	1.013	0.740
		14 Other Non-Manufacturing	105,792	563,601	0.109	1.118	0.816
		15 Storage	26,553	367,989	15.360	3.275	2.392
		17 Food Manufacturing	814,868	3,140,968	0.025	0.967	0.706
		18 Wood Manufacturing	652,638	3,415,669	0.823	1.123	0.820
		19 Wearing Apparel	58,987	365,221	0.108	1.172	0.856
		20 Chemical Manufacturing	295,141	1,156,886	3.353	2.020	1.476
		21 Metal Manufacturing	2,380,710	12,799,553	1.020	1.038	0.758
		22 Other Manufacturing	921,528	4,973,331	0.838	1.114	0.813
		TOTAL	5,711,747	28,820,456	0.946	1.114	0.814
Entire State	TOP 38: Multiline Contractors	4 Other Mercantile Risks	1,440,082	6,876,163	1.310	1.228	0.897
		8 Offices and Banks	120,014	612,673	0.526	1.156	0.844
		14 Other Non-Manufacturing	91,368	427,683	2.959	1.526	1.115
		TOTAL	1,651,464	7,916,519	1.344	1.240	0.905

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

<u>Territory</u>	<u>Type of Policy</u>	<u>Rating Group</u>	(1) Accident Year Ending 09/30/2022 Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
Entire State	TOP: All TOPS						
		1 Apartments	4,911,647	16,155,327	1.749	1.614	1.179
		2 Other Habitational	849,730	4,322,600	1.794	1.592	1.162
		3 Restaurants & Bars	1,256,227	6,439,250	1.113	1.385	1.011
		4 Other Mercantile Risks	7,268,739	35,563,037	1.318	1.344	0.982
		5 Public Buildings	104,258	353,031	0.155	0.961	0.702
		6 Churches	1,633,887	7,458,801	1.179	1.314	0.959
		7 Schools	1,501,168	8,063,655	0.692	0.900	0.657
		8 Offices and Banks	2,136,422	10,138,068	1.605	1.365	0.997
		9 Recreational Facilities	2,113,717	8,341,547	0.665	1.115	0.814
		10 Hotels and Motels	814,730	3,437,909	3.831	2.528	1.847
		11 Hospitals and Nursing Homes	1,115,672	4,423,981	1.898	1.455	1.063
		13 Motor Vehicle Risks	2,521,006	12,483,963	2.422	1.855	1.355
		14 Other Non-Manufacturing	1,426,433	6,744,206	1.124	1.262	0.922
		15 Storage	1,341,574	6,772,913	1.129	1.097	0.801
		17 Food Manufacturing	1,039,938	3,494,732	0.036	0.930	0.679
		18 Wood Manufacturing	687,579	3,571,011	0.904	1.133	0.827
		19 Wearing Apparel	70,858	647,964	0.090	1.102	0.805
		20 Chemical Manufacturing	312,715	1,218,472	3.164	1.955	1.428
		21 Metal Manufacturing	2,633,871	14,119,726	0.929	1.029	0.752
		22 Other Manufacturing	996,480	5,408,825	0.783	1.111	0.811
		TOTAL	34,736,651	159,159,018	1.389	1.369	1.000