

LOSS COSTS – IMPLEMENTATION

MAY 19, 2022

COMMERCIAL PROPERTY

LI-CF-2022-051

MINNESOTA COMMERCIAL FIRE AND ALLIED LINES ADVISORY PROSPECTIVE LOSS COST REVISION TO BE IMPLEMENTED; EXHIBITS PRESENTED IN EXCEL

KEY MESSAGE

Revised advisory prospective loss costs reflecting a statewide loss cost level change of +5.7% to be implemented.

BACKGROUND

In circular [LI-CF-2022-005](#), we provided you with information about the Commercial Fire and Allied Lines loss cost level experience review.

ISO ACTION

We are implementing CF-2021-RLA1, which presents a review of Commercial Fire and Allied Lines loss cost experience. Refer to the attachment(s) for complete details.

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, based on the information currently available, that those changes will have negligible and/or offsetting effects on prospective loss costs.

Occasional cases of possible deviation from long-term trends are difficult to separate from inherent volatility in Commercial Property losses due to the low-frequency, high-severity nature of BGI, and the weather-driven perils in BGII and SCL. However, we are continuing to monitor the economic environment to determine whether adjustments will be necessary. As stated above, based on the information available at the time of this filing, ISO is not making any explicit adjustment to our Commercial Property prospective loss costs due to COVID-19.

SUPPLEMENTARY INFORMATION

We are including the following supplementary information:

- An Actuarial Analysis Supplement, which provides discussion and analysis of changes in the experience and adjustments used to derive the loss cost level analysis.
- Section S, which provides supplementary exhibits displaying 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.

IMPORTANT NOTE

Change in Format

This circular offers several enhancements for customers. In addition to the PDF version, exhibits and loss cost tables are now available in user-friendly Excel format rather than Word. Where possible, exhibits are linked together formulaically to clarify how calculations flow through the entire ratemaking process and to enable customers to test the effects of different assumptions on the results.

To facilitate this change, the filing has been restructured. All explanatory text, for all sections of the filing, appears first; all exhibits and tables are grouped together and appear thereafter. Exhibits have been relabeled (Exhibit A1, Exhibit A2, etc.).

We invite customers to share feedback on this revised format and suggestions for further enhancements by contacting the individuals listed in the Contact Information block.

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 November 1, 2022, 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-2022-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-2022-006](#) 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 11-22 (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 June 20, 2022. On November 1, 2022, 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. Information in ProMetrix will distinguish between loss costs which reflect the effect of limit of insurance (LOI) relativities and pre-LOI loss costs.

- **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 June 20, 2022 to November 1, 2022. On November 1, 2022, 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. Information available via toll-free telephone service will distinguish between loss costs which reflect the effect of limit of insurance (LOI) relativities and pre-LOI loss costs.

REFERENCE(S)

- [LI-CF-2022-005](#) (02/03/2022) Commercial Fire And Allied Lines Experience Level Indications Reviewed By ISO Staff
- [LI-CL-2022-006](#) (02/02/2022) Revised Lead Time Requirements Listing

ATTACHMENT(S)

- CF-2021-RLA1
- Actuarial Analysis Supplement
- Excel Workbook

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.

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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, Nancy Narisi, am a Senior Actuarial Associate in Actuarial Operations for ISO, and I, Brian Klaif, am an Actuarial Associate 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.

CONTACT INFORMATION

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Callers outside the United States, Canada, and the Caribbean may contact us using our global toll-free number (International Access Code + 800 48977489). For information on all ISO products, visit us at www.verisk.com/iso. To keep abreast of the latest Insurance Lines Services updates, view www.verisk.com/ils.

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 5.7% 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 9/30/2020, evaluated as of 12/31/2020.

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, based on the information currently available, that those changes will have negligible and/or offsetting effects on prospective loss costs.

Occasional cases of possible deviation from long-term trends are difficult to separate from inherent volatility in Commercial Property losses due to the low-frequency, high-severity nature of BGI, and the weather-driven perils in BGII and SCL. However, we are continuing to monitor the economic environment to determine whether adjustments will be necessary. As stated above, based on the information available at the time of this filing, ISO is not making any explicit adjustment 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

With this filing, we are removing the Rating Group dimension from the Basic Group I relativity analysis in Exhibits B4 and B6 and removing Exhibit A2. Future class relativity reviews will be derived from countrywide data, in order to increase the credibility and stability of those relativities.

As an associated change, we are removing the credibility weighting from Exhibit B6, as the raw experience ratios without the Rating Group dimension are sufficient for use in the subsequent least squares iterative procedure.

MINNESOTA

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

LOSS COST LEVEL CHANGES

The statewide monoline prospective loss cost level changes are:

<u>Coverage</u>	<u>Indicated</u>
Basic Group I	11.9%
Basic Group II	0.8%
Special Causes of Loss	5.5%
Total	5.7%

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-2019-RLA1	CF-2018-RLA1
<u>Rates/ Loss Costs</u>	Loss Costs	Loss Costs
<u>Dates Implemented</u>	06/01/2020	05/01/2019
<u>Changes</u>		
Basic Group I	5.7%	4.4%
Basic Group II	5.3%	4.5%
Special Causes of Loss	-6.4%	-5.2%
Total	2.8%	2.2%

HISTORICAL SOURCE DATA

The data used in this revision is:

- Voluntary experience for ISO reporting companies.
- Five calendar/accident years ending 9/30/2020 for Basic Group I and Special Causes of Loss.
- Ten calendar/accident years ending 9/30/2020 for Basic Group II.

MINNESOTA

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

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 4/01/2022. 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:

- economic cost indices published by the U.S. Government and information provided by Xactware Solutions, Inc.
- changes in multistate average claim costs through fourth quarter 2019.

The "historic" trend factors based on the economic 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	4.8%
Contents	1.8%
Time Element	0.8%

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 economic 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	1.2%	1.5%	2.4%
Basic Group II	-0.4%	0.6%	2.6%
Special Causes of Loss	0.2%	-1.0%	2.4%

MINNESOTA

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

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	6.0%	3.4%	3.2%
Basic Group II	4.4%	2.5%	3.4%
Special Causes of Loss	5.0%	0.8%	3.2%

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	1.9%	1.8%	1.0%
Basic Group II	1.8%	1.6%	1.0%
Special Causes of Loss	1.8%	1.4%	1.0%

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.

MINNESOTA

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

TEN LARGEST COMPANY GROUPS IN ISO DATA BASE

COMMERCIAL MULTIPERIL - NON-LIABILITY (ASLOB 51)

1. Travelers Indemnity Company
2. Cincinnati Insurance Company
3. Westfield Insurance Company
4. QBE Insurance Corporation
5. State Auto Mutual Insurance Company
6. Tokio Marine Companies
7. Firemans Fund Insurance Company
8. Zurich American Insurance Company
9. Nationwide Mutual Insurance Company
10. Liberty Mutual 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 12/31/2020 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 12/31/2020 is:

Commercial Multi-peril - Non-liability (ASLOB 51) - 22.1%

MINNESOTA

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

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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COMMERCIAL PROPERTY

SECTION B: CALCULATION OF PROPOSED CHANGES

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
SECTION B: CALCULATION OF PROPOSED CHANGES

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>

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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.

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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.

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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).

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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).

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

COMPOSITION OF THE RATEMAKING DATA BASE (cont'd)

DATA EXCLUDED	<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.

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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/>

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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.

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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.

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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:

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

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

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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.

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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.

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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.

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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>2020 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>2016 - 2020 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>

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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>2020 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>2016 - 2020 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>

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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.

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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)

2020 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)

2011 - 2020 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.

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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.

COMMERCIAL PROPERTY
SECTION B: CALCULATION OF PROPOSED CHANGES

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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 PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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

ECONOMIC 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 economic trend information, i.e. May 15, 2021 for property damage and time element. The LPF's adjust losses for projected inflationary changes from the midpoint of the latest period of economic 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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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 economic 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 economic 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, 2020. 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).

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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> <p style="text-align: center;">$MSEP = (CD + CN + FS) + (EXD\&N - IMD\&N) + (IFIX - IPP)$, where</p> <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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

EXPLANATORY NOTES TO EXHIBIT C10 (cont'd)

PARTS B, C and D: COMPUTATION OF THE LOSS PROJECTION FACTOR

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 E: 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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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 economic 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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

OVERVIEW

DEVELOPMENT OF LOSS TREND ADJUSTMENTS

INTRODUCTION

In order to supplement the economic 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 economic 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 2021 COMFAL reviews is based on internal commercial property experience through 12/31/2019 and economic cost indices through 12/31/2019. 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 economic indices shown on Exhibit C10.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

EXPLANATORY NOTES TO EXHIBIT C12

DEVELOPMENT OF LOSS TREND ADJUSTMENTS (LTA'S)

I. RATE OF CHANGE BASED ON ECONOMIC INDICIES

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

CURRENT COST FACTORS

The CCF's underlying the LTA analysis are based on economic cost indices through 12/31/2019 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)

ANNUAL RATE OF CHANGE BASED ON ECONOMIC INDICIES

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 1/1/2018, for BG II it is 1/1/2015. Accordingly, there are 54 and 90 months, respectively, to the anticipated average accident date of 7/1/2022.

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

EXPLANATORY NOTES TO EXHIBIT C12 (cont'd)

III. LTA CALCULATION

COLUMN (11)

ANNUAL ECONOMIC RATE OF CHANGE

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

COLUMN (12)

ANNUAL INTERNAL RATE OF CHANGE

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 economic 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 economic 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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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) 7/1/2020 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 2020 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 2020 are applicable for the entire year.

COLUMNS (3)
AND (7) 10/1/2022 PROJECTED FACTORS

The 10/1/2022 factors are calculated by applying a factor to adjust the 7/1/2020 written factors to the amount of insurance level at the average date of writing, 10/1/2022. This is done using the selected annual changes in exposure or premium.

COLUMNS (4)
AND (8) 10/1/2022 EARNED EXPOSURES/PREMIUM FACTORS

The projected earned factors at the 10/1/2022 level (where 10/1/2022 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).

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

LOSS DEVELOPMENT

INTRODUCTION

For Commercial Property, losses are evaluated as of December 31, 2020, 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, 2020.

Accident year ended September 30, 2020 includes all losses paid on accidents from October 1, 2019 to September 30, 2020 and all losses outstanding on those accidents as of December 31, 2020, fifteen months after the inception of the accident year. Similarly, accident years ended September 30, 2019, 2018, 2017 and 2016 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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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) ADJUSTED INCURRED LOSSES

The adjusted 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 adjusted 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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.
 $\text{Column (4)} = \text{Column (3)} \div \text{Column (1)}$

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION C: SUPPORTING MATERIAL

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.

COMMERCIAL PROPERTY
SECTION D: ADDITIONAL SUPPORTING MATERIAL

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 2015-2019 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	1.110
Special Causes of Loss	1.110

MINNESOTA

SUMMARY OF MONOLINE PROSPECTIVE LOSS COST CHANGES (A)

COVERAGE	INDICATIONS	AGGREGATE LOSS COSTS AT CURRENT LEVEL
BASIC GROUP I	+11.9%	24,736,590
TERRITORY 01	+16.8%	
TERRITORY 02	+14.8%	
TERRITORY 08	+11.4%	
BASIC GROUP II	+0.8%	30,740,416
SPECIAL CAUSES OF LOSS	+5.5%	14,775,954
ALL COVERAGES COMBINED	+5.7%	70,252,960
TERRITORY DEFINITIONS		
Territory 1	Minneapolis	
Territory 2	Saint Paul	
Territory 8	Balance of State	

(A) FOR TREND PURPOSES, THE PERIOD OF USE FOR THIS REVISION IS ASSUMED TO BEGIN ON 04/01/2022.

MINNESOTA

SPECIAL CAUSES OF LOSS PROSPECTIVE LOSS COST CHANGES BY CATEGORY

CATEGORY	DESCRIPTION	ENTIRE STATE

01	BUILDINGS	+6.7%
02	RES. APTS. AND CONDOS	+1.7%
03	OFFICES	+5.9%
04	MERCANTILE - HIGH	+2.5%
05	MERCANTILE - MEDIUM	+7.3%
06	MERCANTILE - LOW	+2.6%
07	MOTELS AND HOTELS	+3.7%
08	INSTITUTIONAL - HIGH	+7.1%
09	INSTITUTIONAL - LOW	+0.1%
10	INDUST-PROC - HIGH	+3.3%
11	INDUST-PROC - LOW	+0.6%
12	SERVICE - HIGH	+0.1%
13	SERVICE - LOW	+2.9%
14	CONTRACTORS	+3.1%
	STATEWIDE TOTAL	+5.5%

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	11.6%	0.8%	6.1%
32	APARTMENT	12.7%	0.8%	5.8%
33	OFFICE	11.9%	0.8%	6.4%
34	MERCANTILE	12.0%	0.8%	5.9%
35	INSTITUTIONAL	11.8%	0.8%	6.1%
36	SERVICES	11.7%	0.8%	4.1%
37	INDUST/PROCESSING	11.7%	0.8%	4.4%
38	CONTRACTORS	11.6%	0.8%	5.0%

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 FOR BG I, 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)
YEAR	AGGREGATE* LOSS COSTS	ADJUSTED** INCURRED LOSSES	EXPERIENCE RATIO (3)/(2)	WEIGHTS
2016	25,645,591	31,501,848	1.228	0.10
2017	25,621,657	25,449,084	0.993	0.15
2018	24,839,662	35,061,347	1.412	0.20
2019	24,475,957	29,280,912	1.196	0.25
2020	24,736,590	44,631,209	1.804	0.30
(6) WEIGHTED EXPERIENCE RATIO				= 1.394
(7) CREDIBILITY				= 0.301
(8) EXPECTED EXPERIENCE RATIO				= 1.032
(9) CREDIBILITY WEIGHTED EXPERIENCE RATIO (0.301 X 1.394) + (0.699 X 1.032)				= 1.141
(10) INDICATED COVERAGE LOSS COST CHANGE				= 1.141
				OR 14.1%

* AGGREGATE LOSS COSTS ARE ADJUSTED TO CURRENT ISO LOSS COST LEVEL
AND 10/01/2022 AMOUNT OF INSURANCE LEVELS.

** INCURRED LOSSES ARE ADJUSTED TO 04/01/2023 COST LEVELS INCLUDING LOSS
DEVELOPMENT AND ALL LOSS ADJUSTMENT EXPENSES.

MINNESOTA

STATEWIDE BASIC GROUP II
COVERAGE LOSS COST LEVEL EVALUATION

(1)	(2)	(3)	(4)	
YEAR	AGGREGATE* LOSS COSTS	ADJUSTED** INCURRED LOSSES	EXPERIENCE RATIO (3)/(2)	WEIGHTS
2011	34,550,348	46,320,602	1.341	0.10
2012	34,407,120	28,878,767	0.839	0.10
2013	31,426,645	27,025,740	0.860	0.10
2014	29,977,000	25,326,969	0.845	0.10
2015	29,694,175	33,478,605	1.127	0.10
2016	29,215,597	31,663,390	1.084	0.10
2017	30,550,558	36,417,330	1.192	0.10
2018	31,022,857	31,049,300	1.001	0.10
2019	31,160,121	49,931,773	1.602	0.10
2020	30,740,416	50,823,555	1.653	0.10

(5) WEIGHTED EXPERIENCE RATIO = 1.154

(6) CREDIBILITY = 0.442

(7) EXPECTED EXPERIENCE RATIO = 1.021

(8) CREDIBILITY WEIGHTED EXPERIENCE RATIO
(0.442 X 1.154) + (0.558 X 1.021) = 1.080

(9) INDICATED COVERAGE LOSS COST CHANGE = 1.080

OR 8.0%

* AGGREGATE LOSS COSTS ARE ADJUSTED TO CURRENT ISO LOSS COST LEVEL
AND 10/01/2022 AMOUNT OF INSURANCE LEVELS.

** INCURRED LOSSES ARE ADJUSTED TO 04/01/2023 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)
YEAR	AGGREGATE* LOSS COSTS	ADJUSTED** INCURRED LOSSES	EXPERIENCE RATIO (3)/(2)	WEIGHTS
2016	13,842,418	12,671,343	0.915	0.10
2017	14,398,129	10,226,490	0.710	0.15
2018	14,683,296	12,204,661	0.831	0.20
2019	14,482,967	19,226,262	1.328	0.25
2020	14,775,954	13,828,071	0.936	0.30
(6) WEIGHTED EXPERIENCE RATIO				= 0.977
(7) CREDIBILITY				= 0.271
(8) EXPECTED EXPERIENCE RATIO				= 1.014
(9) CREDIBILITY WEIGHTED EXPERIENCE RATIO (0.271 X 0.977) + (0.729 X 1.014)				= 1.004
(10) INDICATED COVERAGE LOSS COST CHANGE				= 1.004
				OR 0.4%

* AGGREGATE LOSS COSTS ARE ADJUSTED TO CURRENT ISO LOSS COST LEVEL
AND 10/01/2022 AMOUNT OF INSURANCE LEVELS.

** INCURRED LOSSES ARE ADJUSTED TO 04/01/2023 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 OR	1.141 14.1%
TOP	\$ LST SQ FORMULA RELATIVITY	CREDIBILITY Z	CREDIBILITY WEIGHTED RELATIVITY	BALANCED RELATIVITY		
-----	-----	-----	-----	-----	-----	
10	0.699	0.112	0.961	0.980		
31	3.952	0.018	1.025	1.046		
32	1.300	0.105	1.028	1.049		
33	0.516	0.031	0.980	1.000		
34	0.917	0.205	0.982	1.003		
35	0.620	0.156	0.928	0.947		
36	1.619	0.157	1.079	1.101		
37	0.663	0.207	0.918	0.937		
38	1.208	0.063	1.012	1.033		

STATEWIDE MONOLINE LOSS COST LEVEL CHANGE: 11.9%

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	(5)
	\$ LST SQ		CREDIBILITY		INDICATED
	FORMULA	CREDIBILITY	WEIGHTED	BALANCED	MONOLINE
TERRITORY	RELATIVITY	Z	RELATIVITY	RELATIVITY	LOSS COST LEVEL
-----	-----	-----	-----	-----	-----
Minneapolis	1.275	0.122	1.03	1.045	16.8%
Saint Paul	1.208	0.062	1.012	1.027	14.8%
Balance of State	0.972	0.675	0.981	0.996	11.4%

	(1)	(2)	(3)	(4)
	TERRITORY	OFF-	CURRENT	REVISED
	RELATIVITY	BALANCE	TERRITORIAL	TERRITORIAL
		FACTOR	MULTIPLIER	MULTIPLIER
TERRITORY	-----	-----	-----	-----
Minneapolis	1.045	1.000	0.738	0.774
Saint Paul	1.027	1.000	0.737	0.760
Balance of State	0.996	1.000	1.000	1.000

MINNESOTA
BASIC GROUP I RELATIVITY ANALYSIS

EXAMPLE OF AN INDIVIDUAL LOSS COST CHANGE CALCULATION
FOR

STATEWIDE COVERAGE LOSS COST LEVEL CHANGE	=	1.141
TERRITORIAL RELATIVITY	=	1.045
MONOLINE (TOP 10) RELATIVITY	=	0.980

INDICATED MONOLINE LOSS COSTS LEVEL CHANGE
= 1.141 X 1.045 X 0.980 = 1.168
OR 16.8%

MINNESOTA
SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

TOP	(1) \$ LST SQ FORMULA RELATIVITY	(2) CREDIBILITY Z	(3) CREDIBILITY WEIGHTED RELATIVITY	(4) BALANCED RELATIVITY	STATEWIDE COVERAGE LOSS COST CHANGE OF OR	1.004 0.4%
-----	-----	-----	-----	-----	-----	
10	1.189	0.258	1.046	1.050		
31	1.086	0.028	1.002	1.006		
32	0.926	0.159	0.988	0.992		
33	0.703	0.100	0.965	0.969		
34	0.766	0.304	0.922	0.926		
35	1.159	0.248	1.037	1.041		
36	1.190	0.194	1.034	1.038		
37*	----	----	1.032	1.036		
38	0.862	0.105	0.985	0.989		

* TOP 37 IMPLICIT PMF CAPPED AT 0.500.

CATEGORY					(5) INDICATED MONOLINE LOSS COST LEVEL CHANGE
01	1.031	0.763	1.024	1.012	6.7%
02	0.792	0.099	0.977	0.965	1.7%
03	1.168	0.109	1.017	1.005	5.9%
04	0.907	0.164	0.984	0.972	2.5%
05	1.262	0.129	1.030	1.018	7.3%
06	0.842	0.090	0.985	0.973	2.6%
07	0.803	0.019	0.996	0.984	3.7%
08	1.315	0.102	1.028	1.016	7.1%
09	0.677	0.101	0.961	0.950	0.1%
10	0.799	0.034	0.992	0.980	3.3%
11	0.798	0.159	0.965	0.954	0.6%
12	0.811	0.191	0.961	0.950	0.1%
13	0.837	0.066	0.988	0.976	2.9%
14	0.917	0.120	0.990	0.978	3.1%

OVERALL MONOLINE LOSS COST LEVEL CHANGE 5.5%

MINNESOTA
SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

EXAMPLE OF AN INDIVIDUAL LOSS COST CHANGE CALCULATION

STATEWIDE COVERAGE LOSS COST LEVEL CHANGE	=	1.004
MONOLINE (TOP 10) RELATIVITY	=	1.050
CATEGORY 01 RELATIVITY	=	1.012

INDICATED MONOLINE LOSS COST LEVEL CHANGE FOR CATEGORY 01

=	1.067
OR	6.7%

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

	(1)	(2)	(3)	(4)
	ACCIDENT YEAR			
	ENDING 09/30/2020	5 - YEAR	5 - YEAR	
	AGGREGATE LOSS	AGGREGATE	EXPERIENCE	
TYPE OF POLICY	COSTS	LOSS COSTS	RATIO	RELATIVITY

MINNEAPOLIS				
10 MONOLINE	143,771	622,758	5.271	3.960
31 MULTILINE MOTEL/HOTEL	5,096	54,764	0.000	0.000
32 MULTILINE APARTMENT	588,733	1,935,380	1.796	1.349
33 MULTILINE OFFICE	44,998	244,474	15.707	11.801
34 MULTILINE MERCANTILE	417,427	1,898,192	1.472	1.106
35 MULTILINE INSTITUTIONAL	196,099	988,379	0.857	0.644
36 MULTILINE SERVICES	175,127	769,934	3.142	2.361
37 MULTILINE INDUST/PROCESS	189,142	934,344	1.972	1.482
38 MULTILINE CONTRACTORS	<u>23,857</u>	<u>163,284</u>	<u>15.288</u>	<u>11.486</u>
TOTAL ALL TOPS*	1,784,250	7,611,509	2.574	1.934

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

TYPE OF POLICY	(1)	(2)	(3)	(4)
	ACCIDENT YEAR			
	ENDING 09/30/2020	5 - YEAR	5 - YEAR	
	AGGREGATE LOSS COSTS	AGGREGATE LOSS COSTS	EXPERIENCE RATIO	RELATIVITY

SAINT PAUL				
10 MONOLINE	24,865	178,173	4.895	3.678
31 MULTILINE MOTEL/HOTEL	15,709	93,561	1.009	0.758
32 MULTILINE APARTMENT	175,710	675,381	0.904	0.679
33 MULTILINE OFFICE	15,920	118,253	11.837	8.893
34 MULTILINE MERCANTILE	167,486	1,059,964	4.003	3.008
35 MULTILINE INSTITUTIONAL	80,647	438,023	0.233	0.175
36 MULTILINE SERVICES	70,946	369,105	0.099	0.074
37 MULTILINE INDUST/PROCESS	98,070	564,371	0.330	0.248
38 MULTILINE CONTRACTORS	<u>28,117</u>	<u>133,677</u>	<u>5.985</u>	<u>4.497</u>
TOTAL ALL TOPS*	677,470	3,630,508	2.040	1.532

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

	(1)	(2)	(3)	(4)
	ACCIDENT YEAR			
	ENDING 09/30/2020	5 - YEAR	5 - YEAR	
	AGGREGATE LOSS	AGGREGATE	EXPERIENCE	
TYPE OF POLICY	COSTS	LOSS COSTS	RATIO	RELATIVITY

BALANCE OF STATE				
10 MONOLINE	1,923,541	11,867,690	0.822	0.618
31 MULTILINE MOTEL/HOTEL	403,897	1,687,007	4.835	3.633
32 MULTILINE APARTMENT	2,040,829	9,120,234	1.629	1.224
33 MULTILINE OFFICE	563,074	2,801,981	0.494	0.371
34 MULTILINE MERCANTILE	4,427,404	22,869,651	1.115	0.838
35 MULTILINE INSTITUTIONAL	3,515,093	17,098,749	0.758	0.569
36 MULTILINE SERVICES	3,258,216	17,481,790	1.976	1.485
37 MULTILINE INDUST/PROCESS	4,899,688	24,679,075	0.808	0.607
38 MULTILINE CONTRACTORS	<u>1,243,128</u>	<u>6,471,263</u>	<u>1.466</u>	<u>1.101</u>
TOTAL ALL TOPS*	22,274,870	114,077,440	1.210	0.909

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

	(1)	(2)	(3)	(4)
	ACCIDENT YEAR			
	ENDING 09/30/2020	5 - YEAR	5 - YEAR	
	AGGREGATE LOSS	AGGREGATE	EXPERIENCE	
TYPE OF POLICY	COSTS	LOSS COSTS	RATIO	RELATIVITY

ENTIRE STATE				
10 MONOLINE	2,092,177	12,668,621	1.176	0.884
31 MULTILINE MOTEL/HOTEL	424,702	1,835,332	4.635	3.482
32 MULTILINE APARTMENT	2,805,272	11,730,995	1.619	1.216
33 MULTILINE OFFICE	623,992	3,164,708	1.880	1.412
34 MULTILINE MERCANTILE	5,012,317	25,827,807	1.241	0.932
35 MULTILINE INSTITUTIONAL	3,791,839	18,525,151	0.752	0.565
36 MULTILINE SERVICES	3,504,289	18,620,829	1.996	1.500
37 MULTILINE INDUST/PROCESS	5,186,900	26,177,790	0.841	0.632
38 MULTILINE CONTRACTORS	<u>1,295,102</u>	<u>6,768,224</u>	<u>1.819</u>	<u>1.367</u>
TOTAL ALL TOPS*	24,736,590	125,319,457	1.331	1.000

* TOTALS IN COLUMNS (3) & (4) ARE AVERAGES USING COLUMN (1) AS WEIGHTS.

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

TYPE OF POLICY	CATEGORY	(1)	(2)	(3)	(4)	(5)
		ACCIDENT YEAR			CREDIBILITY	
		ENDING 09/30/2020	5 - YEAR	5 - YEAR	WEIGHTED	CREDIBILITY
		AGGREGATE LOSS	AGGREGATE	EXPERIENCE	EXPERIENCE	WEIGHTED
		COSTS	LOSS COSTS	RATIO	RATIO	RELATIVITY

ENTIRE STATE						
10 MONOLINE	01 BUILDINGS	794,119	4,391,883	1.561	1.537	1.594
	02 RES. APTS. AND COND	15,188	73,504	0.597	0.970	1.006
	03 OFFICES	76,606	389,923	0.967	1.043	1.082
	04 MERCANTILE - HIGH	108,878	639,997	0.078	0.389	0.404
	05 MERCANTILE - MEDIUM	36,669	212,564	1.278	1.223	1.269
	06 MERCANTILE - LOW	36,272	178,067	0.149	0.687	0.713
	07 MOTELS AND HOTELS	4,955	18,389	0.894	1.098	1.139
	08 INSTITUTIONAL - HIG	7,128	43,909	1.573	1.288	1.336
	09 INSTITUTIONAL - LOW	21,257	91,997	0.269	0.833	0.864
	10 INDUST-PROC - HIGH	8,965	70,014	0.013	0.774	0.803
	11 INDUST-PROC - LOW	73,867	368,188	0.558	0.797	0.827
	12 SERVICE - HIGH	43,337	255,017	0.431	0.772	0.801
	13 SERVICE - LOW	49,590	245,484	0.614	0.874	0.907
	14 CONTRACTORS	8,994	54,346	0.153	0.847	0.879
	TOTAL	1,285,825	7,033,282	1.164	1.252	1.299
31 MULTILINE MOTEL/HOTEL	01 BUILDINGS	204,061	903,905	1.269	1.090	1.131
	07 MOTELS AND HOTELS	54,719	265,036	0.693	0.848	0.880
	TOTAL	258,780	1,168,941	1.147	1.039	1.078
32 MULTILINE APARTMENT	01 BUILDINGS	1,598,198	5,996,338	0.934	0.930	0.965
	02 RES. APTS. AND COND	333,434	1,583,526	0.602	0.714	0.741
	TOTAL	1,931,632	7,579,864	0.877	0.893	0.926

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

TYPE OF POLICY	CATEGORY	(1)	(2)	(3)	(4)	(5)
		ACCIDENT YEAR			CREDIBILITY	
		ENDING 09/30/2020	5 - YEAR	5 - YEAR	WEIGHTED	CREDIBILITY
		AGGREGATE LOSS	AGGREGATE	EXPERIENCE	EXPERIENCE	WEIGHTED
		COSTS	LOSS COSTS	RATIO	RATIO	RELATIVITY

ENTIRE STATE (Continued)						
33 MULTILINE OFFICE	01 BUILDINGS	613,368	3,133,297	0.631	0.695	0.721
	03 OFFICES	248,318	1,277,350	0.817	0.854	0.886
	04 MERCANTILE - HIGH	39	642	0.000	0.820	0.851
	08 INSTITUTIONAL - HIG	756	3,336	0.000	0.818	0.849
	11 INDUST-PROC - LOW	171	1,974	0.000	0.819	0.850
	12 SERVICE - HIGH	15,040	37,460	0.000	0.793	0.823
	14 CONTRACTORS	124	124	0.000	0.821	0.852
	TOTAL	877,816	4,454,183	0.672	0.742	0.770
34 MULTILINE MERCANTILE	01 BUILDINGS	2,333,940	11,887,442	0.757	0.768	0.797
	03 OFFICES	12,649	64,383	0.035	0.780	0.809
	04 MERCANTILE - HIGH	387,446	2,077,776	0.629	0.715	0.742
	05 MERCANTILE - MEDIUM	387,149	1,997,188	0.965	0.946	0.981
	06 MERCANTILE - LOW	257,242	1,262,555	0.435	0.632	0.656
	08 INSTITUTIONAL - HIG	23	71	0.000	0.821	0.852
	10 INDUST-PROC - HIGH	361	1,467	0.000	0.820	0.851
	11 INDUST-PROC - LOW	1,438	2,667	12.797	2.046	2.122
	12 SERVICE - HIGH	12,721	70,894	0.000	0.770	0.799
	13 SERVICE - LOW	13,518	58,712	1.668	1.013	1.051
	14 CONTRACTORS	6,755	21,836	0.000	0.805	0.835
	TOTAL	3,413,242	17,444,991	0.743	0.774	0.803

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

TYPE OF POLICY	CATEGORY	(1)	(2)	(3)	(4)	(5)
		ACCIDENT YEAR			CREDIBILITY	
		ENDING 09/30/2020	5 - YEAR	5 - YEAR	WEIGHTED	CREDIBILITY
		AGGREGATE LOSS	AGGREGATE	EXPERIENCE	EXPERIENCE	WEIGHTED
		COSTS	LOSS COSTS	RATIO	RATIO	RELATIVITY

ENTIRE STATE (Continued)						
35 MULTILINE INSTITUTIONAL	01 BUILDINGS	2,153,972	10,004,713	1.189	1.164	1.207
	03 OFFICES	2,836	9,405	0.298	0.844	0.876
	04 MERCANTILE - HIGH	14	68	0.000	0.821	0.852
	06 MERCANTILE - LOW	15	51	0.000	0.821	0.852
	08 INSTITUTIONAL - HIG	391,210	1,625,131	1.812	1.484	1.539
	09 INSTITUTIONAL - LOW	293,386	1,559,427	0.681	0.764	0.793
	11 INDUST-PROC - LOW	1	1,201	0.000	0.820	0.851
	12 SERVICE - HIGH	1,272	6,027	0.721	0.887	0.920
	13 SERVICE - LOW	713	3,360	0.000	0.818	0.849
	14 CONTRACTORS	252	722	0.000	0.820	0.851
	TOTAL	2,843,671	13,210,105	1.221	1.166	1.209
36 MULTILINE SERVICES	01 BUILDINGS	1,062,319	5,511,068	1.231	1.148	1.191
	03 OFFICES	7,953	32,334	1.055	0.960	0.996
	04 MERCANTILE - HIGH	4,976	40,683	0.472	0.900	0.934
	05 MERCANTILE - MEDIUM	2,949	10,414	0.000	0.860	0.892
	06 MERCANTILE - LOW	4,059	15,029	0.000	0.858	0.890
	08 INSTITUTIONAL - HIG	8,559	40,300	0.000	0.850	0.882
	09 INSTITUTIONAL - LOW	4,150	25,672	0.000	0.855	0.887
	10 INDUST-PROC - HIGH	86	94	0.000	0.863	0.895
	11 INDUST-PROC - LOW	3,913	33,119	0.000	0.853	0.885
	12 SERVICE - HIGH	623,739	3,148,911	0.928	0.937	0.972
	13 SERVICE - LOW	154,809	748,973	0.964	0.954	0.990
	14 CONTRACTORS	4,255	30,842	0.000	0.853	0.885
	TOTAL	1,881,767	9,637,439	1.088	1.056	1.096

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

TYPE OF POLICY	CATEGORY	(1)	(2)	(3)	(4)	(5)
		ACCIDENT YEAR			CREDIBILITY	
		ENDING 09/30/2020	5 - YEAR	5 - YEAR	WEIGHTED	CREDIBILITY
		AGGREGATE LOSS	AGGREGATE	EXPERIENCE	EXPERIENCE	WEIGHTED
		COSTS	LOSS COSTS	RATIO	RATIO	RELATIVITY

ENTIRE STATE (Continued)						
37 MULTILINE INDUST/PROC	01 BUILDINGS	793,146	3,979,389	0.965	0.959	0.995
	03 OFFICES	1,515	7,650	2.644	1.108	1.149
	04 MERCANTILE - HIGH	5,603	43,269	0.000	0.849	0.881
	05 MERCANTILE - MEDIUM	176	994	0.000	0.863	0.895
	06 MERCANTILE - LOW	118	771	17.664	2.474	2.566
	08 INSTITUTIONAL - HIG	1	12	0.000	0.863	0.895
	10 INDUST-PROC - HIGH	96,586	470,815	0.711	0.895	0.928
	11 INDUST-PROC - LOW	462,717	2,460,250	0.805	0.873	0.906
	12 SERVICE - HIGH	357	11,127	0.000	0.860	0.892
	13 SERVICE - LOW	1,312	5,967	0.000	0.861	0.893
	14 CONTRACTORS	425	1,893	0.000	0.863	0.895
	TOTAL	1,361,956	6,982,137	0.890	0.925	0.960
38 MULTILINE CONTRACTORS	01 BUILDINGS	485,916	2,520,104	0.824	0.882	0.915
	03 OFFICES	10,472	47,258	0.565	0.909	0.943
	04 MERCANTILE - HIGH	22,204	131,685	1.007	0.957	0.993
	05 MERCANTILE - MEDIUM	224	1,864	0.000	0.863	0.895
	06 MERCANTILE - LOW	4,231	29,254	0.000	0.854	0.886
	08 INSTITUTIONAL - HIG	9	32	0.000	0.863	0.895
	11 INDUST-PROC - LOW	20	1,251	0.000	0.863	0.895
	12 SERVICE - HIGH	668	4,248	1.451	0.996	1.033
	13 SERVICE - LOW	245	2,389	0.000	0.863	0.895
	14 CONTRACTORS	397,276	1,933,737	0.674	0.819	0.850
	TOTAL	921,265	4,671,822	0.757	0.857	0.889

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

TYPE OF POLICY	CATEGORY	(1)	(2)	(3)	(4)	(5)
		ACCIDENT YEAR			CREDIBILITY	
		ENDING 09/30/2020	5 - YEAR	5 - YEAR	WEIGHTED	CREDIBILITY
		AGGREGATE LOSS	AGGREGATE	EXPERIENCE	EXPERIENCE	WEIGHTED
		COSTS	LOSS COSTS	RATIO	RATIO	RELATIVITY

ENTIRE STATE (Continued)						
TOTAL ALL TOPS*	01 BUILDINGS	10,039,039	48,328,139	1.014	1.003	1.040
	02 RES. APTS. AND COND	348,622	1,657,030	0.602	0.725	0.752
	03 OFFICES	360,349	1,828,303	0.823	0.896	0.930
	04 MERCANTILE - HIGH	529,160	2,934,120	0.523	0.661	0.686
	05 MERCANTILE - MEDIUM	427,167	2,223,024	0.984	0.969	1.005
	06 MERCANTILE - LOW	301,937	1,485,727	0.395	0.645	0.670
	07 MOTELS AND HOTELS	59,674	283,425	0.710	0.869	0.901
	08 INSTITUTIONAL - HIG	407,686	1,712,791	1.766	1.466	1.521
	09 INSTITUTIONAL - LOW	318,793	1,677,096	0.645	0.770	0.799
	10 INDUST-PROC - HIGH	105,998	542,390	0.649	0.885	0.918
	11 INDUST-PROC - LOW	542,127	2,868,650	0.797	0.866	0.898
	12 SERVICE - HIGH	697,134	3,533,684	0.860	0.921	0.955
	13 SERVICE - LOW	220,187	1,064,885	0.918	0.938	0.974
	14 CONTRACTORS	418,081	2,043,500	0.644	0.819	0.850
	TOTAL	14,775,954	72,182,764	0.950	0.965	1.000

* TOTALS IN COLUMNS (3) & (4) ARE AVERAGES USING COLUMN (1) AS WEIGHTS.

MINNESOTA

BASIC GROUP II RELATIVITY ANALYSIS

INDICATED TOTAL LOSS COST ADJUSTMENT: 8.0%

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	ACCIDENT YEAR ENDING 09/30/2020	ACCIDENT YEARS 2011-2020	FORMULA							INDICATED TOTAL
	LOSS COSTS AT CURRENT IMPLICIT PMF	EXPERIENCE RATIO AT CURRENT PMF PMF A	RELATIVITY (2)/ 1.154	CREDIBILITY C	WEIGHTED RELATIVITY D	BALANCED FORMULA RELATIVITY E	NORMALIZED FORMULA RELATIVITY F	CURRENT IMPLICIT PMF	INDICATED IMPLICIT PMF G	LOSS COST ADJUST
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
MONOLINE	2,547,704	0.982	0.851	0.407	0.939	0.939	0.9335			0.8%
MULTILINE	28,192,712	1.170	1.014	0.862	1.012	1.012	1.0058			8.6%
	-----	-----	-----	-----	-----	-----	-----			-----
COVERAGE	30,740,416	1.154	1.000			1.0059	0.9998			8.0%
MULTILINE TOP										
31 MOTEL/HOTEL	675,677	0.757	0.656	0.111	0.962	0.975	0.9693	1.114	1.157	4.7%
32 APARTMENT	3,975,024	1.530	1.326	0.459	1.150	1.165	1.1582	1.167	1.448	25.1%
33 OFFICE	969,154	1.948	1.688	0.180	1.124	1.139	1.1323	0.671	0.814	22.3%
34 MERCANTILE	4,887,143	1.167	1.011	0.520	1.006	1.019	1.0130	0.665	0.722	9.4%
35 INSTITUTIONAL	8,323,960	1.147	0.994	0.643	0.996	1.009	1.0031	0.718	0.772	8.3%
36 SERVICES	4,880,163	0.868	0.752	0.537	0.867	0.878	0.8729	1.124	1.051	-5.7%
37 INDUST/PROCESS	3,095,424	1.058	0.917	0.413	0.966	0.979	0.9733	0.658	0.686	5.1%
38 CONTRACTORS	1,386,167	1.266	1.097	0.242	1.023	1.036	1.0299	0.963	1.062	11.2%
	-----	-----	-----	-----	-----	-----	-----			-----
	28,192,712	1.170	1.014		0.999	1.012	1.0058			8.6%

B - 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))

E - (6) = (5) * (1.012/0.999)

F - (7) = (6) / 1.0059

G - (9) = (7) * (8) / (0.9335)

MINNESOTA
BASIC GROUP I
HISTORY OF STATEWIDE LOSS COST/RATE LEVEL CHANGES

LOSS COST/RATE LEVEL HISTORY				
(1)	(2)	(3)	(4)	(5)
EFFECTIVE DATE	LOSS COST/ RATE LEVEL CHANGE (%)	LOSS COST/ RATE LEVEL INDEX	ADJUSTMENT FACTOR	WEIGHT*
2000-10-01	-21.0	0.790	0.719	0.250
2003-12-01	5.4	0.833	0.682	0.083
2004-12-01	4.2	0.868	0.654	0.083
2006-04-01	-10.8	0.774	0.734	0.750
2008-04-01	-14.0	0.666	0.853	0.750
2009-07-01	-18.9	0.540	1.052	0.500
2010-04-01	-16.8	0.449	1.265	0.750
2011-04-01	-6.4	0.420	1.352	0.750
2013-04-01	-1.7	0.413	1.375	0.750
2014-04-01	4.3	0.431	1.318	0.750
2015-05-01	3.0	0.444	1.279	0.667
2016-07-01	5.5	0.468	1.214	0.500
2017-04-01	10.0	0.515	1.103	0.750
2019-05-01	4.4	0.538	1.056	0.667
2020-06-01	5.7	0.568	1.000	0.583

TIME ELEMENT ONLY LOSS COST LEVEL HISTORY				
(1)	(2)	(3)	(4)	(5)
EFFECTIVE DATE	LOSS COST/ RATE LEVEL CHANGE (%)	LOSS COST/ RATE LEVEL INDEX	ADJUSTMENT FACTOR	WEIGHT*
2013-04-01	-13.1	0.869	1.000	0.750

* WEIGHT DENOTES THE PORTION OF THE EFFECTIVE YEAR FOR WHICH THE ADJUSTMENT FACTORS APPLY.

MINNESOTA
BASIC GROUP II
HISTORY OF STATEWIDE LOSS COST/RATE LEVEL CHANGES

LOSS COST/RATE LEVEL HISTORY				
(1)	(2)	(3)	(4)	(5)
EFFECTIVE DATE	LOSS COST/ RATE LEVEL CHANGE (%)	LOSS COST/ RATE LEVEL INDEX	ADJUSTMENT FACTOR	WEIGHT*
2000-10-01	23.2	1.232	1.855	0.250
2003-12-01	14.7	1.413	1.617	0.083
2004-12-01	-0.8	1.402	1.630	0.083
2006-04-01	13.5	1.591	1.436	0.750
2008-04-01	-1.6	1.566	1.459	0.750
2009-07-01	4.3	1.633	1.399	0.500
2010-04-01	0.8	1.646	1.388	0.750
2011-04-01	-10.2	1.478	1.546	0.750
2013-04-01	9.5	1.618	1.412	0.750
2014-04-01	10.8	1.793	1.274	0.750
2015-05-01	7.9	1.935	1.181	0.667
2016-07-01	5.3	2.038	1.121	0.500
2017-04-01	1.9	2.076	1.101	0.750
2019-05-01	4.5	2.170	1.053	0.667
2020-06-01	5.3	2.285	1.000	0.583

TIME ELEMENT ONLY LOSS COST LEVEL HISTORY				
(1)	(2)	(3)	(4)	(5)
EFFECTIVE DATE	LOSS COST/ RATE LEVEL CHANGE (%)	LOSS COST/ RATE LEVEL INDEX	ADJUSTMENT FACTOR	WEIGHT*
2013-04-01	-13.3	0.867	1.000	0.750

* WEIGHT DENOTES THE PORTION OF THE EFFECTIVE YEAR FOR WHICH THE ADJUSTMENT FACTORS APPLY.

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

LOSS COST/RATE LEVEL HISTORY

(1)	(2)	(3)	(4)	(5)
EFFECTIVE DATE	LOSS COST/ RATE LEVEL CHANGE (%)	LOSS COST/ RATE LEVEL INDEX	ADJUSTMENT FACTOR	WEIGHT*
2000-10-01	15.1	1.151	0.583	0.250
2003-12-01	-27.4	0.836	0.803	0.083
2004-12-01	-19.9	0.669	1.003	0.083
2006-04-01	-15.7	0.564	1.190	0.750
2008-04-01	-10.6	0.504	1.331	0.750
2009-07-01	-7.2	0.468	1.434	0.500
2010-04-01	19.6	0.560	1.198	0.750
2011-04-01	3.9	0.582	1.153	0.750
2013-04-01	12.7	0.656	1.023	0.750
2014-04-01	15.4	0.757	0.886	0.750
2015-05-01	-3.3	0.732	0.917	0.667
2016-07-01	3.5	0.757	0.886	0.500
2017-04-01	-0.1	0.756	0.888	0.750
2019-05-01	-5.2	0.717	0.936	0.667
2020-06-01	-6.4	0.671	1.000	0.583

TIME ELEMENT ONLY LOSS COST LEVEL HISTORY

(1)	(2)	(3)	(4)	(5)
EFFECTIVE DATE	LOSS COST/ RATE LEVEL CHANGE (%)	LOSS COST/ RATE LEVEL INDEX	ADJUSTMENT FACTOR	WEIGHT*
2013-04-01	-25.0	0.750	1.000	0.750

* WEIGHT DENOTES THE PORTION OF THE EFFECTIVE YEAR FOR WHICH THE ADJUSTMENT FACTORS APPLY.

MINNESOTA

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

TERRITORY: Minneapolis

EFFECTIVE RATING
DATE ID

RATING GROUP

		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	17	18	19	20	21	22
04/01/2006	SPEC.	-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
	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
04/01/2008	SPEC.	-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
	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
07/01/2009	SPEC.	-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
	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
04/01/2010	SPEC.	-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
	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
04/01/2011	SPEC.	-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
	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
04/01/2013	SPEC.	-15.1	-14.7	-15.1	-8.2	-14.7	-15.1	-15.1	-15.1	-14.5	-15.1	-15.1	-15.1	-14.1	-15.1	-15.1	-11.3	-15.1	-15.1	-15.1	-12.3	-15.1
	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
04/01/2014	SPEC.	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
	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
05/01/2015	SPEC.	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
	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
07/01/2016	SPEC.	-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
	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
04/01/2017	SPEC.	-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
	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
05/01/2019	SPEC.	-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
	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
06/01/2020	SPEC.	-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
	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

MINNESOTA

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

TERRITORY: Saint Paul

EFFECTIVE RATING
DATE ID

RATING GROUP

		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	17	18	19	20	21	22
04/01/2006	SPEC.	-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
	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
04/01/2008	SPEC.	-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
	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
07/01/2009	SPEC.	-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
	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
04/01/2010	SPEC.	-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
	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
04/01/2011	SPEC.	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
	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
04/01/2013	SPEC.	-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
	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
04/01/2014	SPEC.	-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
	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
05/01/2015	SPEC.	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
	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
07/01/2016	SPEC.	-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
	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
04/01/2017	SPEC.	-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
	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
05/01/2019	SPEC.	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
	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
06/01/2020	SPEC.	-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
	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

MINNESOTA

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

TERRITORY: Balance of State

EFFECTIVE RATING
DATE ID

RATING GROUP

		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	17	18	19	20	21	22
04/01/2006	SPEC.	-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
	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
04/01/2008	SPEC.	-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
	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
07/01/2009	SPEC.	-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
	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
04/01/2010	SPEC.	-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
	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
04/01/2011	SPEC.	-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
	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
04/01/2013	SPEC.	-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
	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
04/01/2014	SPEC.	-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
	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
05/01/2015	SPEC.	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
	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
07/01/2016	SPEC.	-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
	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
04/01/2017	SPEC.	-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
	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
05/01/2019	SPEC.	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
	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
06/01/2020	SPEC.	-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
	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

MINNESOTA

SPECIAL CAUSES OF LOSS

HISTORY OF LOSS COST/RATE LEVEL CHANGES BY CATEGORY

(1) EFFECTIVE DATE	(2) CATEGORY													
	01	02	03	04	05	06	07	08	09	10	11	12	13	14
04/01/2006	-13.4	-21.7	-13.7	-25.7	-21.4									
04/01/2008	-15.4	-9.4	8.9	12.0	-2.4									
07/01/2009	-11.9	-9.4	-0.7	11.4	2.1									
04/01/2010	17.5	15.9	12.5	35.5	16.1									
04/01/2011	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
04/01/2013	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
04/01/2014	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
05/01/2015	-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
07/01/2016	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
04/01/2017	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
05/01/2019	-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
06/01/2020	-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

MINNESOTA

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

CPP IMPLICIT PACKAGE MODIFICATION FACTORS (IPMFS) AND IPMF CAPS

TOP	DESCRIPTION	IPMF	LOW CAP	HIGH CAP

31	MOTEL/HOTEL	0.934	0.500	1.500
32	APARTMENT	0.827	0.500	1.500
33	OFFICE	1.313	0.500	1.500
34	MERCANTILE	0.882	0.500	1.500
35	INSTITUTIONAL	0.821	0.500	1.500
36	SERVICES	0.990	0.500	1.500
37	INDUST/PROCESSING	1.046	0.500	1.500
38	CONTRACTORS	1.017	0.500	1.500

MINNESOTA

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

CPP IMPLICIT PACKAGE MODIFICATION FACTORS (IPMFS) AND IPMF CAPS

TOP	DESCRIPTION	IPMF	LOW CAP	HIGH CAP

31	MOTEL/HOTEL	1.114	0.500	1.500
32	APARTMENT	1.167	0.500	1.500
33	OFFICE	0.671	0.500	1.500
34	MERCANTILE	0.665	0.500	1.500
35	INSTITUTIONAL	0.718	0.500	1.500
36	SERVICES	1.124	0.500	1.500
37	INDUST/PROCESSING	0.658	0.500	1.500
38	CONTRACTORS	0.963	0.500	1.500

MINNESOTA

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

CPP IMPLICIT PACKAGE MODIFICATION FACTORS (IPMFS) AND IPMF CAPS

TOP	DESCRIPTION	IPMF	LOW CAP	HIGH CAP

31	MOTEL/HOTEL	0.885	0.500	1.500
32	APARTMENT	1.024	0.500	1.500
33	OFFICE	1.160	0.500	1.500
34	MERCANTILE	0.814	0.500	1.500
35	INSTITUTIONAL	0.572	0.500	1.500
36	SERVICES	0.776	0.500	1.500
37	INDUST/PROCESSING	0.507	0.500	1.500
38	CONTRACTORS	1.034	0.500	1.500

Development of Current Cost Factors and Loss Projection Factors
For Commercial Property Building and Contents Experience
 Period ending June 30, 2021

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

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

Contents - Producer Price Index (PPI) - 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	XCI	PPI	IMSEP	RSALES	Time Element Combined
					Index
1 Q3-2018	118.4	118.3	1.055	0.972	0.997
2 Q4-2018	118.8	119.6	1.058	0.970	0.996
3 Q1-2019	119.8	120.4	1.06	0.965	0.994
4 Q2-2019	121.1	120.8	1.064	0.972	1.000
5 Q3-2019	121.9	120.8	1.063	0.968	0.997
6 Q4-2019	123.0	121.7	1.065	0.970	0.999
7 Q1-2020	124.6	121.8	1.063	0.968	0.997
8 Q2-2020	126.0	122.6	1.044	0.947	0.976
9 Q3-2020	128.4	122.0	1.059	0.965	0.993
10 Q4-2020	129.8	122.9	1.068	0.968	0.998
11 Q1-2021	130.7	123.9	1.082	0.986	1.015
12 Q2-2021	135.9	126.6	1.104	1.013	1.040

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

$$\text{Annual Rate of Change} = +4.8\% \quad R^2 = 0.958$$

$$\text{Loss Projection Factor for Buildings} = 1.048^{22.5/12 (b)} = 1.0915$$

Part C: Computation of Loss Projection Factor (LPF) for Contents based on 12 points

$$\text{Annual Rate of Change} = +1.8\% \quad R^2 = 0.881$$

$$\text{Loss Projection Factor for Contents} = 1.018^{22.5/12 (b)} = 1.0348$$

Part D: Computation of Loss Projection Factor (LPF) for Time Element Based on 12 points

$$\text{Annual Rate of Change} = +0.8\% \quad R^2 = 0.226$$

$$\text{Loss Projection Factor for Time Element} = 1.008^{22.5/12 (b)} = 1.0151$$

(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 4/01/2022, and all one year policies, the time interval between the midpoint of the latest period (5/15/2021) and the average date of accident (4/01/2023) would be 22.5 months.

Development of Current Cost Factors and Loss Projection Factors

Part E: Calculation of Current Cost Factors (CCF)

<u>Calendar Year Averages</u>				<u>Current Cost Factors Based on Average Index Values for Period ending June 30, 2021</u>		
<u>Year</u>	<u>XCI</u>	<u>PPI</u>	<u>Index</u>	<u>Buildings</u>	<u>Contents</u>	<u>Time Element</u>
2009	100.0	100.0	0.940	135.9 / 100.0 = 1.359	126.6 / 100.0 = 1.266	1.0403 / 0.940 = 1.107
2010	99.3	101.8	0.953	135.9 / 99.3 = 1.369	126.6 / 101.8 = 1.243	1.0403 / 0.953 = 1.092
2011	100.0	105.2	0.985	135.9 / 100.0 = 1.359	126.6 / 105.2 = 1.203	1.0403 / 0.985 = 1.056
2012	101.0	108.0	1.000	135.9 / 101.0 = 1.346	126.6 / 108.0 = 1.173	1.0403 / 1.000 = 1.040
2013	102.7	109.7	1.003	135.9 / 102.7 = 1.323	126.6 / 109.7 = 1.154	1.0403 / 1.003 = 1.037
2014	104.7	112.5	1.005	135.9 / 104.7 = 1.298	126.6 / 112.5 = 1.125	1.0403 / 1.005 = 1.035
2015	109.1	113.8	0.986	135.9 / 109.1 = 1.245	126.6 / 113.8 = 1.112	1.0403 / 0.986 = 1.055
2016	111.1	114.4	0.975	135.9 / 111.1 = 1.223	126.6 / 114.4 = 1.106	1.0403 / 0.975 = 1.067
2017	114.3	116.4	0.983	135.9 / 114.3 = 1.189	126.6 / 116.4 = 1.088	1.0403 / 0.983 = 1.058
2018	117.8	118.4	0.996	135.9 / 117.8 = 1.153	126.6 / 118.4 = 1.069	1.0403 / 0.996 = 1.044
2019	121.5	120.9	0.998	135.9 / 121.5 = 1.119	126.6 / 120.9 = 1.047	1.0403 / 0.998 = 1.042
2020	127.2	122.3	0.991	135.9 / 127.2 = 1.068	126.6 / 122.3 = 1.035	1.0403 / 0.991 = 1.050

SUMMARY OF LOSS TREND ADJUSTMENTS (LTA'S)

<u>BUILDINGS</u>	<u>5 YEAR INCURRED LOSSES</u>	<u>LTA'S*</u>
BASIC GROUP I	3,222,471,318	1.2%
BASIC GROUP II	3,465,840,527	-0.4%
SPECIAL CAUSES OF LOSS	1,682,225,202	0.2%
TOTAL	8,370,537,047	0.3%
<u>CONTENTS</u>		
BASIC GROUP I	1,104,115,390	1.5%
BASIC GROUP II	337,973,836	0.6%
SPECIAL CAUSES OF LOSS	666,012,529	-1.0%
TOTAL	2,108,101,755	0.6%
<u>TIME ELEMENT</u>		
BASIC GROUP I	394,365,666	2.4%
BASIC GROUP II	183,986,074	2.6%
SPECIAL CAUSES OF LOSS	138,013,951	2.4%
TOTAL	716,365,691	2.5%
GRAND TOTAL	11,195,004,493	0.5%

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

DEVELOPMENT OF LTA'SI. RATE OF CHANGE BASED ON ECONOMIC INDICES^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
2010	1.239	1.195	1.046		0.10
2011	1.230	1.157	1.012		0.10
2012	1.218	1.127	0.997		0.10
2013	1.198	1.109	0.994		0.10
2014	1.175	1.082	0.992		0.10
2015	1.127	1.069	1.011	0.10	0.10
2016	1.107	1.064	1.023	0.15	0.10
2017	1.076	1.046	1.014	0.20	0.10
2018	1.044	1.028	1.002	0.25	0.10
2019	1.013	1.007	1.001	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))	1.059	1.035	1.008
Basic Group II (Weighted on Column (5))	1.143	1.088	1.009

(7) LOSS PROJECTION FACTORS

	Buildings	Contents	Time Element
Annual Rate of Change	0.031	0.019	0.006
Loss Projection Factor: ^b $(1.0 + \text{Annual Rate of Change})^{(X/12)}$	1.083	1.051	1.017

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

	Buildings	Contents	Time Element
Basic Group I and Special Causes of Loss	1.147	1.088	1.025
Basic Group II	1.238	1.143	1.026

(9) ANNUAL RATE OF CHANGE BASED ON ECONOMIC INDICIES^c

	Buildings	Contents	Time Element
Basic Group I and Special Causes of Loss: $(\text{Total Trend Factor})^{12/54}$	1.031	1.019	1.006
Basic Group II: $(\text{Total Trend Factor})^{12/90}$	1.029	1.018	1.003

- (a) The Current Cost Factors and Loss Projection Factors on this exhibit are based on economic indices through December 31, 2019 for Buildings, Contents and Time Element.
- (b) Assuming a loss cost revision date of July 1, 2021, the time interval between the midpoint of the latest period of economic trend information (November 15, 2019) and the prospective average date of loss (July 1, 2022) 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, 2022) is 54 months for BG I and SCL, and 90 months for BG II. The weighted midpoint is January 1, 2018 for BG I and SCL, and January 1, 2015 for BG II.

DEVELOPMENT OF LTA'SII. INTERNAL ANNUAL RATES OF CHANGE:

(10) SELECTED COMFAL

	Buildings	Contents	Time Element
Basic Group I (BGI)	1.055	1.050	1.055
Basic Group II (BGII)	1.020	1.030	1.055
Special Causes of Loss	1.035	1.020	1.055

III. LTA CALCULATION:

CALCULATION OF LTAs - BUILDINGS

	(11) Economic Rate of Change ^d	(12) Internal Rate of Change	(13) Indicated Severity LTA [(12)/(11)-1.0]	(14) Formula Severity LTA ^e	(15) Frequency Effect	(16) Final LTA ^f
Basic Group I (BGI)	1.031	1.055	2.3	1.2	0.0	1.2
Basic Group II (BGII)	1.029	1.020	-0.9	-0.4	0.0	-0.4
Special Causes of Loss	1.031	1.035	0.4	0.2	0.0	0.2

CALCULATION OF LTAs - CONTENTS

	(11) Economic Rate of Change ^d	(12) Internal Rate of Change	(13) Indicated Severity LTA [(12)/(11)-1.0]	(14) Formula Severity LTA ^e	(15) Frequency Effect	(16) Final LTA ^f
Basic Group I (BGI)	1.019	1.050	3.0	1.5	0.0	1.5
Basic Group II (BGII)	1.018	1.030	1.2	0.6	0.0	0.6
Special Causes of Loss	1.019	1.020	0.1	0.0	-1.0	-1.0

CALCULATION OF LTAs - TIME ELEMENT

	(11) Economic Rate of Change ^d	(12) Internal Rate of Change	(13) Indicated Severity LTA [(12)/(11)-1.0]	(14) Formula Severity LTA ^e	(15) Frequency Effect	(16) Final LTA ^f
Basic Group I (BGI)	1.006	1.055	4.9	2.4	0.0	2.4
Basic Group II (BGII)	1.003	1.055	5.2	2.6	0.0	2.6
Special Causes of Loss	1.006	1.055	4.9	2.4	0.0	2.4

(d) The economic rates of change are based on economic indices through December 31, 2019 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 economic 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.

EXPOSURE TREND
DEVELOPMENT OF CURRENT AND PROJECTED EARNED EXPOSURE FACTORS

	<u>Buildings</u>				<u>Contents</u>			
	(1) ^a	(2) ^a	(3) ^b	(4) ^c	(5) ^a	(6) ^a	(7) ^b	(8) ^c
	Annual	7/1/2020	10/1/2022	10/1/2022	Annual	7/1/2020	10/1/2022	10/1/2022
	Written	Written	Projected	Earned	Written	Written	Projected	Earned
<u>Year</u>	<u>Increase</u>	<u>Factors</u>	<u>Factors</u>	<u>Factors</u>	<u>Increase</u>	<u>Factors</u>	<u>Factors</u>	<u>Factors</u>
2008	3.5%	1.353	1.427	1.465	2.4%	1.260	1.320	1.344
2009	3.3%	1.310	1.382	1.416	2.2%	1.233	1.292	1.313
2010	2.5%	1.278	1.348	1.374	1.7%	1.212	1.270	1.287
2011	2.5%	1.247	1.315	1.340	1.8%	1.191	1.248	1.265
2012	2.7%	1.214	1.281	1.306	1.8%	1.170	1.226	1.243
2013	2.6%	1.183	1.248	1.273	2.1%	1.146	1.201	1.220
2014	2.5%	1.154	1.217	1.240	2.1%	1.122	1.176	1.195
2015	2.3%	1.128	1.190	1.210	1.9%	1.101	1.154	1.171
2016	2.1%	1.105	1.166	1.184	1.8%	1.082	1.134	1.149
2017	2.1%	1.082	1.141	1.160	1.8%	1.063	1.114	1.129
2018	2.7%	1.054	1.112	1.134	1.9%	1.043	1.093	1.109
2019	2.9%	1.024	1.080	1.104	2.2%	1.021	1.070	1.087
2020	2.4%	1.000	1.055	1.074	2.1%	1.000	1.048	1.065

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 2.4% and 2.1% for Buildings and Contents, respectively. Consequently, the written factors at 7/1/2020 levels in column (2) and column (6) are brought to the level of the average date of writing in the effective period, 10/1/2022 (i.e., 6 months beyond an assumed revision date of 4/1/2022), by applying a factor of $(1.024)^{(27/12)}$ for Buildings and $(1.021)^{(27/12)}$ 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 01/01/2020 to 12/31/2020 to the projected level are 1.074 for Buildings and 1.065 for Contents.

EXPOSURE TREND
DEVELOPMENT OF CURRENT AND PROJECTED EARNED EXPOSURE FACTORS

	Time Element			
	(1) ^a	(2) ^a	(3) ^b	(4) ^c
	Annual	7/1/2020	10/1/2022	10/1/2022
	Written	Written	Projected	Earned
<u>Year</u>	<u>Increase</u>	<u>Factors</u>	<u>Factors</u>	<u>Factors</u>
2008	1.3%	1.115	1.140	1.151
2009	0.8%	1.106	1.131	1.138
2010	0.7%	1.098	1.123	1.129
2011	0.8%	1.089	1.114	1.121
2012	0.8%	1.080	1.104	1.111
2013	0.9%	1.070	1.094	1.102
2014	1.0%	1.059	1.083	1.091
2015	1.1%	1.047	1.071	1.080
2016	1.1%	1.036	1.059	1.068
2017	0.9%	1.027	1.050	1.057
2018	0.7%	1.020	1.043	1.048
2019	1.0%	1.010	1.033	1.040
2020	1.0%	1.000	1.023	1.031

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%. Consequently, the written factors at 7/1/2020 levels in column (2) are brought to the level of the average date of writing in the effective period, 10/1/2022 (i.e., 6 months beyond an assumed revision date of 4/1/2022), by applying a factor of $(1.01)^{(27/12)}$ 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 01/01/2020 to 12/31/2020 to the projected level is 1.031 for Time Element

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

	<u>Buildings</u>				<u>Contents</u>			
	(1) ^a	(2) ^a	(3) ^b	(4) ^c	(5) ^a	(6) ^a	(7) ^b	(8) ^c
	Annual	7/1/2020	10/1/2022	10/1/2022	Annual	7/1/2020	10/1/2022	10/1/2022
	Written	Written	Projected	Earned	Written	Written	Projected	Earned
<u>Year</u>	<u>Increase</u>	<u>Factors</u>	<u>Factors</u>	<u>Factors</u>	<u>Increase</u>	<u>Factors</u>	<u>Factors</u>	<u>Factors</u>
2008	2.8%	1.276	1.331	1.360	2.0%	1.213	1.263	1.282
2009	2.7%	1.242	1.296	1.322	1.8%	1.192	1.241	1.258
2010	2.0%	1.218	1.271	1.290	1.4%	1.176	1.224	1.237
2011	2.0%	1.194	1.246	1.265	1.5%	1.159	1.206	1.219
2012	2.2%	1.168	1.219	1.239	1.5%	1.142	1.189	1.202
2013	2.1%	1.144	1.193	1.213	1.8%	1.122	1.168	1.184
2014	2.0%	1.122	1.171	1.188	1.8%	1.102	1.147	1.163
2015	1.9%	1.101	1.149	1.166	1.6%	1.085	1.129	1.143
2016	1.7%	1.083	1.130	1.144	1.5%	1.069	1.113	1.125
2017	1.7%	1.065	1.111	1.125	1.5%	1.053	1.096	1.109
2018	2.2%	1.042	1.087	1.105	1.6%	1.036	1.078	1.091
2019	2.3%	1.019	1.063	1.081	1.8%	1.018	1.060	1.074
2020	1.9%	1.000	1.043	1.058	1.8%	1.000	1.041	1.055

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 1.9% and 1.8% for Buildings and Contents, respectively. Consequently, the written factors at 7/1/2020 levels in column (2) and column (6) are brought to the level of the average date of writing in the effective period, 10/1/2022 (i.e., 6 months beyond an assumed revision date of 4/1/2022), by applying a factor of $(1.019)^{(27/12)}$ for Buildings and $(1.018)^{(27/12)}$ 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 01/01/2020 to 12/31/2020 to the projected level are 1.058 for Buildings and 1.055 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
	Annual	7/1/2020	10/1/2022	10/1/2022	Annual	7/1/2020	10/1/2022	10/1/2022
	Written	Written	Projected	Earned	Written	Written	Projected	Earned
<u>Year</u>	<u>Increase</u>	<u>Factors</u>	<u>Factors</u>	<u>Factors</u>	<u>Increase</u>	<u>Factors</u>	<u>Factors</u>	<u>Factors</u>
2008	2.6%	1.253	1.304	1.330	1.8%	1.194	1.237	1.254
2009	2.4%	1.224	1.274	1.297	1.7%	1.174	1.217	1.232
2010	1.9%	1.201	1.250	1.268	1.3%	1.159	1.201	1.213
2011	1.9%	1.179	1.227	1.244	1.4%	1.143	1.185	1.197
2012	2.0%	1.156	1.203	1.221	1.4%	1.127	1.168	1.181
2013	1.9%	1.134	1.180	1.197	1.6%	1.109	1.149	1.163
2014	1.9%	1.113	1.159	1.175	1.6%	1.092	1.132	1.145
2015	1.7%	1.094	1.139	1.154	1.4%	1.077	1.116	1.128
2016	1.6%	1.077	1.121	1.135	1.4%	1.062	1.101	1.112
2017	1.6%	1.060	1.103	1.117	1.4%	1.047	1.085	1.097
2018	2.0%	1.039	1.082	1.098	1.4%	1.033	1.071	1.082
2019	2.1%	1.018	1.060	1.076	1.7%	1.016	1.053	1.066
2020	1.8%	1.000	1.041	1.055	1.6%	1.000	1.036	1.049

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 1.8% and 1.6% for Buildings and Contents, respectively. Consequently, the written factors at 7/1/2020 levels in column (2) and column (6) are brought to the level of the average date of writing in the effective period, 10/1/2022 (i.e., 6 months beyond an assumed revision date of 4/1/2022), by applying a factor of $(1.018)^{(27/12)}$ for Buildings and $(1.016)^{(27/12)}$ 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 01/01/2020 to 12/31/2020 to the projected level are 1.055 for Buildings and 1.049 for Contents.

PREMIUM TREND - SPECIAL CAUSES OF LOSS
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
	Annual	7/1/2020	10/1/2022	10/1/2022	Annual	7/1/2020	10/1/2022	10/1/2022
	Written	Written	Projected	Earned	Written	Written	Projected	Earned
Year	<u>Increase</u>	<u>Factors</u>	<u>Factors</u>	<u>Factors</u>	<u>Increase</u>	<u>Factors</u>	<u>Factors</u>	<u>Factors</u>
2008	2.7%	1.260	1.312	1.338	1.6%	1.162	1.199	1.214
2009	2.5%	1.229	1.279	1.304	1.4%	1.146	1.182	1.195
2010	1.9%	1.206	1.255	1.273	1.1%	1.134	1.170	1.179
2011	1.9%	1.184	1.232	1.249	1.2%	1.121	1.157	1.167
2012	2.1%	1.160	1.208	1.226	1.2%	1.108	1.143	1.153
2013	2.0%	1.137	1.184	1.202	1.4%	1.093	1.128	1.139
2014	1.9%	1.116	1.162	1.179	1.4%	1.078	1.112	1.124
2015	1.8%	1.096	1.141	1.157	1.2%	1.065	1.099	1.109
2016	1.6%	1.079	1.123	1.137	1.2%	1.052	1.085	1.095
2017	1.6%	1.062	1.105	1.119	1.2%	1.040	1.073	1.082
2018	2.1%	1.040	1.083	1.099	1.2%	1.028	1.061	1.070
2019	2.2%	1.018	1.060	1.077	1.4%	1.014	1.046	1.057
2020	1.8%	1.000	1.041	1.055	1.4%	1.000	1.032	1.043

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 1.8% and 1.4% for Buildings and Contents, respectively. Consequently, the written factors at 7/1/2020 levels in column (2) and column (6) are brought to the level of the average date of writing in the effective period, 10/1/2022 (i.e., 6 months beyond an assumed revision date of 4/1/2022), by applying a factor of $(1.018)^{(27/12)}$ for Buildings and $(1.014)^{(27/12)}$ 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 01/01/2020 to 12/31/2020 to the projected level are 1.055 for Buildings and 1.043 for Contents.

MINNESOTA

BASIC GROUP I
 ADDITIONAL INFORMATION ON TREND ADJUSTMENTS

YEAR	(1) UNADJUSTED INCURRED LOSSES	(2) TRENDED INCURRED LOSSES	(3) AVERAGE TOTAL LOSS TREND FACTOR (2) / (1)	(4) SPLIT % ----- BUILDINGS CONTENTS TIME ELEMENT		
2016	17,354,787	24,781,839	1.428	77.9%	16.5%	5.6%
2017	13,427,876	18,458,911	1.375	74.8%	22.8%	2.4%
2018	22,141,433	29,020,407	1.311	71.4%	15.8%	12.8%
2019	19,979,168	25,055,657	1.254	70.3%	21.0%	8.7%
2020	33,255,264	39,857,929	1.199	74.3%	21.0%	4.7%

MINNESOTA

BASIC GROUP II
 ADDITIONAL INFORMATION ON TREND ADJUSTMENTS

	(1)	(2)	(3)	(4)		
	UNADJUSTED	TRENDED	AVERAGE	SPLIT %		
	INCURRED	INCURRED	TOTAL LOSS	-----		
	LOSSES	LOSSES	TREND FACTOR	TIME		
YEAR			(2) / (1)	BUILDINGS	CONTENTS	ELEMENT
2011	29,489,688	42,174,305	1.430	94.9%	5.0%	0.1%
2012	12,296,528	17,602,780	1.432	95.9%	4.1%	0.0%
2013	31,664,964	44,120,295	1.393	94.7%	5.2%	0.1%
2014	11,107,085	15,437,814	1.390	94.5%	2.6%	2.9%
2015	15,336,355	20,406,574	1.331	94.2%	4.9%	0.9%
2016	14,859,579	19,442,537	1.308	91.8%	7.6%	0.6%
2017	32,097,817	41,024,421	1.278	95.3%	3.7%	1.0%
2018	14,984,171	18,536,540	1.237	93.2%	5.6%	1.2%
2019	25,512,443	30,722,846	1.204	98.3%	1.5%	0.2%
2020	35,116,546	40,045,021	1.140	70.9%	22.7%	6.4%

MINNESOTA

SPECIAL CAUSES OF LOSS
ADDITIONAL INFORMATION ON TREND ADJUSTMENTS

YEAR	(1) UNADJUSTED INCURRED LOSSES	(2) TRENDED INCURRED LOSSES	(3) AVERAGE TOTAL LOSS TREND FACTOR (2) / (1)	(4) SPLIT % ----- BUILDINGS CONTENTS TIME ELEMENT		
2016	7,369,714	9,804,801	1.330	77.7%	20.2%	2.1%
2017	6,017,001	7,887,522	1.311	79.9%	18.3%	1.8%
2018	7,516,058	9,377,601	1.248	67.7%	22.9%	9.4%
2019	15,184,975	18,709,998	1.232	81.2%	16.3%	2.5%
2020	9,059,382	10,612,809	1.171	72.1%	25.3%	2.6%

BASIC GROUP I
INCURRED LOSSES
LOSS YEARS 2011-2020
EVALUATED AS OF 12/2020

LOSSES AS OF					
YEAR ENDING	15 MONTHS	27 MONTHS	39 MONTHS	51 MONTHS	63 MONTHS
9/30/2011	970,176,357	955,910,904	927,196,809	919,408,946	914,982,020
9/30/2012	824,420,862	809,656,796	796,418,255	790,134,209	787,905,878
9/30/2013	867,506,391	855,485,608	853,307,970	843,732,743	832,192,328
9/30/2014	905,377,872	893,255,778	880,480,974	868,749,349	867,692,821
9/30/2015	827,403,166	801,469,881	793,951,927	791,097,919	787,520,286
9/30/2016	797,008,736	791,283,158	774,443,337	775,290,833	772,475,029
9/30/2017	906,950,104	879,411,473	861,295,998	852,832,762	
9/30/2018	1,056,506,736	1,010,986,528	963,386,873		
9/30/2019	1,014,813,207	983,252,863			
9/30/2020	1,238,638,560				

RATIOS				
YEAR ENDING	27:15 MONTHS	39:27 MONTHS	51:39 MONTHS	63:51 MONTHS
9/30/2011	0.985	0.970	0.992	0.995
9/30/2012	0.982	0.984	0.992	0.997
9/30/2013	0.986	0.997	0.989	0.986
9/30/2014	0.987	0.986	0.987	0.999
9/30/2015	0.969	0.991	0.996	0.995
9/30/2016	0.993	0.979	1.001	0.996
9/30/2017	0.970	0.979	0.990	
9/30/2018	0.957	0.953		
9/30/2019	0.969			
5 POINT AVERAGE	0.972	0.978	0.993	0.995

DEVELOPMENT FACTORS TO ULTIMATE

15 MONTHS TO ULTIMATE =	0.939
27 MONTHS TO ULTIMATE =	0.966
39 MONTHS TO ULTIMATE =	0.988
51 MONTHS TO ULTIMATE =	0.995

BASIC GROUP II
INCURRED LOSSES
LOSS YEARS 2011-2020
EVALUATED AS OF 12/2020

LOSSES AS OF					
YEAR ENDING	15 MONTHS	27 MONTHS	39 MONTHS	51 MONTHS	63 MONTHS
9/30/2011	1,297,856,074	1,343,177,675	1,350,476,864	1,361,894,340	1,375,524,077
9/30/2012	762,238,080	805,680,201	823,020,261	829,595,416	835,700,446
9/30/2013	742,126,041	762,490,345	774,244,316	782,396,045	790,008,713
9/30/2014	572,447,673	591,543,154	604,390,788	616,557,055	621,173,803
9/30/2015	421,604,111	448,064,166	451,299,305	455,902,351	459,918,365
9/30/2016	649,632,240	684,790,332	697,168,226	702,157,622	704,336,847
9/30/2017	749,132,252	795,411,627	823,502,045	840,534,293	
9/30/2018	592,163,526	635,430,586	657,398,468		
9/30/2019	690,050,569	729,929,069			
9/30/2020	1,226,760,256				

RATIOS				
YEAR ENDING	27:15 MONTHS	39:27 MONTHS	51:39 MONTHS	63:51 MONTHS
9/30/2011	1.035	1.005	1.008	1.010
9/30/2012	1.057	1.022	1.008	1.007
9/30/2013	1.027	1.015	1.011	1.010
9/30/2014	1.033	1.022	1.020	1.007
9/30/2015	1.063	1.007	1.010	1.009
9/30/2016	1.054	1.018	1.007	1.003
9/30/2017	1.062	1.035	1.021	
9/30/2018	1.073	1.035		
9/30/2019	1.058			
5 POINT AVERAGE	1.062	1.023	1.014	1.007

DEVELOPMENT FACTORS TO ULTIMATE	
15 MONTHS TO ULTIMATE =	1.109
27 MONTHS TO ULTIMATE =	1.045
39 MONTHS TO ULTIMATE =	1.021
51 MONTHS TO ULTIMATE =	1.007

SPECIAL CAUSES OF LOSS
INCURRED LOSSES
LOSS YEARS 2011-2020
EVALUATED AS OF 12/2020

LOSSES AS OF					
YEAR ENDING	15 MONTHS	27 MONTHS	39 MONTHS	51 MONTHS	63 MONTHS
9/30/2011	751,830,333	739,236,965	732,813,668	730,134,014	729,634,493
9/30/2012	387,222,530	378,328,455	376,463,164	377,639,687	377,614,545
9/30/2013	409,161,576	403,119,823	394,407,779	395,345,328	395,989,722
9/30/2014	642,380,982	636,034,394	634,790,119	633,475,777	631,977,168
9/30/2015	573,212,565	569,887,489	568,315,288	569,738,967	571,519,772
9/30/2016	365,001,699	375,353,952	378,802,934	377,949,612	377,432,289
9/30/2017	403,006,604	404,829,195	407,732,754	413,140,843	
9/30/2018	543,751,376	534,387,791	516,397,549		
9/30/2019	461,061,934	462,846,275			
9/30/2020	401,050,005				

RATIOS				
YEAR ENDING	27:15 MONTHS	39:27 MONTHS	51:39 MONTHS	63:51 MONTHS
9/30/2011	0.983	0.991	0.996	0.999
9/30/2012	0.977	0.995	1.003	1.000
9/30/2013	0.985	0.978	1.002	1.002
9/30/2014	0.990	0.998	0.998	0.998
9/30/2015	0.994	0.997	1.003	1.003
9/30/2016	1.028	1.009	0.998	0.999
9/30/2017	1.005	1.007	1.013	
9/30/2018	0.983	0.966		
9/30/2019	1.004			
5 POINT AVERAGE	1.003	0.995	1.003	1.000

DEVELOPMENT FACTORS TO ULTIMATE	
15 MONTHS TO ULTIMATE =	1.001
27 MONTHS TO ULTIMATE =	0.998
39 MONTHS TO ULTIMATE =	1.003
51 MONTHS TO ULTIMATE =	1.000

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	1.060	1.123	1.190	1.261	1.336	1.416	1.501	1.590	1.685	1.786
	Prot. 5-7	1.000	1.073	1.151	1.235	1.325	1.421	1.525	1.636	1.755	1.882	2.020
	Prot. 8-10	1.000	1.060	1.123	1.190	1.261	1.336	1.416	1.501	1.590	1.685	1.786

		Amount of Insurance *										
		1	2	3	4	5	6	7	8	9	10	11
Const. 4-6	Prot. 1-4	1.000	1.059	1.121	1.187	1.257	1.332	1.410	1.493	1.581	1.674	1.773
	Prot. 5-7	1.000	1.072	1.149	1.232	1.321	1.416	1.518	1.627	1.744	1.870	2.005
	Prot. 8-10	1.000	1.059	1.121	1.187	1.257	1.332	1.410	1.493	1.581	1.674	1.773

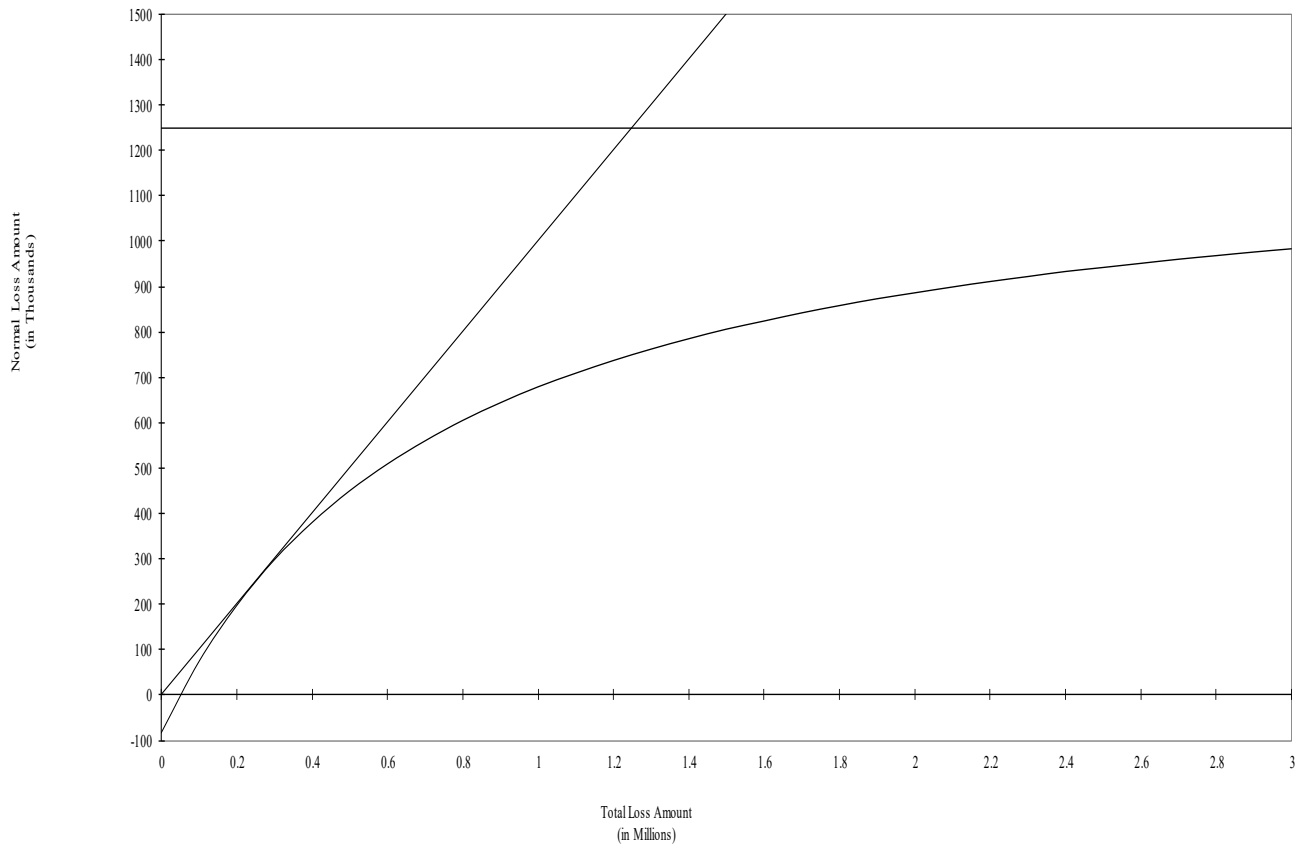
* Amount of
Insurance

Intervals

1	0-450,000
2	450,001-500,000
3	500,001-700,000
4	700,001-1,000,000
5	1,000,001-1,500,000
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)
				MULTI-		STATE
	TRENDED	TRENDED	STATE	STATE	ADJUSTED	AVERAGE
	INCURRED	NORMAL	NORMAL %	NORMAL	INCURRED	EXCESS
YEAR	LOSSES	LOSSES	(2)/(1)	%	LOSSES	FACTOR
						(5)/(2)
2016	24,781,839	20,947,965	84.5%	71.1%	28,900,777	1.380
2017	18,458,911	16,324,767	88.4%	71.7%	23,465,110	1.437
2018	29,020,407	24,031,093	82.8%	69.0%	32,557,059	1.355
2019	25,055,657	18,666,688	74.5%	63.9%	27,808,728	1.490
2020	39,857,929	29,727,896	74.6%	63.2%	43,606,028	1.467

MINNESOTA
DEVELOPMENT OF BASIC GROUP II EXCESS MULTIPLIER

	(1)	(2)	(3)	(4)	(5)	(6)
YEAR	EARNED PREMIUMS	INCURRED LOSSES	NORMAL INCURRED LOSSES	NORMAL LOSS RATIO	STATE EXCESS LOSS RATIO	REGIONAL EXCESS LOSS RATIO
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		-
1954	2,080,006	1,056,276	1,056,276	0.508		-
1955	2,212,756	976,717	976,717	0.441		-
1956	2,251,529	766,087	766,087	0.340		-
1957	2,356,325	888,403	888,403	0.377		-
1958	2,357,061	1,045,851	1,045,851	0.444		-
1959	2,476,701	1,270,375	1,270,375	0.513		-
1960	2,595,223	894,901	894,901	0.345		-
1961	2,583,792	1,006,858	1,006,858	0.390		-
1962	2,564,398	1,510,489	1,510,489	0.589		-
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		-
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		-
1969	3,062,945	1,125,290	1,125,290	0.367		-
1970	4,958,145	1,174,562	1,174,562	0.237		-
1971	5,645,657	1,416,482	1,416,482	0.251		-
1972	6,692,491	1,176,935	1,176,935	0.176		-
1973	6,334,759	1,540,371	1,540,371	0.243		-
1974	6,394,817	2,443,100	2,443,100	0.382		-
1975	7,537,022	4,314,983	4,314,983	0.573		-
1976	8,606,596	2,303,417	2,303,417	0.268		-
1977	9,390,285	3,164,001	3,164,001	0.337		-
1978	10,086,056	3,695,326	3,695,326	0.366		-
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		-
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		-
1986	19,206,588	4,048,923	4,048,923	0.211		-
1987	17,555,169	2,850,192	2,850,192	0.162		-
1988	16,580,064	2,250,818	2,250,818	0.136		-
1989	13,967,430	2,002,462	2,002,462	0.143		-
1990	14,486,136	4,386,637	4,386,637	0.303		-

MINNESOTA
DEVELOPMENT OF BASIC GROUP II EXCESS MULTIPLIER

	(1)	(2)	(3)	(4)	(5)	(6)
YEAR	EARNED PREMIUMS	INCURRED LOSSES	NORMAL INCURRED LOSSES	NORMAL LOSS RATIO	STATE EXCESS LOSS RATIO	REGIONAL EXCESS LOSS RATIO
1991	14,211,918	2,968,541	2,968,541	0.209		-
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		-
1994	10,701,681	2,277,593	2,277,593	0.213		-
1995	9,358,719	2,755,506	2,755,506	0.294		-
1996	8,097,753	7,883,912	6,103,699	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		-
2000	7,521,642	11,354,052	6,376,073	0.848	0.517	0.145
2001	8,552,532	9,974,799	7,333,271	0.857	0.264	0.045
2002	11,656,287	3,273,524	3,273,524	0.281		-
2003	14,227,806	3,239,887	3,239,887	0.228		-
2004	16,337,511	2,586,652	2,586,652	0.158		-
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
2010	42,542,820	35,583,334	29,236,322	0.687	0.138	0.011
2011	23,979,136	29,489,688	19,706,729	0.822	0.362	0.046
2012	25,232,241	12,296,528	12,296,528	0.487		-
2013	26,616,971	31,664,964	11,758,441	0.442	0.520	0.228
2014	28,341,071	11,107,085	11,107,085	0.392		-
2015	29,823,830	15,336,355	15,336,355	0.514		-
2016	30,669,113	14,859,579	14,750,350	0.481	0.004	-
2017	32,368,751	32,097,817	17,248,584	0.533	0.360	0.099
2018	33,830,696	14,984,171	14,984,171	0.443		-
2019	35,504,530	25,512,443	24,177,274	0.681	0.037	0.001
2020	38,753,838	35,116,546	24,440,485	0.631	0.254	0.021
TOTALS	832,960,343	575,145,088	407,275,028	34.336	10.608	5.420

(7) STATE EXCESS COMPONENT = (SELR / NLR) = 0.309

(8) REGIONAL EXCESS COMPONENT = 0.129

(9) STATE EXCESS MULTIPLIER = (1+SEC) * (1+REC) = 1.478

NOTE: FOR YEARS PRIOR TO 2009, THE DISPLAYED YEAR INCLUDES DATA FOR ACCIDENT YEAR ENDING 12/31. FOR YEARS 2011 TO 2020, THE DISPLAYED YEAR INCLUDES DATA FOR ACCIDENT YEAR ENDING 9/30. THE DISPLAYED YEAR 2010 INCLUDES DATA FOR FIRST QUARTER 2009 THROUGH THIRD QUARTER 2010.

MINNESOTA
DEVELOPMENT OF SPECIAL CAUSES OF LOSS EXCESS MULTIPLIER

YEAR	(1) EARNED PREMIUMS	(2) INCURRED LOSSES	(3) NORMAL INCURRED LOSSES	(4) NORMAL LOSS RATIO	(5) STATE EXCESS LOSS 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	19,434,686	7,369,714	7,369,714	0.379	
2017	19,968,535	6,017,001	6,017,001	0.301	
2018	20,055,961	7,516,058	7,516,058	0.375	
2019	20,107,686	15,184,975	12,049,933	0.599	0.156
2020	22,290,889	9,059,382	9,059,382	0.406	
TOTALS		294,903,587	264,591,425	18.005	3.286

(6) STATE EXCESS COMPONENT = (SELR / NLR) 0.183

(7) STATE EXCESS MULTIPLIER = (SELR / NLR) = 1.183

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	8.207
(1c) FULL CREDIBILITY CLAIMS STANDARD ADJUSTED FOR SEVERITY ((1a) X (1b))	12,614
(2) MULTISTATE FIVE YEAR RATIO OF EARNED RISKS TO CLAIMS	356.484
(3) FULL CREDIBILITY EARNED RISKS STANDARD (1c)X(2)	4,496,689
(4) FIVE YEAR STATEWIDE EARNED RISKS	408,735
(5) FIVE YEAR AGGREGATE LOSS COSTS	125,319,457
(6) AGGREGATE LOSS COSTS PER EARNED RISK (5)/(4)	306.603
(7) AGGREGATE LOSS COSTS FOR 100% CREDIBILITY (3) X (6)	1,378,698,337
(8) STATEWIDE CREDIBILITY ((5)/(7))**(.5)	30.1%

MINNESOTA
BASIC GROUP II STATEWIDE CREDIBILITY CALCULATION

(1) FULL CREDIBILITY CLAIMS STANDARD	30,000
(2) MULTISTATE TEN YEAR RATIO OF EARNED RISKS TO CLAIMS	143.628
(3) FULL CREDIBILITY EARNED RISKS STANDARD (1)X(2)	4,308,840
(4) TEN YEAR STATEWIDE EARNED RISKS	843,182
(5) TEN YEAR AGGREGATE LOSS COSTS	312,744,837
(6) AGGREGATE LOSS COSTS PER EARNED RISK (5)/(4)	370.910
(7) AGGREGATE LOSS COSTS FOR 100% CREDIBILITY (3) X (6)	1,598,191,844
(8) STATEWIDE CREDIBILITY ((5)/(7))**(.5)	44.2%

MINNESOTA
SPECIAL CAUSES OF LOSS STATEWIDE CREDIBILITY CALCULATION

(1) FULL CREDIBILITY CLAIMS STANDARD	25,000
(2) MULTISTATE FIVE YEAR RATIO OF EARNED RISKS TO CLAIMS	227.323
(3) FULL CREDIBILITY EARNED RISKS STANDARD (1)X(2)	5,683,075
(4) FIVE YEAR STATEWIDE EARNED RISKS	416,948
(5) FIVE YEAR AGGREGATE LOSS COSTS	72,182,764
(6) AGGREGATE LOSS COSTS PER EARNED RISK (5)/(4)	173.122
(7) AGGREGATE LOSS COSTS FOR 100% CREDIBILITY (3) X (6)	983,865,310
(8) STATEWIDE CREDIBILITY ((5)/(7))**(.5)	27.1%

BASIC GROUP I RATING GROUP DEFINITIONSTHE FOLLOWING CSP CLASSES COMPRISE THE BASIC GROUP I RATING GROUPS01 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
- 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
- 0580 Greenhouses
- 0581 Multiple Occupancy Mercantile, Fire Class Rated, without furniture Occupant
- 0582 Multiple Occupancy Mercantile, Fire Class Rated, with furniture Occupant

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

07 SCHOOLS

- 1052 Schools, Academic

BASIC GROUP I RATING GROUP DEFINITIONS08 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

BASIC GROUP I RATING GROUP DEFINITIONS11 HOSPITALS & NURSING HOMES

0851 Hospitals

0852 Nursing and Convalescent Homes

12 BUILDINGS UNDER CONSTRUCTION

1150 Buildings Under Construction

13 MOTOR VEHICLE RISKS

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

BASIC GROUP I RATING GROUP DEFINITIONS15 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
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

17 FOOD MANUFACTURING

2000 Dairy Products
2059 Meat, Poultry and Fish Products
2150 Grain Milling, Including Feed, Stock, Flour Mills
2200 Bakeries and Bakery Products
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

BASIC GROUP I RATING GROUP DEFINITIONS18 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

21 METAL MANUFACTURING

6810 Heavy Metalworking including Basic Metalwork

6850 Metalworking, NOC

22 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

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, 0550, 0562, 0566, 0567, 0581, 0702, 1180, 1185, 1190, 1200, 1211, 1212, 1213, 1251, 1300, 1400, 1751, or 1752

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, 2250, 2300, 2350, 2400, 2459, 2550, 2600, 2750, 2800, 2805, 3009, 3409, 3809, 3959, or 4400

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

YEAR	TOTAL UNADJUSTED LOSS COSTS	TOTAL UNADJUSTED INCURRED LOSSES	EXPERIENCE RATIO
——	—————	—————	—————
2016	14,344,149	17,354,787	1.210
2017	14,211,569	13,427,876	0.945
2018	14,338,658	22,141,433	1.544
2019	14,755,597	19,979,168	1.354
2020	16,285,209	33,255,264	2.042

MINNESOTA

BASIC GROUP II

UNADJUSTED AGGREGATE LOSS COSTS, LOSSES, AND EXPERIENCE RATIOS

YEAR	TOTAL UNADJUSTED LOSS COSTS	TOTAL UNADJUSTED INCURRED LOSSES	EXPERIENCE RATIO
_____	_____	_____	_____
2011	13,531,616	29,489,688	2.179
2012	14,239,703	12,296,528	0.864
2013	15,017,597	31,664,964	2.109
2014	15,996,979	11,107,085	0.694
2015	16,834,589	15,336,355	0.911
2016	17,312,553	14,859,579	0.858
2017	18,275,985	32,097,817	1.756
2018	19,098,577	14,984,171	0.785
2019	20,045,085	25,512,443	1.273
2020	21,871,311	35,116,546	1.606

MINNESOTA

SPECIAL CAUSES OF LOSS

UNADJUSTED AGGREGATE LOSS COSTS, LOSSES, AND EXPERIENCE RATIOS

YEAR	TOTAL UNADJUSTED LOSS COSTS	TOTAL UNADJUSTED INCURRED LOSSES	EXPERIENCE RATIO
——	———	———	———
2016	10,965,204	7,369,714	0.672
2017	11,266,498	6,017,001	0.534
2018	11,316,010	7,516,058	0.664
2019	11,347,550	15,184,975	1.338
2020	12,584,381	9,059,382	0.720

FIRE AND ALLIED LINES INSURANCE
COUNTRYWIDE LOSS ADJUSTMENT EXPENSE EXPERIENCE (A)

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>Selected</u>
(1) Fire						
(a) Direct Losses Incurred	5,453,646	5,651,498	7,743,812	8,515,121	7,422,919	
(b) Direct Loss Adjustment Expense Incurred	521,637	542,989	691,423	667,872	679,915	
(2) Allied Lines						
(a) Direct Losses Incurred	4,779,658	6,416,870	17,941,113	10,344,868	7,617,526	
(b) Direct Loss Adjustment Expense Incurred	675,860	739,333	1,156,389	996,933	973,416	
(3) Loss Adjustment Expense as a Ratio to Losses						
(a) Fire (1b) / (1a)	9.6%	9.6%	8.9%	7.8%	9.2%	9.0%
(b) Allied Lines (2b) / (2a)	14.1%	11.5%	6.4%	9.6%	12.8%	11.0%

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.....	E4-14

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>.096.097</u>
	Contents	<u>.081.082</u>
A	Buildings	<u>.104.105</u>
	Contents	<u>.094.095</u>
AB	Buildings	<u>.136.137</u>
	Contents	<u>.114.115</u>
B	Buildings	<u>.161.162</u>
	Contents	<u>.125.126</u>

72. CAUSES OF LOSS – SPECIAL FORM

E.2. Rating Procedure – Property Damage – Other than Builders' Risk**b.(1) Building Coverage – Loss Cost: ~~.061~~.065****c.(2) Personal Property Coverage – Loss Costs**

Occupancy Category	Loss Cost
Residential Apartments and Condominiums	.126 .128
Offices	.128 .136
Mercantile – High	.167 .171
Mercantile – Medium	.191 .205
Mercantile – Low	.154 .158
Motels and Hotels	.098 .102
Institutional – High	.053 .057
Institutional – Low	.053
Industrial and Processing – High	.215 .222
Industrial and Processing – Low	.138 .139
Service – High	.183
Service – Low	.123 .127
Contractors	.202 .208
Territory (Districts)	Territorial Multiplier
Hennepin, Ramsey	1.218
Remainder of State	1.000

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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)	0.130	0.114	0.102	0.082	0.077
	Contents (2)	0.130	0.114	0.108	0.094	0.092
0075	Building (1)	0.130	0.114	0.102	0.082	0.077
	Contents (2)	0.130	0.114	0.108	0.094	0.092
0076	Building (1)	0.130	0.114	0.102	0.082	0.077
	Contents (2)	0.130	0.114	0.108	0.094	0.092
0077	Building (1)	0.114	0.106	0.094	0.077	0.068
	Contents (2)	0.120	0.108	0.105	0.092	0.087
0078	Building (1)	0.114	0.106	0.094	0.077	0.068
	Contents (2)	0.120	0.108	0.105	0.092	0.087
0079	Building (1)	0.114	0.106	0.094	0.077	0.068
	Contents (2)	0.120	0.108	0.105	0.092	0.087
0196	Building (1)	0.080	0.068	0.063	0.052	0.049
	Contents (2)	0.087	0.080	0.072	0.065	0.059
0197	Building (1)	0.080	0.068	0.063	0.052	0.049
	Contents (2)	0.087	0.080	0.072	0.065	0.059
0198	Building (1)	0.080	0.068	0.063	0.052	0.049
	Contents (2)	0.087	0.080	0.072	0.065	0.059
0311	Building (1)	0.179	0.163	0.143	0.117	0.107
	Contents (2)	0.206	0.183	0.172	0.153	0.141
0312	Building (1)	0.179	0.163	0.143	0.117	0.107
	Contents (2)	0.206	0.183	0.172	0.153	0.141
Territory					Territorial Multiplier	
Minneapolis					0.774	
Saint Paul					0.760	
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)	0.179	0.163	0.143	0.117	0.107
	Contents (2)	0.206	0.183	0.172	0.153	0.141
0321	Building (1)	0.277	0.251	0.222	0.179	0.165
	Contents (2)					
	A	0.410	0.370	0.351	0.310	0.289
0322	B&C	0.481	0.433	0.409	0.362	0.338
	Building (1)	0.277	0.251	0.222	0.179	0.165
	Contents (2)					
0323	A	0.410	0.370	0.351	0.310	0.289
	B&C	0.481	0.433	0.409	0.362	0.338
	Building (1)	0.277	0.251	0.222	0.179	0.165
0323	Contents (2)					
	A	0.410	0.370	0.351	0.310	0.289
	B&C	0.481	0.433	0.409	0.362	0.338
0331	Building (1)	0.101	0.090	0.081	0.065	0.060
	Contents (2)	0.089	0.078	0.076	0.065	0.060
0332	Building (1)	0.101	0.090	0.081	0.065	0.060
	Contents (2)	0.089	0.078	0.076	0.065	0.060
0333	Building (1)	0.101	0.090	0.081	0.065	0.060
	Contents (2)	0.089	0.078	0.076	0.065	0.060
Territory					Territorial Multiplier	
Minneapolis					0.774	
Saint Paul					0.760	
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)	0.156	0.139	0.125	0.104	0.094
	Contents (2)					
	A	0.178	0.159	0.150	0.135	0.123
0342	Building (1)	0.156	0.139	0.125	0.104	0.094
	Contents (2)					
	A	0.178	0.159	0.150	0.135	0.123
0343	Building (1)	0.156	0.139	0.125	0.104	0.094
	Contents (2)					
	A	0.178	0.159	0.150	0.135	0.123
0511	Building (1)	0.159	0.145	0.130	0.102	0.097
	Contents (2)	0.227	0.206	0.193	0.170	0.159
0512	Building (1)	0.155	0.139	0.124	0.099	0.094
	Contents (2)	0.201	0.182	0.173	0.152	0.140
0520	Building (1)	0.192	0.173	0.155	0.127	0.114
	Contents (2)	0.296	0.270	0.254	0.224	0.207
0531	Building (1)	0.164	0.146	0.130	0.104	0.097
	Contents (2)	0.243	0.215	0.201	0.178	0.167
Territory					Territorial Multiplier	
Minneapolis					0.774	
Saint Paul					0.760	
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					
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					
0564	Mercantile – Sole Occupancy Only – Furniture and Home Furnishings other than Appliances					
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)	0.250	0.225	0.197	0.159	0.150
	Contents (2)	0.296	0.270	0.254	0.224	0.207
0533	Building (1)	0.194	0.174	0.157	0.127	0.118
	Contents (2)	0.240	0.211	0.198	0.178	0.166
0534	Building (1)	0.273	0.246	0.216	0.177	0.164
	Contents (2)	0.250	0.225	0.209	0.185	0.174
0541	Building (1)	0.526	0.476	0.423	0.343	0.317
	Contents (2)	0.565	0.509	0.480	0.423	0.393
0545	Building (1)	0.622	0.561	0.497	0.403	0.375
	Contents (2)	0.703	0.629	0.598	0.526	0.490
0550	Building (1)	0.146	0.130	0.118	0.097	0.087
	Contents (2)	0.246	0.224	0.209	0.185	0.173
0561	Building (1)	0.157	0.140	0.126	0.099	0.095
	Contents (2)	0.246	0.224	0.209	0.185	0.173
0562	Building (1)	0.174	0.158	0.140	0.114	0.104
	Contents (2)	0.272	0.246	0.232	0.206	0.192
0563	Building (1)	0.174	0.157	0.140	0.113	0.102
	Contents (2)	0.201	0.182	0.173	0.152	0.140
0564	Building (1)	0.243	0.216	0.192	0.157	0.144
	Contents (2)	0.358	0.324	0.303	0.271	0.250
Territory					Territorial Multiplier	
Minneapolis					0.774	
Saint Paul					0.760	
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						
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					
0580	Greenhouses – Sole Occupancy Only					
0581	Mercantile – Multiple Occupancy without 0564 Occupant					
0582	Mercantile – Multiple Occupancy with 0564 Occupant					
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)
0565	Building (1)	0.159	0.144	0.128	0.102	0.097
	Contents (2)	0.197	0.178	0.167	0.150	0.140
0566	Building (1)	0.178	0.164	0.145	0.118	0.109
	Contents (2)	0.271	0.243	0.227	0.198	0.185
0567	Building (1)	0.159	0.145	0.130	0.102	0.097
	Contents (2)	0.227	0.206	0.193	0.170	0.159
0570	Building (1)	0.159	0.145	0.130	0.102	0.097
	Contents (2)	0.243	0.215	0.201	0.178	0.167
0580	Building (1)	0.159	0.145	0.130	0.102	0.097
	Contents (2)	0.250	0.226	0.211	0.185	0.174
0581	Building (1)	0.173	0.155	0.136	0.111	0.102
	Contents (2)					
	A	0.243	0.215	0.201	0.178	0.167
	B	0.292	0.265	0.250	0.216	0.206
0582	Building (1)	0.188	0.170	0.152	0.126	0.113
	Contents (2)					
	A	0.211	0.193	0.182	0.159	0.150
	B	0.265	0.237	0.225	0.197	0.182
	C	0.240	0.211	0.198	0.178	0.166
Territory					Territorial Multiplier	
Minneapolis					0.774	
Saint Paul					0.760	
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						
0701	Government Offices					
0702	Banks and Offices other than Governmental					
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					
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)
0701	Building (1)	0.106	0.097	0.085	0.074	0.066
	Contents (2)					
	A	0.119	0.106	0.099	0.089	0.085
	B	0.176	0.159	0.150	0.129	0.123
0702	Building (1)	0.058	0.053	0.049	0.037	0.036
	Contents (2)					
	A	0.070	0.063	0.059	0.053	0.049
	B	0.098	0.088	0.085	0.075	0.069
0742	Building (1)	0.180	0.162	0.144	0.116	0.109
	Contents (2)	0.199	0.179	0.168	0.148	0.141
0743	Building (1)	0.180	0.162	0.144	0.116	0.109
	Contents (2)	0.199	0.179	0.168	0.148	0.141
0744	Building (1)	0.180	0.162	0.144	0.116	0.109
	Contents (2)	0.199	0.179	0.168	0.148	0.141
0745	Building (1)	0.079	0.069	0.062	0.049	0.047
	Contents (2)	0.086	0.077	0.070	0.062	0.060
0746	Building (1)	0.079	0.069	0.062	0.049	0.047
	Contents (2)	0.086	0.077	0.070	0.062	0.060
0747	Building (1)	0.079	0.069	0.062	0.049	0.047
	Contents (2)	0.086	0.077	0.070	0.062	0.060
Territory					Territorial Multiplier	
Minneapolis					0.774	
Saint Paul					0.760	
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						
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					
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					
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)
0755	Building (1)	0.515	0.463	0.413	0.336	0.309
	Contents (2)	0.593	0.535	0.504	0.444	0.416
0756	Building (1)	0.209	0.189	0.165	0.137	0.125
	Contents (2)	0.238	0.217	0.203	0.180	0.165
0757	Building (1)	0.226	0.203	0.180	0.148	0.137
	Contents (2)	0.238	0.217	0.203	0.180	0.165
0831	Building (1)	0.177	0.160	0.139	0.113	0.106
	Contents (2)	0.203	0.182	0.170	0.154	0.143
0832	Building (1)	0.226	0.201	0.180	0.148	0.136
	Contents (2)	0.238	0.217	0.203	0.180	0.165
0833	Building (1)	0.190	0.170	0.154	0.123	0.113
	Contents (2)	0.222	0.201	0.189	0.165	0.155
0834	Building (1)	0.306	0.274	0.245	0.201	0.185
	Contents (2)	0.312	0.280	0.266	0.235	0.219
0841	Building (1)	0.312	0.280	0.250	0.203	0.188
	Contents (2)	0.324	0.293	0.275	0.243	0.228
0843	Building (1)	0.155	0.139	0.123	0.102	0.091
	Contents (2)	0.164	0.149	0.139	0.123	0.113
0844	Building (1)	0.209	0.189	0.165	0.137	0.125
	Contents (2)	0.229	0.205	0.196	0.176	0.162
0845	Building (1)	0.139	0.123	0.110	0.086	0.084
	Contents (2)	0.160	0.143	0.137	0.118	0.110
Territory					Territorial Multiplier	
Minneapolis					0.774	
Saint Paul					0.760	
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						
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					
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					
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)
0846	Building (1)	0.291	0.260	0.229	0.189	0.176
	Contents (2)	0.285	0.256	0.243	0.216	0.201
0851	Building (1)	0.152	0.136	0.121	0.098	0.090
	Contents (2)	0.176	0.160	0.148	0.131	0.123
0852	Building (1)	0.155	0.141	0.125	0.105	0.094
	Contents (2)	0.182	0.163	0.154	0.136	0.129
0900	Building (1)	0.098	0.092	0.081	0.065	0.061
	Contents (2)	0.107	0.095	0.092	0.079	0.076
0911	Building (1)	0.248	0.226	0.198	0.162	0.149
	Contents (2)	0.294	0.267	0.252	0.219	0.207
0912	Building (1)	0.332	0.297	0.265	0.214	0.197
	Contents (2)	0.408	0.367	0.344	0.304	0.283
0913	Building (1)	0.218	0.195	0.170	0.141	0.129
	Contents (2)	0.256	0.229	0.216	0.189	0.177
0921	Building (1)	0.129	0.116	0.102	0.084	0.079
	Contents (2)	0.156	0.139	0.130	0.115	0.108
0922	Building (1)	0.143	0.129	0.115	0.094	0.086
	Contents (2)	0.177	0.158	0.149	0.131	0.126
0923	Building (1)	0.096	0.086	0.077	0.060	0.055
	Contents (2)	0.102	0.091	0.086	0.077	0.072
0931	Building (1)	0.145	0.129	0.114	0.094	0.087
	Contents (2)	0.167	0.150	0.145	0.124	0.115
Territory					Territorial Multiplier	
Minneapolis					0.774	
Saint Paul					0.760	
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						
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					
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					
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)
0932	Building (1)	0.202	0.184	0.163	0.130	0.123
	Contents (2)	0.247	0.224	0.209	0.187	0.175
0933	Building (1)	0.172	0.153	0.137	0.110	0.105
	Contents (2)	0.218	0.196	0.185	0.163	0.150
0934	Building (1)	0.224	0.201	0.179	0.146	0.135
	Contents (2)	0.266	0.235	0.224	0.199	0.187
0940	Building (1)	0.107	0.097	0.089	0.070	0.067
	Contents (2)	0.135	0.120	0.114	0.102	0.096
0951	Building (1)	0.602	0.539	0.483	0.391	0.362
	Contents (2)	0.663	0.598	0.566	0.499	0.466
0952	Building (1)	0.203	0.182	0.163	0.133	0.121
	Contents (2)	0.293	0.261	0.247	0.219	0.203
1000	Building (1)	0.105	0.092	0.085	0.068	0.066
	Contents (2)	0.090	0.081	0.076	0.069	0.066
1051	Building (1)	0.067	0.058	0.052	0.045	0.040
	Contents (2)	0.085	0.076	0.074	0.066	0.058
1052	Building (1)	0.075	0.067	0.061	0.046	0.045
	Contents (2)	0.085	0.076	0.071	0.065	0.061
1070	Building (1)	0.099	0.090	0.080	0.067	0.062
	Contents (2)	0.119	0.106	0.099	0.090	0.085
Territory					Territorial Multiplier	
Minneapolis					0.774	
Saint Paul					0.760	
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						
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, 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					
1230	Cold Storage Warehouses					
1400	Waste and Reclaimed Materials Including Yards					
1650	Building Supply Yards, Including Retail Lumberyards, Coal and Coke Yards					
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)
1150	Building (1)	0.164	0.147	0.130	0.106	0.098
1211	Building (1)	0.157	0.143	0.124	0.100	0.096
	Contents (2)	0.184	0.167	0.157	0.136	0.129
1212	Building (1)	0.124	0.113	0.099	0.078	0.075
	Contents (2)	0.153	0.136	0.129	0.113	0.108
1213	Building (1)	0.110	0.099	0.086	0.074	0.067
	Contents (2)	0.145	0.131	0.124	0.110	0.100
1220	Building (1)	0.131	0.118	0.101	0.081	0.077
	Contents (2)	0.158	0.143	0.136	0.118	0.113
1230	Building (1)	0.113	0.100	0.090	0.075	0.068
	Contents (2)	0.154	0.137	0.131	0.115	0.108
1400	Building (1)	0.336	0.305	0.270	0.219	0.203
	Contents (2)	0.410	0.369	0.352	0.312	0.287
	Yard	0.508		0.052		
1650	Building (1)	0.202	0.179	0.162	0.131	0.120
	Contents (2)	0.255	0.228	0.218	0.190	0.177
	Yard	0.143		0.018		
Territory					Territorial Multiplier	
Minneapolis					0.774	
Saint Paul					0.760	
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						
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					
2350	Beverage Bottlers Excluding Alcoholic Beverages					
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)
1700	Building (1)	0.167	0.148	0.133	0.108	0.099
	Contents (2)	0.252	0.222	0.212	0.188	0.176
	Yard	0.136		0.018		
1751	Building (1)	0.107	0.096	0.081	0.068	0.065
	Contents (2)	0.136	0.124	0.118	0.101	0.096
1752	Building (1)	0.099	0.090	0.078	0.067	0.060
	Contents (2)	0.099	0.090	0.081	0.075	0.068
2200	Building (1)	0.622	0.564	0.501	0.409	0.372
	Contents (2)	0.741	0.671	0.628	0.557	0.522
2350	Building (1)	0.402	0.361	0.320	0.261	0.240
	Contents (2)	0.473	0.429	0.402	0.354	0.333
2459	Building (1)	0.261	0.234	0.204	0.168	0.154
	Contents (2)	0.333	0.302	0.287	0.255	0.234
2800	Building (1)	0.755	0.678	0.607	0.491	0.457
	Contents (2)	0.993	0.893	0.840	0.744	0.698
3409	Building (1)	0.157	0.146	0.128	0.102	0.096
	Contents (2)	0.186	0.166	0.156	0.137	0.128
4809	Building (1)	0.120	0.110	0.098	0.079	0.072
	Contents (2)	0.149	0.136	0.127	0.110	0.106
Territory					Territorial Multiplier	
Minneapolis					0.774	
Saint Paul					0.760	
Balance of State (Minnesota)					1.000	

MINNESOTA
COMMERCIAL PROPERTY
LOSS COST LEVEL REVIEW
ACTUARIAL ANALYSIS SUPPLEMENT

PURPOSE This document provides discussion and analysis of changes in the experience and adjustments used to derive the advisory prospective loss cost level indications.

MONOLINE
INDICATIONS

The indicated statewide monoline changes are:

<u>Subline</u>	<u>Current Review</u>	<u>Prior Review</u>
Basic Group I	11.9%	1.4%
Basic Group II	0.8%	-2.9%
Special Causes of Loss	5.5%	3.6%
All Coverages Combined	5.7%	-0.1%

The prior review's indications were not filed. There has not been a change in the Implicit Package Modification Factors since the prior review.

Given below is a brief discussion and comparison of the multistate factors (premium and loss trend, loss adjustment expense, and loss development) used in this year's and last year's reviews. The discussion is followed by a state specific analysis by subline and a list of events occurring during the experience period in this state that have been identified as catastrophes by ISO's Property Claims Services.

DATA QUALITY

Statistical plan data reported to ISO is first processed through a system of rigorous automated data verification processes so that only valid data is used for ratemaking. Subsequent to this initial data submission review, additional analyses 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, corrected or adjusted. Specifically, an on-leveling approach was used to determine aggregate loss costs at current level rather than the extension-of-exposures method for some reported exposures, and various loss cost multipliers have been adjusted prior to their use in the calculations. The ISO staff responsible for this loss cost review also reviewed the data for reasonableness.

LOSS
ADJUSTMENT
EXPENSE/LOSS
DEVELOPMENT
FACTORS

Loss adjustment expense factors have changed since the previous review, from 1.095 in the prior review to 1.090 in the current review for BG I and from 1.115 to 1.110 for BG II and SCL. Loss development factors changed slightly but are still relatively close to unity for all sublines and years.

LOSS TREND FACTORS

Given below is a comparison of the economic trend factors, loss trend adjustments (LTAs) and total loss trend factors for the current and prior reviews.

Economic Trend

The prospective annual rates of change based on the economic indices (Xactware for Buildings, PPI for Contents, and IMSEP/RSales for Time Element) for the current and prior year reviews are:

<u>Coverage</u>	<u>Current Review</u>	<u>Prior Review</u>	<u>Change</u>
Buildings	4.8%	3.3%	1.5%
Contents	1.8%	1.9%	-0.1%
Time Element	0.8%	0.0%	0.8%

Loss Trend Adjustments (LTAs)

The loss trend adjustment factors underlying the current and prior reviews are:

<u>Subline</u>	<u>Current Review</u>			<u>Prior Review</u>		
	<u>Bldg.</u>	<u>Cnts.</u>	<u>TE</u>	<u>Bldg.</u>	<u>Cnts.</u>	<u>TE</u>
Basic Group I	1.2%	1.5%	2.4%	0.0%	0.6%	2.6%
Basic Group II	-0.4%	0.6%	2.6%	0.0%	0.6%	2.7%
Special Causes of Loss	0.2%	-1.0%	2.4%	0.3%	-0.6%	2.6%

Total Annual Loss Trend

The prospective total annual loss trend factors are given below and are calculated as the product of the economic trend factors and loss trend adjustment factors.

<u>Subline</u>	<u>Current Review</u>			<u>Prior Review</u>		
	<u>Bldg.</u>	<u>Cnts.</u>	<u>TE</u>	<u>Bldg.</u>	<u>Cnts.</u>	<u>TE</u>
Basic Group I	6.0%	3.4%	3.2%	3.3%	2.6%	2.6%
Basic Group II	4.4%	2.5%	3.4%	3.3%	2.6%	2.7%
Special Causes of Loss	5.0%	0.8%	3.2%	3.6%	1.3%	2.6%

CHANGE IN
AVERAGE LOSS
TREND

The changes in average loss trend from current year to prior year are:

<u>Subline</u>	<u>Change in Average Trend</u>
Basic Group I	6.2%
Basic Group II	4.3%
Special Causes of Loss	3.7%

Average loss trend is calculated as a weighted average of the total loss trend from the midpoint of the experience year to one year past the assumed effective date for each year in the experience period based on the statewide loss cost level review year weights (.10, .15, .20, .25, .30 for BG I and SCL, and 0.10 for all years for BG II). Total loss trend includes the effect of Current Cost Factors to bring losses to the latest level of economic cost information, Loss Projection Factors to project from the economic cost level to one year past the assumed effective date, and Loss Trend Adjustment factors over the entire trend period.

PREMIUM TREND
FACTORS

The prospective annual premium trend factors, based on annual changes in amounts of insurance written, for the current and prior reviews are:

<u>Subline</u>	<u>Current Review</u>			<u>Prior Review</u>		
	<u>Bldg.</u>	<u>Cnts.</u>	<u>TE</u>	<u>Bldg.</u>	<u>Cnts.</u>	<u>TE</u>
Basic Group I	1.9%	1.8%	1.0%	2.5%	1.8%	0.9%
Basic Group II	1.8%	1.6%	1.0%	2.3%	1.7%	0.9%
Special Causes of Loss	1.8%	1.4%	1.0%	2.4%	1.4%	0.9%

NET TREND

The prospective annual net (loss ÷ premium) trend factors for the current and prior year reviews are:

<u>Subline</u>	<u>Current Review</u>			<u>Prior Review</u>		
	<u>Bldg.</u>	<u>Cnts.</u>	<u>TE</u>	<u>Bldg.</u>	<u>Cnts.</u>	<u>TE</u>
Basic Group I	4.1%	1.5%	2.2%	0.8%	0.7%	1.7%
Basic Group II	2.5%	0.8%	2.4%	1.0%	0.8%	1.8%
Special Causes of Loss	3.1%	-0.6%	2.2%	1.2%	-0.1%	1.7%

BASIC GROUP I

The statewide five year weighted average experience ratio, before credibility weighting, increased by 28.8%, from 1.082 in the prior review to 1.394 in the current review. The increase is due to a lower-than-average experience ratio of 1.037 for 2015 exiting the experience period, and a higher-than-average experience ratio of 1.804 for 2020 entering the experience period. The monoline relativity decreased by -0.3%.

Statewide Loss Cost Level Review

	<u>Current Review</u>	<u>Prior Review</u>	<u>Ratio</u>
Weighted Experience Ratio	1.394	1.082	1.288
Credibility	0.301	0.294	1.024
Expected Experience Ratio	1.032	1.009	1.023
Coverage Change	1.141	1.031	1.107
Monoline Relativity	0.980	0.983	0.997
Monoline Change	1.119	1.014	1.104

BASIC GROUP II

The statewide ten year weighted average experience ratio, before credibility weighting, increased by 14.7%, from 1.006 in the prior review to 1.154 in the current review. The increase is due to a lower-than-average experience ratio of 0.938 for 2010 exiting the experience period, and a higher-than-average experience ratio of 1.653 for 2020 entering the experience period. The monoline relativity decreased by 3.0%, due to a higher-than-overall monoline experience of 1.692 for 2010 exiting the experience period and a lower-than-overall monoline experience ratio of 1.032 for 2020 entering the experience period.

Statewide Loss Cost Level Review

	<u>Current Review</u>	<u>Prior Review</u>	<u>Ratio</u>
Weighted Experience Ratio	1.154	1.006	1.147
Credibility	0.442	0.445	0.993
Expected Experience Ratio	1.021	1.010	1.011
Coverage Change	1.080	1.008	1.071
Monoline Relativity	0.934	0.963	0.970
Monoline Change	1.008	0.971	1.038

**SPECIAL CAUSES
OF LOSS**

The statewide five year weighted average experience ratio, before credibility weighting, increased by 2.1%, from 0.957 in the prior review to 0.977 in the current review, reflecting an increase in average net trend. The monoline relativity increased by 0.7%, due to a higher-than-overall monoline experience of 1.239 for 2020 entering the experience period which was offset by a higher-than-overall monoline experience ratio of 1.243 for 2015 leaving the experience period.

Statewide Loss Cost Level Review

	<u>Current Review</u>	<u>Prior Review</u>	<u>Ratio</u>
Weighted Experience Ratio	0.977	0.957	1.021
Credibility	0.271	0.286	0.948
Expected Experience Ratio	1.014	1.007	1.007
Coverage Change	1.004	0.993	1.011
Monoline Relativity	1.050	1.043	1.007
Monoline Change	1.055	1.036	1.018

PROPERTY
CLAIMS SERVICES
INFORMATION

The following events have been identified by Property Claims Services as catastrophes occurring in this state from 1/1/1990 through 12/31/2020.

<u>Date From</u>	<u>Date To</u>	<u>Perils</u>
7/7/1990	7/8/1990	Wind, Hail
5/27/1991	5/29/1991	Wind, Hail, Tornadoes, Flooding
6/17/1991	6/18/1991	Wind, Hail, Tornadoes, Flooding
6/14/1992	6/19/1992	Wind, Hail, Tornadoes, Flooding
6/17/1993	6/19/1993	Wind, Hail, Tornadoes, Flooding
6/27/1993	7/3/1993	Wind, Hail, Tornadoes, Flooding
7/8/1993	7/16/1993	Wind, Hail, Tornadoes, Flooding
4/25/1994	4/27/1994	Wind, Hail, Tornadoes, Flooding
8/27/1994	8/28/1994	Wind, Hail, Tornadoes, Flooding
7/13/1995	7/16/1995	Wind, Hail, Tornadoes, Flooding
1/17/1996	1/20/1996	Wind, Snow, Hail, Tornadoes, Flooding
1/31/1996	2/6/1996	Wind, Snow, Ice, Tornadoes, Flooding
5/17/1996	5/21/1996	Wind, Hail, Tornadoes, Flooding
8/6/1996	8/7/1996	Wind, Hail, Tornadoes, Flooding
4/5/1997	4/6/1997	Wind, Hail, Tornadoes, Snow, Flooding
7/1/1997	7/3/1997	Wind, Hail, Tornadoes, Flooding
3/27/1998	3/30/1998	Hail, Wind, Tornadoes
5/15/1998	5/16/1998	Hail, Wind, Tornadoes
5/30/1998	6/1/1998	Hail, Wind, Tornadoes
6/24/1998	6/30/1998	Hail, Wind, Flooding, Tornadoes
8/22/1998	8/25/1998	Hail, Wind, Tornadoes
11/9/1998	11/11/1998	Hail, Wind, Flooding, Tornadoes
6/4/1999	6/7/1999	Hail, Wind, Flooding, Tornadoes
7/1/1999	7/5/1999	Hail, Wind, Flooding, Tornadoes
7/23/1999	7/26/1999	Hail, Wind, Flooding
7/7/2000	7/10/2000	Hail, Wind, Flooding, Tornadoes
9/10/2000	9/12/2000	Hail, Wind, Flooding, Tornadoes
4/6/2001	4/12/2001	Hail, Wind, Flooding, Tornadoes
4/30/2001	5/1/2001	Hail, Wind, Tornadoes
6/9/2001	6/12/2001	Hail, Wind, Flooding, Tornadoes
7/4/2003	7/10/2003	Flooding, Hail, Tornadoes, Wind
5/6/2005	5/12/2005	Flooding, Hail, Tornadoes, Wind
9/21/2005	9/21/2005	Hail, Tornadoes, Wind
8/23/2006	8/25/2006	Flooding, Hail, Tornadoes, Wind
10/2/2006	10/4/2006	Flooding, Hail, Tornadoes, Wind
5/4/2007	5/8/2007	Flooding, Hail, Tornadoes, Wind
5/21/2007	5/24/2007	Flooding, Hail, Tornadoes, Wind
6/20/2007	6/22/2007	Flooding, Hail, Tornadoes, Wind
8/10/2007	8/11/2007	Flooding, Hail, Tornadoes, Wind
8/13/2007	8/14/2007	Flooding, Hail, Tornadoes, Wind
9/20/2007	9/21/2007	Flooding, Hail, Wind
5/22/2008	5/26/2008	Hail, Tornadoes, Wind
5/29/2008	6/1/2008	Flooding, Hail, Tornadoes, Wind
6/5/2008	6/8/2008	Flooding, Hail, Tornadoes, Wind
7/10/2008	7/12/2008	Flooding, Hail, Tornadoes, Wind
7/24/2009	7/25/2009	Flooding, Hail, Wind
8/7/2009	8/10/2009	Flooding, Hail, Tornadoes, Wind
6/17/2010	6/20/2010	Flooding, Hail, Tornadoes, Wind
6/25/2010	6/28/2010	Flooding, Hail, Tornadoes, Wind
7/17/2010	7/18/2010	Flooding, Hail, Tornadoes, Wind
7/20/2010	7/25/2010	Flooding, Hail, Tornadoes, Wind

8/8/2010	8/12/2010	Flooding, Hail, Wind
10/26/2010	10/28/2010	Flooding, Hail, Tornadoes, Wind
5/10/2011	5/13/2011	Hail, Tornadoes, Wind
5/20/2011	5/27/2011	Flooding, Hail, Tornadoes, Wind
5/29/2011	6/1/2011	Flooding, Hail, Tornadoes, Wind
7/1/2011	7/4/2011	Flooding, Hail, Tornadoes, Wind
7/10/2011	7/14/2011	Flooding, Hail, Tornadoes, Wind
7/29/2011	8/1/2011	Flooding, Hail, Wind
5/2/2012	5/6/2012	Flooding, Hail, Wind
5/25/2012	5/30/2012	Flooding, Hail, Tornadoes, Wind
6/17/2012	6/18/2012	Flooding, Hail, Tornadoes, Wind
6/19/2012	6/20/2012	Flooding, Wind
7/2/2012	7/4/2012	Flooding, Hail, Wind
6/20/2013	6/22/2013	Flooding, Hail, Tornadoes, Wind
8/6/2013	8/7/2013	Flooding, Hail, Tornadoes, Wind
5/7/2014	5/9/2014	Flooding, Hail, Tornadoes, Wind
6/14/2014	6/18/2014	Flooding, Hail, Tornadoes, Wind
5/3/2015	5/4/2015	Flooding, Hail, Tornadoes, Wind
6/29/2015	6/30/2015	Flooding, Hail, Tornadoes, Wind
7/12/2015	7/14/2015	Flooding, Hail, Tornadoes, Wind
7/17/2015	7/20/2015	Flooding, Hail, Tornadoes, Wind
6/16/2016	6/18/2016	Flooding, Hail, Wind
7/5/2016	7/7/2016	Flooding, Hail, Tornadoes, Wind
7/20/2016	7/21/2016	Flooding, Hail, Wind
9/19/2016	9/23/2016	Flooding, Hail, Tornadoes, Wind
3/6/2017	3/9/2017	Flooding, Hail, Tornadoes, Wind
5/15/2017	5/18/2017	Flooding, Hail, Tornadoes, Wind
6/11/2017	6/11/2017	Flooding, Hail, Wind
7/11/2017	7/12/2017	Flooding, Hail, Wind
5/29/2018	6/1/2018	Flooding, Hail, Tornadoes, Wind
8/27/2018	8/28/2018	Flooding, Hail, Tornadoes, Wind
9/20/2018	9/21/2018	Flooding, Hail, Tornadoes, Wind
1/29/2019	2/1/2019	Freezing, Ice, Snow, Wind
3/12/2019	3/17/2019	Flooding, Hail, Ice, Snow, Tornadoes, Wind
7/17/2019	7/18/2019	Flooding, Hail, Tornadoes, Wind
7/19/2019	7/23/2019	Flooding, Hail, Tornadoes, Wind
7/26/2019	7/27/2019	Flooding, Hail, Wind
8/4/2019	8/5/2019	Flooding, Hail, Wind
6/4/2019	6/6/2019	Flooding, Hail, Tornadoes, Wind
5/26/2020	6/8/2020	Riot; Civil Disorder
6/2/2020	6/3/2020	Flooding, Hail, Tornadoes, Wind
6/5/2020	6/11/2020	Flooding, Hail, Tornadoes, Wind
7/10/2020	7/12/2020	Flooding, Hail, Tornadoes, Wind
7/17/2020	7/19/2020	Flooding, Hail, Tornadoes, Wind
8/8/2020	8/11/2020	Flooding, Hail, Tornadoes, Wind
8/13/2020	8/17/2020	Flooding, Hail, Tornadoes, Wind
9/5/2020	9/6/2020	Flooding, Hail, Wind

PROPERTY
CLAIMS SERVICES
INFORMATION
(cont'd)

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 above 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 Catastrophe Claims Services, please see "Persons to Contact" in the circular cover letter.
