

RULES – IMPLEMENTATION

SEPTEMBER 6, 2024

COMMERCIAL MULTIPLE LINE

LI-ML-2024-032

## ILLINOIS COMMERCIAL PACKAGE POLICY REVISED PACKAGE MODIFICATION FACTOR REVISION TO BE IMPLEMENTED

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### KEY MESSAGE

Revised Commercial Package Policy package modification factors for an overall statewide change of **3.9%** to be implemented.

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### BACKGROUND

In circular [LI-ML-2024-021](#), we provided you with information about the Commercial Package Policy modification factor experience review.

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### CONSIDERATION OF COVID-19

ISO has considered whether any adjustments need to be made to prospective loss costs or rating factors, which are based on historical experience (pre-COVID-19), to reflect the conditions in which these loss costs or rating factors will be effective (post-COVID-19). Commercial Package Policy Modification Factors are applied to separate underlying coverages that are then combined to create a package policy. Any adjustment that is made to the underlying coverage loss costs to reflect the potential impact of COVID-19 will, therefore, also be reflected in commercial package policy rating. 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 effects on Commercial Package Policy Modification Factors. Therefore, ISO is not making any explicit adjustment to those factors due to COVID-19.

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### ISO ACTION

We are implementing [ML-2024-RLA1](#), which presents a review of Commercial Package Policy modification factors experience.

Refer to the attachment(s) for complete details.

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

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### EFFECTIVE DATE

We do not establish an effective date for Commercial Package Policy rules revisions in this state. Each insurer that elects to utilize this revision is responsible for determining its own effective date.

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## COMPANY ACTION

ISO has not filed this revision.

You must independently determine what revision to make and when to make any revision effective. If you decide to use all or any part of our revision, 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 internal correspondence on this revision, you should refer to ISO Filing Number ML-2024-RLA1, NOT this circular number. Communications with the regulator concerning a filing affecting multiple lines of business (i.e., CL, PL, AL filing designation) should specify the line(s) of business that you are addressing.

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## RATING SOFTWARE IMPACT

No new attributes are being introduced with this revision.

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## POLICYHOLDER NOTIFICATION

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

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## REVISION DISTRIBUTION

We will issue a Notice to Manualholders with an edition date of 3-25 (or the earliest possible subsequent date), along with any new and/or revised manual pages.

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## REFERENCE(S)

- LI-ML-2024-021 (07/16/2024) Commercial Package Policy Experience Reviewed By Staff
- LI-CL-2024-016 (03/12/2024) Commercial Lines Revised Lead Time Requirements Listing

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## ATTACHMENT(S)

Filing ML-2024-RLA1

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## 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.

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## ACKNOWLEDGMENT OF ACTUARIAL QUALIFICATIONS

The American Academy of Actuaries' "Qualification 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 this rule revision a Statement of Actuarial Opinion; therefore, we are including the following acknowledgment:

I, Rimma Maasbach, am an Actuarial Consultant in Actuarial Operations for ISO, and I, Bei Zhou, am an Actuarial Product Director 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.

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ILLINOIS  
ADVISORY PACKAGE MODIFICATION FACTOR REVIEW  
COMMERCIAL PACKAGE POLICY  
ML-2024-RLA1  
EXECUTIVE SUMMARY

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PURPOSE

This document:

- presents a review of advisory Package Modification Factors (PMFs). PMFs are relativity factors used to adjust monoline loss costs as appropriate for multiline risks.
  - provides the analyses used to derive these advisory PMFs.
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CONSIDERATION  
OF COVID-19

ISO has considered whether any adjustments need to be made to prospective loss costs or rating factors, which are based on historical experience (pre-COVID-19), to reflect the conditions in which these loss costs or rating factors will be effective (post-COVID-19). Commercial Package Policy Modification Factors are applied to separate underlying coverages that are then combined to create a package policy. Any adjustment that is made to the underlying coverage loss costs to reflect the potential impact of COVID-19 will therefore also be reflected in commercial package policy rating. 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 effects on Commercial Package Policy Modification Factors. Therefore, ISO is not making any explicit adjustment to those factors due to COVID-19.

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PMF CHANGES

The proposed Commercial Package Policy (CPP) Package Modification Factor changes are:

<u>Type of Policy</u>	<u>Property</u>	<u>Liability</u>	<u>Prop. &amp; Liab. Total</u>
Motel/Hotel	2.0%	0.0%	0.9%
Apartment	0.0%	0.0%	0.0%
Office	7.9%	6.5%	7.0%
Mercantile	0.0%	3.1%	1.5%
Institutional	5.3%	1.1%	4.4%
Services	4.2%	0.0%	2.4%
Indust./Proc.	13.9%	3.7%	9.4%
Contractors	6.7%	1.0%	1.5%
Statewide	5.1%	2.9%	3.9%

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ILLINOIS  
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EXECUTIVE SUMMARY

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INDICATED VS. CAPPED	Indicated PMF changes are based on standard ISO methodology. Differences between indicated and capped PMF changes are caused by rounding each indicated PMF to the nearest one percent and applying an upper cap of 1.00, where necessary.
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HISTORICAL SOURCE DATA	<p>The data used in this review is from ISO reporting companies for:</p> <ul style="list-style-type: none"><li>• Basic Group I: five fiscal accident years ending 9/30/22.</li><li>• Basic Group II: ten fiscal accident years ending 9/30/22.</li><li>• Special Causes of Loss: five fiscal accident years ending 9/30/22.</li><li>• Crime: calendar year ending 06/30/22.</li><li>• Inland Marine: calendar accident year ending 12/31/22.</li><li>• Fidelity: policy year ending 12/31/21.</li><li>• Owners, Landlords, and Tenants: five fiscal accident years ending 9/30/22.</li><li>• Manufacturers and Contractors: five fiscal accident years ending 9/30/22.</li><li>• Products: five calendar accident years ending 12/31/21.</li><li>• Local Products and Completed Operations: five calendar accident years ending 12/31/21.</li></ul>
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PRIOR ISO REVISIONS	The latest revisions in this state are:
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<u>Filing</u>	ML-2022-RLA1	ML-2019-RLA1	ML-2016-RLA1
<u>Dates</u>			
Implemented	3/1/2023	7/1/2020	5/1/2017
<u>Changes</u>			
Indicated	-3.0%	0.1%	3.0%
Filed	-3.0%	0.1%	3.0%
Implemented	-3.0%	0.1%	3.0%

ILLINOIS  
ADVISORY PACKAGE MODIFICATION FACTOR REVIEW  
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EXECUTIVE SUMMARY

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ADJUSTMENTS  
TO REPORTED  
EXPERIENCE

Standard actuarial procedures have been used in the reviews underlying the calculation of the PMFs, including adjusting the fire and liability losses to ultimate settlement level and, for all coverages, reflecting all loss adjustment expenses and trend. Specific procedures vary by subline.

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TEN LARGEST  
GROUPS IN  
ISO DATA BASE

Insurers are listed in descending order based on the percent of statewide written premium volume from Annual Statement Page 15 for the year ending 12/31/22 for the Annual Statement Line of Business (ASLOB) indicated.

COMMERCIAL MULTI PERIL (ASLOB 51 & 52)

1. Travelers Indemnity Company
  2. Insurance Company Of North America
  3. Country Mutual Insurance Company
  4. Cincinnati Insurance Company
  5. Hanover Insurance Company
  6. Continental Casualty Company
  7. Liberty Mutual Insurance Company
  8. Tokio Marine Companies
  9. Society Insurance Company
  10. Westfield Insurance Company
- 

SIZE OF ISO  
DATA BASE

The market share of ISO participating insurers as measured by Annual Statement Page 15 written premium for the year ending 12/31/2022 is:

Commercial Multi Peril (ASLOB 51 & 52). 47.4%.

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ADDITIONAL  
SUPPORTING  
MATERIAL

Additional supporting material underlying the calculation of the experience review indications used in this PMF analysis may be found in the respective monoline experience review documents for each line.

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ILLINOIS  
ADVISORY PACKAGE MODIFICATION FACTOR REVIEW  
COMMERCIAL PACKAGE POLICY  
ML-2024-RLA1  
EXECUTIVE SUMMARY

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COMPANY DECISION

We encourage each insurer to decide independently whether the judgments made and the procedures or data used by ISO in developing the PMFs contained herein are appropriate for your 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 a 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 projection based on the aggregate data.

Some calculations included in this document involve areas of ISO staff judgment. Each company should carefully review and evaluate whether the ISO selected PMFs are appropriate for its use.

The material has been developed exclusively by the staff of Insurance Services Office, Inc.

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## COMMERCIAL PACKAGE POLICY

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## COMMERCIAL PACKAGE POLICY

### SECTION A: SCOPE OF REVISION METHODOLOGY OVERVIEW

OBJECTIVE	<p>A Commercial Package Policy (CPP) is essentially a combination of monoline coverages. CPP pricing employs monoline loss costs modified by Package Modification Factors (PMFs). These factors vary by the eight CPP types of policy and are reviewed annually. Monoline and multiline experience are combined and reviewed via a monoline/multiline relativity analysis. The resulting indicated PMFs represent the loss cost for a CPP <u>relative to</u> that for monoline policies providing the same coverages.</p>
STEP 1: THE RELATIVITY ANALYSES	<p>Each line of insurance develops indicated changes to monoline and multiline aggregate loss costs based on an experience ratio relativity analysis for that coverage. The monoline indication represents the needed change to monoline loss costs. The multiline indication represents the needed change to multiline aggregate loss costs, which is implemented through changes to the PMFs. For this PMF analysis, multiline indications are developed for each line of insurance and Type of Policy. Relativity analyses are explained in Section B.</p>
STEP 2: CALCULATION OF THE PMFs	<p>The procedure described above generates indicated Implicit PMFs (IPMFs) which vary by the various lines of insurance and by type of policy. IPMFs represent what the PMF would be for the CPP risk if only a single coverage were written. For each Type of Policy, IPMFs are weighted by CPP aggregate loss costs to determine the indicated property and liability PMFs. These PMFs may be capped, or rounded to the nearest one percent, and certain component IPMFs appropriately adjusted for this change. These calculations are explained in the remainder of Section A.</p>

## COMMERCIAL PACKAGE POLICY

### SECTION A: SCOPE OF REVISION

#### CALCULATION OF REVISED PACKAGE MODIFICATION FACTORS (EXHIBIT A2)

**OBJECTIVE** Commercial package policies were introduced in the 1960's as a convenient tool for both insurer and insured to have the many types of insurance needed by commercial risks packaged under one cover. Thus fire, extended coverage, crime, liability insurance, etc. could be written using a single policy instead of several. Today, virtually any type of monoline coverage can also be purchased as part of a package policy such as the CPP.

The types of insured which can be written under a CPP are generally categorized into the following Types of Policy:

- . Motels and Hotels (TOP 31)
- . Apartments (TOP 32)
- . Offices (TOP 33)
- . Mercantile Operations (TOP 34)
- . Institutions (TOP 35)
- . Service Operations (TOP 36)
- . Industrial and Processing Operations (TOP 37)
- . Contractors (TOP 38)

**PRICING OF POLICIES** Since a CPP is essentially a combination of monoline coverages, CPP pricing employs monoline loss costs modified by PMFs (Package Modification Factors). These factors vary by the categories shown above and are reviewed annually.

**CPP PMF REVIEW PROCEDURE** The CPP review of Package Modification Factors, which appears in Table 2 of this document, determines the appropriate PMF loss cost level for each of the eight CPP categories. This is done by combining the indications of the simultaneous reviews of monoline and multiline experience for the various lines (or coverages).

A detailed explanation of the calculation of the revised PMFs follows.

## COMMERCIAL PACKAGE POLICY

### SECTION A: SCOPE OF REVISION

#### CALCULATION OF REVISED PACKAGE MODIFICATION FACTORS (EXHIBIT A2)

##### LINES OF INSURANCE (COVERAGES) INCLUDED

The CPP review reflects the contribution from each significant coverage which can be written on a CPP. Included are:

##### Property Coverages

- . Basic Group I (BGI) - the predominant property coverage included.
- . Basic Group II (BGII) - both Basic Group I and Basic Group II must be purchased under a CPP contract.
- . Special Causes of Loss (SCL) - typically a type of insurance which is purchased in addition to Basic Group I and Basic Group II in order to provide "all risk" property coverage for the insured.
- . Crime (CRIME) - Crime insurance is a commonly purchased CPP coverage.
- . Inland Marine (INL. MAR.) - A highly specialized line of property insurance, Inland Marine coverages can be purchased as part of a package policy.
- . Fidelity (FIDELITY) - Certain forms of fidelity insurance can be part of the CPP package. Various forms of employee dishonesty coverage are available.

##### Liability Coverages

- . Owners, Landlords and Tenants (OL&T) Liability - this is the prevalent type of Premises/Operations liability for CPP insureds.
- . Manufacturers and Contractors Liability (M&C) - this is the type of Premises/Operations liability insurance for risks whose liability exposure is more heavily off-premises than on.
- . Products/Completed Operations Liability (PROD) - this type of insurance protects against claims for damages arising from products/completed operations in conjunction with an insured's business. For review purposes, this line of insurance is split into the following two categories:
  - Products: experience for this category is reviewed on a multistate basis.
  - Local Products/ Completed Operations: experience for this category reflects an exposure to loss which is local in nature; therefore, individual state experience is used.

## COMMERCIAL PACKAGE POLICY

### SECTION A: SCOPE OF REVISION

#### CALCULATION OF REVISED PACKAGE MODIFICATION FACTORS (EXHIBIT A2)

##### THE IMPLICIT PACKAGE MODIFICATION FACTOR

For each applicable coverage listed under each of the eight (8) CPP categories, a "current implicit PMF" is shown in column (2). The definition of this factor follows:

For a given CPP category (e.g., apartments) the published Package Modification Factor (PMF) represents the loss cost for a CPP relative to that for monoline policies providing the same coverages. Thus a property (liability) PMF of .80 represents a 20% lower aggregate loss cost for a CPP than for the comparable monoline policies. This PMF, however, represents the CPP "loss cost" for all property (liability) coverages combined. Based on CPP experience, it has been determined that this CPP "loss cost" can differ significantly if it is determined for each property (liability) coverage individually. The IPMF represents what the PMF would be for that CPP risk if only a single coverage were written. The use of the IPMF in monoline/ multiline ratemaking and in the determination of revised CPP Package Modification Factors is significant in that it appropriately identifies how different the component parts of the multiline "loss cost" are.

##### THE MULTILINE INDICATION

Under the CPP ratemaking procedures, monoline and multiline experience are combined for each coverage. The results of these coverage analyses are indicated changes to monoline loss costs and also indicated CPP aggregate loss cost level changes. The CPP indications by coverage are then incorporated in the CPP PMF review. These indications (shown in column (3)) represent the needed adjustments to the IPMFs (shown in column (2)) described above.

The development of these indications is detailed in Section B.

##### THE INDICATED PMF

For each CPP category (and for property vs. liability), the indicated PMF is calculated as follows:

Each of the current IPMFs in column (2) is multiplied by the indicated percent change shown in column (3). A weighted average of the indicated IPMFs, using weights based on latest year aggregate loss costs at current ISO loss cost level (column (1) divided by column (2)), yields the indicated PMF at the bottom of column (4).

##### THE CAPPED PMF

The indicated PMF for each category (and for property vs. liability) shown at the bottom of column (4) is limited to a maximum of 1.00 in arriving at the proposed PMF (bottom of column (5)). All indicated PMFs which are below 1.00 are rounded to the nearest .01 in determining the proposed PMF. To the extent that any indicated PMFs are capped at 1.00, indicated PMFs below this value are adjusted in order to minimize any revenue changes which would result from capping.

In addition to the adjustments just described, the IPMFs (for property and liability) in column (4) are subject to minimum and maximum values and adjusted in column (5) so that they average to the proposed PMF shown at the bottom of column (5).

## COMMERCIAL PACKAGE POLICY

### SECTION B: CALCULATION OF PROPOSED CHANGES PROPERTY COVERAGES: COMMERCIAL FIRE AND ALLIED LINES

#### DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE BASIC GROUP I AND SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS (EXHIBIT B1-B2)

OBJECTIVE	<p>The explanations which follow clarify Exhibits B1 and B2, the Basic Group I Relativity Analysis and the Special Causes of Loss Relativity Analysis, respectively. The purpose of these analyses is to:</p> <ol style="list-style-type: none"><li>(1) determine monoline classification and territorial loss cost level needs for Basic Group I;</li><li>(2) determine monoline category loss cost level need for Special Causes of Loss;</li><li>(3) determine indicated changes to the eight property CPP Package Modification Factors based on Basic Group I/Special Causes of Loss experience.</li></ol>
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COLUMN (1)	<p><u>LEAST SQUARES FORMULA RELATIVITIES</u></p> <p>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).</p> <p>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 PMF); 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, or 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.</p>
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## COMMERCIAL PACKAGE POLICY

### SECTION B: CALCULATION OF PROPOSED CHANGES PROPERTY COVERAGES: COMMERCIAL FIRE AND ALLIED LINES

#### DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE BASIC GROUP I AND SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS (EXHIBIT B1-B2)

COLUMN (1)  
(Cont'd)

The procedure uses 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 Exhibit B3 for Basic Group I and Exhibit B4 for Special Causes of Loss). Specifically, the iteration procedure uses the following formulas:

BASIC GROUP I:

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

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

SPECIAL CAUSES OF LOSS:

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

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

- $TOP_i$  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;

## COMMERCIAL PACKAGE POLICY

### SECTION B: CALCULATION OF PROPOSED CHANGES PROPERTY COVERAGES: COMMERCIAL FIRE AND ALLIED LINES

#### DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE BASIC GROUP I AND SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS (EXHIBIT B1-B2)

COLUMN (1)  
(Cont'd)

- $W_{ik}$  is the loss cost volume at current level for the  $i$ th Type of Policy and  $k$ th Territory;
- $R_{ik}$  is the experience ratio relativity for the  $i$ th Type of Policy,  $k$ th Territory (Basic Group I);
- $R_{ij}$  is the experience ratio relativity for the  $i$ th Type of Policy,  $j$ th Category (Special Causes of Loss);
- $m$  is the number of Types of Policy in the analysis;
- $n$  is the number of Rating Groups or 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 (BG1) or a set of  $n$  category relativities (SCL) are 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  $P$  presents the five-year adjusted aggregate 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 PACKAGE POLICY

### SECTION B: CALCULATION OF PROPOSED CHANGES PROPERTY COVERAGES: COMMERCIAL FIRE AND ALLIED LINES

#### DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE BASIC GROUP I AND SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS (EXHIBIT B1-B2)

##### 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 CHANGES

The indicated changes by Type of Policy is calculated as follows:

$$\text{Indicated Change} = \frac{\text{Balanced Relativity for TOP}}{\text{Monoline Relativity}} - 1$$

##### MULTILINE CONSIDERATIONS

The type of policy (TOP) relativities are used to generate multiline indications which apply to the current Implicit Package Modification Factors (IPMFs). The indicated IPMFs are calculated as follows:

$$\text{TOP y Indicated IPMF} = \frac{(\text{TOP y Current IPMF}) \times (\text{TOP y Relativity})}{\text{Monoline Relativity}}$$

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 re-performed to take this into account. If an IPMF has been capped it is so noted at the bottom of Exhibits B1 and B2.

Loss cost changes for each TOP are calculated as described on Exhibits B1-B2.

## COMMERCIAL PACKAGE POLICY

### SECTION B: CALCULATION OF PROPOSED CHANGES PROPERTY COVERAGES: COMMERCIAL FIRE AND ALLIED LINES

#### DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE BASIC GROUP I RELATIVITY ANALYSIS SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW (EXHIBIT B3)

**INTRODUCTION**      The experience used in the relativity analysis and displayed in Exhibits B3 is the latest five years of accident year data as 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. Losses have also been developed to their ultimate settlement value by application of loss development factors.

**COLUMN (1)**      AGGREGATE LOSS COSTS

The latest year adjusted 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 formulae used in the simultaneous review procedure.

**COLUMN (2)**      5 - YEAR AGGREGATE LOSS COSTS

The combined five-year adjusted aggregate loss costs (adjusted as described above) are used to calculate the experience ratios in column (3).

**COLUMN (3)**      FIVE-YEAR EXPERIENCE RATIOS

These are the ratio 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).

**COLUMN (4)**      RELATIVITIES

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.

## COMMERCIAL PACKAGE POLICY

### SECTION B: CALCULATION OF PROPOSED CHANGES PROPERTY COVERAGES: COMMERCIAL FIRE AND ALLIED LINES

#### DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW (EXHIBIT B4)

INTRODUCTION	<p>The experience used in the relativity analysis and displayed on Exhibit B4 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 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>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>5 - YEAR 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 PACKAGE POLICY

### SECTION B: CALCULATION OF PROPOSED CHANGES PROPERTY COVERAGES: COMMERCIAL FIRE AND ALLIED LINES

#### DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW (EXHIBIT B4)

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 PACKAGE POLICY

### SECTION B: CALCULATION OF PROPOSED CHANGES PROPERTY COVERAGES: COMMERCIAL FIRE AND ALLIED LINES

#### DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE BASIC GROUP II RELATIVITY ANALYSIS (EXHIBIT B5)

OBJECTIVE	<p>The explanations which follow clarify Exhibit B5, the Basic Group II (BG II) relativity analysis. The purpose of this analysis is to:</p> <ol style="list-style-type: none"><li>(1) determine the monoline loss cost level need;</li><li>(2) determine indicated changes to the eight property Commercial Package Policy (CPP) Package Modification Factors (PMFs) based on Basic Group II experience.</li></ol>
COLUMN (1)	<p><u>AGGREGATE LOSS COSTS</u></p> <p>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.</p>
COLUMN (2)	<p><u>10 - YEAR EXPERIENCE RATIO</u></p> <p>These experience ratios are the ratio of the combined ten year CSP adjusted incurred losses (adjusted to current deductible and prospective cost levels including loss development, and also adjusted to reflect the BGII 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.</p>
COLUMN (3)	<p><u>FORMULA RELATIVITY</u></p> <p>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.</p>

## COMMERCIAL PACKAGE POLICY

### SECTION B: CALCULATION OF PROPOSED CHANGES PROPERTY COVERAGES: COMMERCIAL FIRE AND ALLIED LINES

#### DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE BASIC GROUP II RELATIVITY ANALYSIS (EXHIBIT B5)

COLUMN (3)  
(Cont'd)

Unlike the BGI and SCL relativity analyses, the BGII 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.

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 adjusted aggregate 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 and the monoline balanced formula relativity, divided by the current IPMF.

COMMERCIAL PACKAGE POLICY

SECTION B: CALCULATION OF PROPOSED CHANGES  
PROPERTY COVERAGES: COMMERCIAL FIRE AND ALLIED LINES

DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE  
BASIC GROUP II RELATIVITY ANALYSIS (EXHIBIT B5)

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)

INDICATED LOSS COST CHANGES

The indicated multiline (by TOP) changes are calculated by taking the ratio of the TOP relativity (Column 7) to the monoline relativity.

For each 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.

## COMMERCIAL PACKAGE POLICY

### SECTION B: CALCULATION OF PROPOSED CHANGES PROPERTY COVERAGES: CRIME, FIDELITY, AND INLAND MARINE

#### Crime and Fidelity

The reviews for Crime (Burglary and Theft) and for Fidelity are performed on a multistate basis, combining both multiline and monoline experience. Unlike other coverages included in a Commercial Package Policy, there is no simultaneous review procedure for either Burglary and Theft or for Fidelity in which separate loss cost level changes can be determined for multiline and monoline experience. In the absence of a simultaneous review procedure, we are unable to determine Type of Policy relativities with which to price CPP policies relative to monoline policies and therefore have assumed a multiline change of 0.0% and thus no change to the historic Crime or Fidelity IPMFs.

#### Inland Marine

A simultaneous review procedure had been performed in the past to calculate indicated IPMFs for Inland Marine. Beginning with this review, the IPMFs for Inland Marine are being frozen at 0.910 since the results of the simultaneous review procedure were not used to calculate monoline loss cost level changes and the IPMFs have little impact, or weight, in the calculation of the overall Property PMFs. Indications for Inland Marine are to bring the current IPMFs to the 0.910 level.

## COMMERCIAL PACKAGE POLICY

### SECTION B: CALCULATION OF PROPOSED CHANGES LIABILITY COVERAGES: GENERAL LIABILITY

#### DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE (EXHIBIT B8-B17)

OBJECTIVES	<p>The objectives of this procedure are to:</p> <ol style="list-style-type: none"><li>1) determine monoline loss cost level needs for the appropriate rating variables;</li><li>2) determine indicated changes to the eight liability Commercial Package Policy (CPP) Package Modification Factors (PMFs) based on Premises/Operations and Products/Completed Operations data.</li></ol>
EXPERIENCE BASE	<p>The experience used in this relativity analysis is the latest five (5) years of accident year data, as reported under the Commercial Statistical Plan with aggregate loss costs adjusted to current loss cost level (multiline aggregate loss costs adjusted additionally by the current Implicit Package Modification Factors). Losses have been trended and developed in the Relativity Analysis. ALCCL have been trended.</p>
SIMULTANEOUS DETERMINATION OF RATING VARIABLE RELATIVITIES	<p>Once the aggregate loss costs at current level and incurred losses used in the analysis have been appropriately adjusted, the 5-year experience ratios are calculated for each combination of the appropriate rating variables. From these ratios, relativities to the statewide 5-year experience ratio are calculated. These relativities are then used in a minimum bias iterative review procedure, which simultaneously determines the relativities for each rating variable.</p> <p>The purpose of a simultaneous review procedure is to arrive at a set of relativities for each rating variable that best represent the experience. For example, the type of policy relativities will serve to derive the relationship of CPP policies relative to monoline policies, via the PMF, while the class group and territory (if applicable) relativities will serve to derive the relationship of the various classification and territories relative to one another. An iterative technique is used to derive relativities for each rating variable. This procedure is in contrast to a one-way type of review, wherein relativities for each rating variable would each be reviewed separately.</p> <p>Such one-way types of review do not take into account differing percentages of experience of each rating variable within the other rating variables. The simultaneous review procedure accounts for these different distributions in generating relativities for each rating variable.</p>

RATING  
VARIABLES  
USED

For Premises/Operations and Products/Completed Operations, the rating variables used in the relativity analysis are as follows:

Manufacturers and Contractors -	Type of policy and Class group
Owners, Landlords and Tenants -	Type of policy, Territory and Class group
Products -	Type of policy and Class group
Local Products/Completed Operations-	Type of policy, State and Class group

COMMERCIAL PACKAGE POLICY

SECTION B: CALCULATION OF PROPOSED CHANGES  
LIABILITY COVERAGES: GENERAL LIABILITY

DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE (EXHIBIT B8-B17)

ITERATIVE  
PROCEDURE

The iterative technique referred to in the previous paragraph solves for a set of relativities for each rating variable based on the experience for the cells; that is, based on the experience ratio and latest year adjusted aggregate loss cost volume for each combination of rating variables relative to the experience ratio and adjusted aggregate loss cost volume for all combinations of rating variables combined. Specifically, the iterative procedure uses the following formulas:

For Owners, Landlords and Tenants:

$$TOP_i = \frac{\sum_j \sum_k W_{ijk} r_{ijk}}{\sum_j \sum_k W_{ijk} CG_j TER_k} \quad \text{where } 1 \leq i \leq m$$

$$CG_j = \frac{\sum_i \sum_k W_{ijk} r_{ijk}}{\sum_i \sum_k W_{ijk} TOP_i TER_k} \quad \text{where } 1 \leq j \leq n$$

$$TER_k = \frac{\sum_i \sum_j W_{ijk} r_{ijk}}{\sum_i \sum_j W_{ijk} TOP_i CG_j} \quad \text{where } 1 \leq k \leq p$$

$TOP_i$  is the relative change for the  $i^{\text{th}}$  type of policy;

$CG_j$  is the relative change for the  $j^{\text{th}}$  class group;

$TER_k$  is the relative change for the  $k^{\text{th}}$  territory;

$W_{ijk}$  is the aggregate loss costs at current level for the  $i^{\text{th}}$  type of policy,

$j^{\text{th}}$  class group, and  $k^{\text{th}}$  territory;

$r_{ijk}$  is the relative change for the  $i^{\text{th}}$  type of policy,  $j^{\text{th}}$  class group, and  $k^{\text{th}}$  territory;

$m$  is the number of types of policy in the analysis;

$n$  is the number of class groups in the analysis;

$p$  is the number of territories in the analysis;

COMMERCIAL PACKAGE POLICY

SECTION B: CALCULATION OF PROPOSED CHANGES  
LIABILITY COVERAGES: GENERAL LIABILITY

DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE (EXHIBIT B8-B17)

For Manufacturers and Contractors, and Products:

$$TOP_i = \frac{\sum_j W_{ij} r_{ij}}{\sum_j W_{ij} CG_j} \quad \text{where } 1 \leq i \leq m$$
$$CG_j = \frac{\sum_i W_{ij} r_{ij}}{\sum_i W_{ij} TOP_i} \quad \text{where } 1 \leq j \leq n$$

$TOP_i$  is the relative change for the  $i^{\text{th}}$  type of policy;

$CG_j$  is the relative change for the  $j^{\text{th}}$  class group;

$W_{ij}$  is the aggregate loss costs at current level for the  $i^{\text{th}}$  type of policy,  
and  $j^{\text{th}}$  class group;

$r_{ij}$  is the relative change for the  $i^{\text{th}}$  type of policy and  $j^{\text{th}}$  class group;

$m$  is the number of types of policy in the analysis;

$n$  is the number of class groups in the analysis;

COMMERCIAL PACKAGE POLICY

SECTION B: CALCULATION OF PROPOSED CHANGES  
LIABILITY COVERAGES: GENERAL LIABILITY

DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE (EXHIBIT B8-B17)

For Local Products/Completed Operations:

$$TOP_i = \frac{\sum_j \sum_k W_{ijk} r_{ijk}}{\sum_j \sum_k W_{ijk} CG_j ST_k} \quad \text{where } 1 \leq i \leq m$$
$$CG_j = \frac{\sum_i \sum_k W_{ijk} r_{ijk}}{\sum_i \sum_k W_{ijk} TOP_i ST_k} \quad \text{where } 1 \leq j \leq n$$
$$ST_k = \frac{\sum_i \sum_j W_{ijk} r_{ijk}}{\sum_i \sum_j W_{ijk} TOP_i CG_j} \quad \text{where } 1 \leq k \leq p$$

$TOP_i$  is the relative change for the  $i^{\text{th}}$  type of policy;

$CG_j$  is the relative change for the  $j^{\text{th}}$  class group;

$ST_k$  is the relative change for the  $k^{\text{th}}$  state;

$W_{ijk}$  is the aggregate loss costs at current level for the  $i^{\text{th}}$  type of policy,

$j^{\text{th}}$  class group and  $k^{\text{th}}$  state;

$r_{ijk}$  is the relative change for the  $i^{\text{th}}$  type of policy,  $j^{\text{th}}$  class group and  $k^{\text{th}}$  state;

$m$  is the number of types of policy in the analysis;

$n$  is the number of class groups in the analysis;

$p$  is the number of states in the analysis;

COMMERCIAL PACKAGE POLICY

SECTION B: CALCULATION OF PROPOSED CHANGES  
LIABILITY COVERAGES: GENERAL LIABILITY

DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE (EXHIBIT B8-B17)

ITERATIVE  
PROCEDURE  
(Cont'd)

For example, for Owners, Landlords and Tenants, the procedure starts by inserting the actual relativities for type of policy and class group into the third formula to get a territory relativity. This result is then used with the class group relativity in the first formula to get a new type of policy relativity, which in turn is substituted along with the territory relativity into the second formula to get a new class group relativity. The process continues on in that fashion until there is no appreciable difference from one iteration to the next.

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APPLICATION OF  
CREDIBILITY

Consideration is then given to the credibility of the experience for each rating variable. The credibility of each of these categories is based on the formula

$$Z = \sqrt{P/18,000} \text{ for Owners, Landlords and Tenants, } Z = \sqrt{P/18,000} \text{ for}$$

Manufacturers and Contractors and  $Z = \sqrt{P/20,000}$  for Products, where P is the 5

year occurrence total for a given class group, territory or type of policy. For Local Products/Completed Operations, separate formulas are used to calculate the credibility of the experience for each type of policy and class group versus the

credibility of the experience for each state, namely  $Z = \sqrt{P/15,000}$  for type of

policy and class group, and  $Z = \sqrt{P/5,500}$  for state (in this case, P is the 5 year

occurrence total for a given state). Credibility-weighted relativities are then calculated as follows:

$$W = RZ \quad \text{where:}$$

Z is the class group, territory, state or type of policy credibility;

R is the class group, territory, state or type of policy relativity;

W is the credibility-weighted relativity.

The resulting credibility-weighted relativities are then balanced to assure that the average relativity remains at unity.

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INDICATED  
CHANGES

The indicated changes by Type of Policy is calculated as follows:

$$\text{Indicated Change} = \frac{\text{Balanced Relativity for TOP}}{\text{Monoline Relativity}} - 1$$

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COMMERCIAL PACKAGE POLICY

SECTION B: CALCULATION OF PROPOSED CHANGES

LIABILITY COVERAGES: GENERAL LIABILITY

DISTRIBUTION OF ADVISORY LOSS COST LEVEL CHANGE (EXHIBIT B8-B17)

MULTILINE  
CONSIDERATIONS

The monoline relativities and the class group, territory (if applicable) and state relativities which result from the aforementioned procedures are then used to generate indicated monoline classification loss cost changes. The multiline relativities are used to generate multiline indications that apply to the current Implicit Package Modification Factors. The indicated IPMFs are calculated as follows:

$$\text{TOP y Indicated IPMF} = \frac{(\text{TOP y Current IPMF}) \times (\text{TOP y Relativity})}{\text{Monoline relativity}}$$

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 re-performed to take this into account.

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## ILLINOIS

COMMERCIAL PACKAGE POLICY  
SUMMARY OF THIS REVIEW

Type of Policy	<u>PROPERTY PMFS</u>			<u>LIABILITY PMFS</u>			<u>PROP. &amp; LIAB. TOTAL</u>
	Current	Capped	% Change	Current	Capped	% Change	% Change
Motel/Hotel (31)	0.98	1.00	2.0%	1.00	1.00	0.0%	0.9%
Apartment (32)	1.00	1.00	0.0%	1.00	1.00	0.0%	0.0%
Offices (33)	0.76	0.82	7.9%	0.93	0.99	6.5%	7.0%
Mercantile (34)	1.00	1.00	0.0%	0.97	1.00	3.1%	1.5%
Institutional (35)	0.76	0.80	5.3%	0.89	0.90	1.1%	4.4%
Services (36)	0.96	1.00	4.2%	1.00	1.00	0.0%	2.4%
Ind/Proc (37)	0.79	0.90	13.9%	0.81	0.84	3.7%	9.4%
Contractors (38)	0.90	0.96	6.7%	0.99	1.00	1.0%	1.5%
			————				————
Statewide			5.1%			2.9%	3.9%

ILLINOIS  
COMMERCIAL PACKAGE POLICY  
CALCULATION OF REVISED CPP PACKAGE MODIFICATION FACTORS(PMF)

Motel / Hotel (31) *****	(1) Aggregate Loss Costs	(2) Current Implicit PMF	(3) Net Indication	(4) Indicated PMF	(5) Capped PMF
<u>Coverage</u>					
Property-					
Basic Group I	1,029,461	0.824	2.3%	0.843	0.840
Basic Group II	555,017	1.120	7.8%	1.207	1.203
Special Causes of Loss	382,910	1.276	5.0%	1.340	1.335
* Crime	8,472	0.909	0.0%	0.909	0.909
* Inland Marine	2,497	0.910	0.0%	0.910	0.910
* Fidelity	16,214	1.000	0.0%	1.000	1.000
Total	1,994,571	0.980	2.4%	1.004	1.000
Liability -					
OL&T	2,485,783	1.000	3.0%	1.030	1.000
Total	2,485,783	1.000	3.0%	1.030	1.000
Property & Liability Total	4,480,354		2.7%		0.9%

  

Apartment (32) *****	(1) Aggregate Loss Costs	(2) Current Implicit PMF	(3) Net Indication	(4) Indicated PMF	(5) Capped PMF
<u>Coverage</u>					
Property-					
Basic Group I	7,213,095	0.860	0.9%	0.868	0.867
Basic Group II	6,359,354	1.129	-1.8%	1.109	1.108
Special Causes of Loss	3,398,556	1.227	-3.4%	1.185	1.184
* Crime	4,158	0.909	0.0%	0.909	0.909
* Inland Marine	1,955	0.910	0.0%	0.910	0.910
* Fidelity	23,282	1.000	0.0%	1.000	1.000
Total	17,000,400	1.000	0.1%	1.001	1.000
Liability -					
OL&T	16,029,986	1.000	11.8%	1.118	1.000
Total	16,029,986	1.000	11.8%	1.118	1.000
Property & Liability Total	33,030,386		5.8%		0.0%

\* indicates coverage for which reviews are on a MULTISTATE basis.

ILLINOIS  
COMMERCIAL PACKAGE POLICY  
CALCULATION OF REVISED CPP PACKAGE MODIFICATION FACTORS(PMF)

Office (33) *****	(1) Aggregate Loss Costs	(2) Current Implicit PMF	(3) Net Indication	(4) Indicated PMF	(5) Capped PMF
<u>Coverage</u>					
Property-					
Basic Group I	2,602,403	0.921	-5.1%	0.874	0.911
Basic Group II	2,665,533	0.572	9.3%	0.625	0.651
Special Causes of Loss	1,858,884	0.918	11.2%	1.021	1.064
* Crime	10,736	0.909	0.0%	0.909	0.909
* Inland Marine	174,964	0.910	0.0%	0.910	0.910
* Fidelity	24,399	1.000	0.0%	1.000	1.000
Total	7,336,919	0.760	3.5%	0.787	0.820
Liability -					
OL&T	11,822,347	0.918	-1.3%	0.906	0.977
M&C	1,533,727	1.013	0.9%	1.022	1.103
Total	13,356,074	0.930	-1.3%	0.918	0.990
Property & Liability Total	20,692,993		0.4%		7.0%

  

Mercantile (34) *****	(1) Aggregate Loss Costs	(2) Current Implicit PMF	(3) Net Indication	(4) Indicated PMF	(5) Capped PMF
<u>Coverage</u>					
Property-					
Basic Group I	11,989,131	0.910	-3.9%	0.875	0.804
Basic Group II	12,367,804	1.176	21.3%	1.426	1.311
Special Causes of Loss	5,080,155	0.883	9.4%	0.966	0.888
* Crime	86,534	0.909	0.0%	0.909	0.909
* Inland Marine	372,139	0.910	0.0%	0.910	0.910
* Fidelity	236,131	1.000	0.0%	1.000	1.000
Total	30,131,894	1.000	8.6%	1.086	1.000
Liability -					
OL&T	20,298,030	0.984	0.5%	0.989	1.024
M&C	3,146,950	0.961	-3.1%	0.931	0.964
Local Product	563,245	0.868	0.0%	0.868	0.898
* Multi Product	2,750,934	0.889	1.5%	0.902	0.901
Total	26,759,159	0.970	0.0%	0.970	1.000
Property & Liability Total	56,891,053		4.5%		1.5%

\* indicates coverage for which reviews are on a MULTISTATE basis.

ILLINOIS  
COMMERCIAL PACKAGE POLICY  
CALCULATION OF REVISED CPP PACKAGE MODIFICATION FACTORS(PMF)

Institution (35) *****	(1) Aggregate Loss Costs	(2) Current Implicit PMF	(3) Net Indication	(4) Indicated PMF	(5) Capped PMF
<u>Coverage</u>					
Property-					
Basic Group I	5,488,291	0.581	-5.6%	0.548	0.571
Basic Group II	8,191,355	0.795	12.1%	0.891	0.928
Special Causes of Loss	6,733,137	1.041	-13.2%	0.904	0.941
* Crime	94,999	0.909	0.0%	0.909	0.909
* Inland Marine	41,580	0.910	0.0%	0.910	0.910
* Fidelity	170,256	1.000	0.0%	1.000	1.000
Total	20,719,618	0.760	1.7%	0.773	0.800
Liability-					
OL&T	4,944,812	0.918	-5.6%	0.867	0.935
M&C	240,613	0.504	-0.8%	0.500	0.539
Total	5,185,425	0.890	-6.0%	0.837	0.900
Property & Liability Total	25,905,043		0.2%		4.4%

  

Services (36) *****	(1) Aggregate Loss Costs	(2) Current Implicit PMF	(3) Net Indication	(4) Indicated PMF	(5) Capped PMF
<u>Coverage</u>					
Property-					
Basic Group I	8,039,895	1.013	7.6%	1.090	1.053
Basic Group II	5,803,914	0.844	7.2%	0.905	0.874
Special Causes of Loss	4,175,025	1.079	7.5%	1.160	1.121
* Crime	62,862	0.909	0.0%	0.909	0.909
* Inland Marine	187,468	0.910	0.0%	0.910	0.910
* Fidelity	150,581	1.000	0.0%	1.000	1.000
Total	18,419,745	0.960	7.7%	1.034	1.000
Liability -					
OL&T	7,000,286	1.087	-4.8%	1.035	1.071
M&C	5,435,754	0.896	-3.6%	0.864	0.894
Local Product	1,225,944	1.149	-1.2%	1.135	1.175
* Multi Product	155,428	0.964	1.0%	0.974	0.974
Total	13,817,412	1.000	-3.4%	0.966	1.000
Property & Liability Total	32,237,157		3.0%		2.4%

\* indicates coverage for which reviews are on a MULTISTATE basis.

ILLINOIS  
COMMERCIAL PACKAGE POLICY  
CALCULATION OF REVISED CPP PACKAGE MODIFICATION FACTORS(PMF)

Industrial / Processing (37) *****	(1) Aggregate Loss Costs	(2) Current Implicit PMF	(3) Net Indication	(4) Indicated PMF	(5) Capped PMF
<u>Coverage</u>					
Property-					
Basic Group I	8,019,992	1.144	11.8%	1.279	1.332
Basic Group II	3,956,464	0.563	9.2%	0.615	0.641
Special Causes of Loss	2,439,149	0.559	6.3%	0.594	0.619
* Crime	23,304	0.909	0.0%	0.909	0.909
* Inland Marine	52,275	0.910	0.0%	0.910	0.910
* Fidelity	148,310	1.000	0.0%	1.000	1.000
Total	14,639,494	0.790	9.4%	0.864	0.900
Liability-					
M&C	7,154,053	0.758	-1.9%	0.744	0.802
Local Product	186,933	0.703	-2.2%	0.688	0.741
* Multi Product	4,411,626	0.898	2.5%	0.920	0.920
Total	11,752,613	0.810	-1.0%	0.802	0.840
Property & Liability Total	26,392,107		4.8%		9.4%

  

Contractors (38) *****	(1) Aggregate Loss Costs	(2) Current Implicit PMF	(3) Net Indication	(4) Indicated PMF	(5) Capped PMF
<u>Coverage</u>					
Property-					
Basic Group I	1,157,601	0.838	2.1%	0.856	0.891
Basic Group II	1,208,784	0.857	5.0%	0.900	0.937
Special Causes of Loss	827,254	1.042	4.1%	1.085	1.130
* Crime	28,142	0.909	0.0%	0.909	0.909
* Inland Marine	37,190	0.910	0.0%	0.910	0.910
* Fidelity	84,623	1.000	0.0%	1.000	1.000
Total	3,343,594	0.900	2.8%	0.925	0.960
Liability-					
M&C	23,243,642	0.999	1.3%	1.012	1.012
Local Product	9,660,175	0.975	-0.4%	0.971	0.971
Total	32,903,817	0.990	1.0%	1.000	1.000
Property & Liability Total	36,247,411		1.2%		1.5%

\* indicates coverage for which reviews are on a MULTISTATE basis.

ILLINOIS  
COMMERCIAL PACKAGE POLICY  
CALCULATION OF REVISED CPP PACKAGE MODIFICATION FACTORS(PMF)

Statewide *****	(1) Aggregate Loss Costs	(2) Current Implicit PMF	(3) Net Indication	(4) Indicated PMF	(5) Capped PMF
<u>Coverage</u>					
Property-					
Basic Group I	45,539,869	0.886	1.7%	0.901	0.891
Basic Group II	41,108,225	0.876	11.3%	0.975	0.960
Special Causes of Loss	24,895,070	0.945	0.8%	0.953	0.948
* Crime	319,207	0.909	0.0%	0.909	0.909
* Inland Marine	870,068	0.910	0.0%	0.910	0.910
* Fidelity	853,796	1.000	0.0%	1.000	1.000
Total	113,586,235	0.884	6.3%	0.940	0.929
Liability -					
OL&T	62,581,244	0.980	2.1%	1.001	1.005
M&C	40,754,740	0.925	-0.3%	0.922	0.945
Local Product	11,636,297	0.979	-0.5%	0.974	0.980
* Multi Product	7,317,988	0.896	2.1%	0.915	0.914
Total	122,290,268	0.949	1.8%	0.966	0.976
Property & Liability Total	235,876,503		4.0%		3.9%

\* indicates coverage for which reviews are on a MULTISTATE basis.

ILLINOIS  
 COMMERCIAL PACKAGE POLICY  
 CALCULATION OF REVISED CPP PACKAGE MODIFICATION FACTORS(PMF)

Combined PMFs			
<u>Type of Policy</u>	<u>Current Combined</u>	<u>Indicated Combined</u>	<u>Capped Combined</u>
Motel/Hotel (31)	0.990	1.018	1.000
Apartment (32)	1.000	1.058	1.000
Office (33)	0.880	0.865	0.920
Mercantile (34)	0.980	1.030	1.000
Institution (35)	0.800	0.785	0.820
Services (36)	0.980	1.006	1.000
Ind/Proc (37)	0.800	0.837	0.870
Contractors (38)	0.980	0.992	1.000

NOTE: Combined PMFs are provided for informational purposes only.

ILLINOIS  
BASIC GROUP I RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	(5)
<u>TOP</u>	\$ Lst Sq Formula Relativity	Credibility Z	Credibility Weighted Relativity	Balanced Relativity	Indicated Change
10	0.946	0.296	0.984	0.986	
31	1.146	0.045	1.006	1.009	2.3%
32	0.971	0.271	0.992	0.995	0.9%
33	0.564	0.119	0.934	0.936	-5.1%
34	0.868	0.391	0.946	0.948	-3.9%
35	0.741	0.247	0.929	0.931	-5.6%
36	1.212	0.294	1.058	1.061	7.6%
37	1.361	0.305	1.099	1.102	11.8%
38	1.066	0.064	1.004	1.007	2.1%

  

	(1)	(2)	(3)	(4)
<u>Territory</u>	\$ Lst Sq Formula Relativity	Credibility Z	Credibility Weighted Relativity	Balanced Relativity
Chicago	1.329	0.480	1.146	1.172
Bal. Of State	0.926	0.811	0.940	0.961

ILLINOIS  
SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	(5)
<u>TOP</u>	<u>\$ Lst Sq Formula Relativity</u>	<u>Credibility Z</u>	<u>Credibility Weighted Relativity</u>	<u>Balanced Relativity</u>	<u>Indicated Change</u>
10	0.906	0.302	0.971	0.993	
31	1.640	0.041	1.020	1.043	5.0%
32	0.802	0.296	0.937	0.959	-3.4%
33	1.506	0.185	1.079	1.104	11.2%
34	1.166	0.391	1.062	1.086	9.4%
35	0.704	0.487	0.843	0.862	-13.2%
36	1.133	0.339	1.043	1.067	7.5%
37	1.139	0.243	1.032	1.056	6.3%
38	1.113	0.103	1.011	1.034	4.1%

  

	(1)	(2)	(3)	(4)
<u>Category</u>	<u>\$ Lst Sq Formula Relativity</u>	<u>Credibility Z</u>	<u>Credibility Weighted Relativity</u>	<u>Balanced Relativity</u>
01	1.010	0.867	1.009	1.005
02	1.024	0.165	1.004	1.000
03	0.557	0.201	0.889	0.885
04	0.867	0.216	0.970	0.966
05	1.356	0.170	1.053	1.048
06	0.833	0.099	0.982	0.978
07	0.704	0.018	0.994	0.990
08	1.424	0.000	1.000	1.136
09	0.895	0.341	0.963	0.959
10	1.003	0.056	1.000	0.996
11	0.972	0.274	0.992	0.988
12	0.975	0.257	0.994	0.990
13	1.003	0.152	1.000	0.996
14	1.003	0.114	1.000	0.996

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

<u>Type Of Policy</u>	(1) Latest Year Aggregate Loss <u>Costs</u>	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) 5 - Year Exp. Ratio <u>Relativity</u>
Chicago				
10 Monoline	1,655,245	7,169,198	1.599	1.354
31 Multiline Motel/Hotel	53,886	216,888	0.340	0.288
32 Multiline Apartment	1,740,286	9,777,937	1.427	1.208
33 Multiline Office	349,912	1,937,109	2.515	2.130
34 Multiline Mercantile	2,472,576	13,184,817	2.040	1.727
35 Multiline Institutional	1,218,171	6,328,187	1.195	1.012
36 Multiline Services	1,187,713	6,059,175	1.291	1.093
37 Multiline Indust/Process	1,184,948	5,682,335	0.828	0.701
38 Multiline Contractors	89,635	491,757	0.543	0.460
Total All Tops*	9,952,372	50,847,403	1.516	1.284
Balance Of State (Illinois)				
10 Monoline	7,225,769	34,975,317	1.036	0.877
31 Multiline Motel/Hotel	975,575	4,513,631	1.271	1.076
32 Multiline Apartment	5,472,809	27,402,469	1.086	0.920
33 Multiline Office	2,252,491	11,598,174	0.566	0.479
34 Multiline Mercantile	9,516,555	51,031,454	0.893	0.756
35 Multiline Institutional	4,270,120	26,425,793	0.815	0.690
36 Multiline Services	6,852,182	35,600,779	1.364	1.155
37 Multiline Indust/Process	6,835,044	38,259,574	1.559	1.320
38 Multiline Contractors	1,067,966	6,335,874	1.187	1.005
Total All Tops*	44,468,511	236,143,065	1.106	0.937

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

<u>Type Of Policy</u>	(1) Latest Year Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) 5 - Year Exp. Ratio Relativity
Entire State				
10 Monoline	8,881,014	42,144,515	1.141	0.966
31 Multiline Motel/Hotel	1,029,461	4,730,519	1.222	1.035
32 Multiline Apartment	7,213,095	37,180,406	1.168	0.989
33 Multiline Office	2,602,403	13,535,283	0.828	0.701
34 Multiline Mercantile	11,989,131	64,216,271	1.130	0.956
35 Multiline Institutional	5,488,291	32,753,980	0.899	0.761
36 Multiline Services	8,039,895	41,659,954	1.353	1.146
37 Multiline Indust/Process	8,019,992	43,941,909	1.451	1.229
38 Multiline Contractors	1,157,601	6,827,631	1.137	0.963
Total All Tops*	54,420,883	286,990,468	1.181	1.000

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

			(1) Latest Year Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
Entire State	Type Of Policy	Category					
	10 Monoline	01 Buildings	2,568,781	11,530,610	1.033	1.020	0.913
		02 Res. Apts. And Cond	53,795	206,703	0.052	0.750	0.671
		03 Offices	195,809	1,012,683	0.912	0.955	0.855
		04 Mercantile - High	214,492	1,109,875	1.120	1.029	0.921
		05 Mercantile - Medium	74,613	375,865	0.838	0.940	0.842
		06 Mercantile - Low	67,980	317,154	0.903	0.958	0.858
		07 Motels And Hotels	3,306	30,474	0.900	0.961	0.860
		08 Institutional - High	75,197	300,803	0.870	0.950	0.850
		09 Institutional - Low	53,324	213,023	0.362	0.826	0.739
		10 Indust-Proc - High	40,654	123,740	0.301	0.820	0.734
		11 Indust-Proc - Low	154,587	866,398	0.503	0.820	0.734
		12 Service - High	90,323	398,700	0.727	0.909	0.814
		13 Service - Low	136,062	669,404	1.599	1.170	1.047
		14 Contractors	33,585	123,471	0.096	0.772	0.691
		Total	3,762,508	17,278,903	0.974	0.997	0.892
	31 Multiline Motel/Hotel	01 Buildings	335,565	1,477,635	3.460	1.846	1.653
		07 Motels And Hotels	47,345	249,532	2.322	1.287	1.152
		Total	382,910	1,727,167	3.319	1.777	1.591
	32 Multiline Apartment	01 Buildings	2,869,507	14,020,754	0.839	0.902	0.808
		02 Res. Apts. And Cond	529,049	2,757,694	0.663	0.919	0.823
		Total	3,398,556	16,778,448	0.812	0.905	0.810
	33 Multiline Office	01 Buildings	1,371,414	6,644,299	2.053	1.699	1.521
		03 Offices	479,921	2,378,179	0.559	0.892	0.799
		04 Mercantile - High	769	3,217	132.953	14.376	12.870

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

<u>Type Of Policy</u>	<u>Category</u>	(1) Latest Year Aggregate Loss <u>Costs</u>	(2) 5 - Year Aggregate <u>Loss Costs</u>	(3) 5 - Year Experience <u>Ratio</u>	(4) Credibility Weighted Experience <u>Ratio</u>	(5) Credibility Weighted <u>Relativity</u>
	08 Institutional - High	1,078	6,278	9.365	1.947	1.743
	11 Indust-Proc - Low	2,782	5,559	0.000	1.000	0.895
	12 Service - High	2,719	20,927	0.000	0.997	0.893
	14 Contractors	201	1,154	0.000	1.001	0.896
	Total	1,858,884	9,059,613	1.719	1.494	1.337
34 Multiline Mercantile	01 Buildings	3,753,841	19,021,261	1.358	1.314	1.176
	03 Offices	10,688	46,733	7.093	1.762	1.577
	04 Mercantile - High	481,590	2,504,158	1.090	1.103	0.987
	05 Mercantile - Medium	549,524	2,648,388	2.670	1.767	1.582
	06 Mercantile - Low	222,025	1,190,538	0.967	1.072	0.960
	08 Institutional - High	67	585	0.000	1.001	0.896
	11 Indust-Proc - Low	4,936	22,113	0.000	0.996	0.892
	12 Service - High	33,584	170,485	1.451	1.157	1.036
	13 Service - Low	16,968	97,060	0.409	1.029	0.921
	14 Contractors	6,932	33,214	0.000	0.994	0.890
	Total	5,080,155	25,734,535	1.464	1.331	1.191
35 Multiline Institutional	01 Buildings	4,539,104	22,117,690	0.731	0.792	0.709
	03 Offices	19,200	84,992	0.697	1.064	0.953
	04 Mercantile - High	35	172	0.000	1.001	0.896
	06 Mercantile - Low	0	33	0.000	1.001	0.896
	08 Institutional - High	569,548	8,231,413	1.159	1.144	1.024
	09 Institutional - Low	1,582,614	7,418,331	0.480	0.703	0.629
	12 Service - High	16,157	80,435	0.394	1.030	0.922
	13 Service - Low	6,181	27,131	0.000	0.995	0.891
	14 Contractors	298	2,203	0.000	1.001	0.896
	Total	6,733,137	37,962,400	0.707	0.802	0.718

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

<u>Type Of Policy</u>	<u>Category</u>	(1) Latest Year Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
36 Multiline Services	01 Buildings	2,712,520	13,214,215	1.199	1.277	1.143
	03 Offices	30,044	121,615	3.819	1.523	1.363
	04 Mercantile - High	36,225	200,933	0.894	1.248	1.117
	05 Mercantile - Medium	6,367	30,127	290.059	28.359	25.389
	06 Mercantile - Low	11,945	46,010	7.510	1.869	1.673
	08 Institutional - Hig	69,510	331,822	0.115	1.175	1.052
	09 Institutional - Low	25,114	121,047	0.147	1.178	1.055
	10 Indust-Proc - High	151	874	0.000	1.164	1.042
	11 Indust-Proc - Low	8,517	48,916	0.410	1.203	1.077
	12 Service - High	892,757	4,463,380	0.734	1.233	1.104
	13 Service - Low	370,695	1,853,313	0.924	1.251	1.120
	14 Contractors	11,180	48,587	0.000	1.164	1.042
	Total	4,175,025	20,480,839	1.521	1.307	1.170
37 Indust/Proc	01 Buildings	1,372,164	7,169,299	1.247	1.281	1.147
	03 Offices	1,402	8,599	2.912	1.437	1.286
	04 Mercantile - High	19,430	83,848	0.000	1.164	1.042
	05 Mercantile - Medium	782	4,266	0.000	1.164	1.042
	06 Mercantile - Low	500	1,180	0.000	1.164	1.042
	10 Indust-Proc - High	172,657	768,350	1.260	1.283	1.149
	11 Indust-Proc - Low	863,029	4,717,423	0.812	1.240	1.110
	12 Service - High	997	24,481	0.000	1.164	1.042
	13 Service - Low	5,732	27,659	0.000	1.164	1.042
	14 Contractors	2,456	11,478	0.000	1.164	1.042
	Total	2,439,149	12,816,583	1.080	1.265	1.133

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

<u>Type Of Policy</u>	<u>Category</u>	(1) Latest Year Aggregate Loss Costs	(2) 5 - Year Aggregate Loss Costs	(3) 5 - Year Experience Ratio	(4) Credibility Weighted Experience Ratio	(5) Credibility Weighted Relativity
38 Multiline Contractors	01 Buildings	420,586	2,408,537	0.904	1.249	1.118
	03 Offices	21,844	112,649	1.562	1.311	1.174
	04 Mercantile - High	42,897	227,704	1.196	1.277	1.143
	05 Mercantile - Medium	1,108	7,065	0.000	1.164	1.042
	06 Mercantile - Low	12,319	85,672	1.712	1.325	1.186
	08 Institutional - High	925	2,301	0.000	1.164	1.042
	11 Indust-Proc - Low	1,546	8,203	0.379	1.200	1.074
	12 Service - High	5,327	27,411	0.000	1.164	1.042
	13 Service - Low	4,830	15,299	0.000	1.164	1.042
	14 Contractors	315,872	1,710,760	0.892	1.248	1.117
	Total	827,254	4,605,601	0.930	1.251	1.120
Total All TOPs	01 Buildings	19,943,482	97,604,300	1.143	1.125	1.007
	02 Res. Apts. And Cond	582,844	2,964,397	0.607	0.903	0.809
	03 Offices	758,908	3,765,450	0.908	0.963	0.862
	04 Mercantile - High	795,438	4,129,907	1.196	1.113	0.996
	05 Mercantile - Medium	632,394	3,065,711	5.339	1.935	1.733
	06 Mercantile - Low	314,769	1,640,587	1.229	1.088	0.974
	07 Motels And Hotels	50,651	280,006	2.229	1.266	1.133
	08 Institutional - High	716,325	8,873,202	1.038	1.128	1.010
	09 Institutional - Low	1,661,052	7,752,401	0.471	0.714	0.639
	10 Indust-Proc - High	213,462	892,964	1.076	1.195	1.070
	11 Indust-Proc - Low	1,035,397	5,668,612	0.756	1.175	1.052
	12 Service - High	1,041,864	5,185,819	0.745	1.198	1.073
	13 Service - Low	540,468	2,689,866	1.049	1.219	1.091
	14 Contractors	370,524	1,930,867	0.769	1.197	1.071
	Total	28,657,578	146,444,089	1.146	1.117	1.000

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Latest Year Loss Costs At Current <u>Implicit PMF</u>	10-Year Experience Ratio At Current <u>PMF</u>	Formula Relativity <u>(2)/</u>	Credibility <u>(C)</u>	Credibility Weighted Relativity (D)	Balanced Formula Relativity (E)	Normalized Formula Relativity (F)	Indicated Change
Monoline	8,117,599	1.130	0.871	0.617	0.92	0.920	0.9139	
Multiline	41,108,225	1.331	1.026	0.909	1.02	1.024	1.0170	
Coverage	49,225,824	1.298	1.000			1.007	1.0000	
<u>Multiline Top</u>								
31 Motel/Hotel	555,017	1.204	0.928	0.105	0.99	0.992	0.9854	7.8%
32 Apartment	6,359,354	1.099	0.847	0.637	0.90	0.903	0.8970	-1.8%
33 Office	2,665,533	1.322	1.019	0.341	1.01	1.006	0.9993	9.3%
34 Mercantile	12,367,804	1.500	1.157	0.739	1.12	1.116	1.1086	21.3%
35 Institutional	8,191,355	1.356	1.045	0.693	1.03	1.031	1.0241	12.1%
36 Services	5,803,914	1.265	0.975	0.567	0.99	0.986	0.9794	7.2%
37 Indust/Process	3,956,464	1.310	1.010	0.477	1.01	1.005	0.9983	9.2%
38 Contractors	1,208,784	1.101	0.849	0.226	0.97	0.966	0.9596	5.0%
	41,108,225	1.331	1.026		1.02	1.024	1.0170	

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

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

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

E -  $(6) = (5) * (1.024/1.024)$

F -  $(7) = (6) / 1.0067$

ILLINOIS  
OWNERS, LANDLORDS, AND TENANTS  
BASIC LIMIT RELATIVE CHANGE ANALYSIS

	(1)	(2)	(3)	(4)	(5)
<u>TOP</u>	<u>Bailey Formula Relativity</u>	<u>Credibility Z</u>	<u>Credibility Weighted Relativity</u>	<u>Balanced Relativity</u>	<u>Indicated Change</u>
10	0.944	0.289	0.983	0.983	
31	1.101	0.132	1.013	1.012	3.0%
32	1.510	0.229	1.099	1.099	11.8%
33	0.869	0.215	0.970	0.970	-1.3%
34	0.956	0.272	0.988	0.988	0.5%
35	0.657	0.177	0.928	0.928	-5.6%
36	0.631	0.144	0.936	0.936	-4.8%
<u>Class Group</u>					
1	0.827	0.137	0.974	0.972	
2	0.798	0.194	0.957	0.955	
3	0.911	0.137	0.987	0.985	
4	0.999	0.039	1.000	0.998	
5	0.791	0.075	0.983	0.980	
6	0.583	0.089	0.953	0.951	
7	0.932	0.125	0.991	0.989	
8	1.840	0.061	1.038	1.036	
9	0.831	0.168	0.969	0.967	
10	1.197	0.182	1.033	1.031	
11	0.982	0.199	0.996	0.994	
12	1.098	0.330	1.031	1.029	
13	1.596	0.070	1.033	1.031	
16	0.292	0.039	0.953	0.951	
<u>Territory</u>					
501	1.007	0.287	1.002	0.999	
504	1.000	0.036	1.000	0.997	
506	0.903	0.163	0.984	0.981	
507	1.007	0.208	1.001	0.999	
508	0.809	0.141	0.971	0.968	
509	1.071	0.274	1.019	1.016	
514	1.020	0.278	1.006	1.003	

ILLINOIS  
MANUFACTURERS AND CONTRACTORS  
BASIC LIMIT RELATIVE CHANGE ANALYSIS

	(1)	(2)	(3)	(4)	(5)
<u>TOP</u>	<u>Bailey Formula Relativity</u>	<u>Credibility Z</u>	<u>Credibility Weighted Relativity</u>	<u>Balanced Relativity</u>	<u>Indicated Change</u>
10	1.028	0.253	1.007	1.002	
33	1.320	0.060	1.017	1.011	0.9%
34	0.766	0.090	0.976	0.971	-3.1%
35	-	-	0.999	0.994	-0.8%
36	0.822	0.152	0.971	0.966	-3.6%
37	0.898	0.109	0.988	0.983	-1.9%
38	1.073	0.280	1.020	1.015	1.3%
<u>Class Group</u>					
30	1.139	0.141	1.018	1.022	
31	1.043	0.162	1.007	1.010	
32	0.929	0.271	0.980	0.984	
33	0.925	0.123	0.991	0.994	
34	1.171	0.141	1.023	1.026	
35	0.787	0.039	0.991	0.994	
36	0.796	0.092	0.979	0.982	
37	0.694	0.069	0.975	0.978	
38	1.396	0.142	1.048	1.052	

ILLINOIS  
OWNERS, LANDLORDS, AND TENANTS  
SUMMARY OF EXPERIENCE USED IN BASIC LIMIT RELATIVE CHANGE ANALYSIS

Territory: All		(1)	(2)	(3)	(4)	(5)	(6)
		Calendar A.Y.E 9/30/2022	Calendar A.Y.E 2018-2022	Five Year Experience			
<u>Type of Policy</u>	<u>Class Group</u>	<u>Agg. Loss Costs at Current Level</u>	<u>Agg. Loss Costs at Current Level</u>	<u>Ratio</u>	<u>Relativity</u>	<u>Number of Occurrences</u>	<u>Bal Cell Relativity</u>
10 MONOLINE	1 FOOD&BEV.(RETAIL)	\$80,196	\$1,884,826	0.448		47	
	2 RESTAURANTS	\$667,295	\$5,268,456	0.685		162	
	3 STORES	\$421,958	\$2,907,549	1.199		116	
	4 VENDING & RENTAL	\$79,139	\$316,091	0.235		6	
	5 FOOD & BEV. DIST.	\$402,853	\$2,534,340	0.291		41	
	6 NON-FOOD&BEV.DIST	\$532,356	\$2,027,252	0.375		34	
	7 CLUBS,AMSMT&SPRTS	\$692,117	\$4,637,066	1.586		107	
	8 HEALTH CARE FACIL	\$120,714	\$626,974	1.223		13	
	9 HOTELS AND MOTELS	\$556,945	\$4,931,797	0.894		193	
	10 SCHLS & CHURCHES	\$1,726,745	\$5,404,593	1.394		120	
	11 APARTMENTS	\$695,404	\$4,721,415	1.470		121	
	12 BUILDINGS&OFFICES	\$3,676,046	\$19,749,055	1.176		501	
	13 MISC. PREMISES	\$133,033	\$788,438	1.497		28	
	16 GOVT SUBDIVISIONS	\$242,494	\$1,191,789	0.179		15	
	TOTAL *	\$10,027,294	\$56,989,640	1.104		1504	
31 MULT MOTEL/HOTEL	9 HOTELS AND MOTELS	\$1,306,931	\$7,824,287	1.062		312	
	TOTAL *	\$1,306,931	\$7,824,287	1.062		312	
32 MULT APARTMENT	11 APARTMENTS	\$5,516,433	\$22,769,129	1.675		594	
	12 BUILDINGS&OFFICES	\$2,911,530	\$10,722,969	2.026		352	
	TOTAL *	\$8,427,963	\$33,492,097	1.796		946	
33 MULT OFFICE	12 BUILDINGS&OFFICES	\$6,171,223	\$32,454,039	1.113		825	
	13 MISC. PREMISES	\$44,522	\$248,966	0.071		4	
	TOTAL *	\$6,215,745	\$32,703,005	1.106		829	
34 MULT MERCANTILE	1 FOOD&BEV.(RETAIL)	\$2,511,518	\$11,033,104	0.943		290	
	2 RESTAURANTS	\$3,454,693	\$16,058,670	0.923		514	
	3 STORES	\$1,287,281	\$7,264,959	0.883		189	
	4 VENDING & RENTAL	\$34,352	\$362,819	0.528		1	
	5 FOOD & BEV. DIST.	\$584,048	\$2,517,532	1.252		59	
	6 NON-FOOD&BEV.DIST	\$1,445,022	\$7,405,615	0.755		108	
	12 BUILDINGS&OFFICES	\$1,355,026	\$6,692,325	0.972		171	
	TOTAL *	\$10,671,940	\$51,335,023	0.923		1332	

ILLINOIS  
OWNERS, LANDLORDS, AND TENANTS  
SUMMARY OF EXPERIENCE USED IN BASIC LIMIT RELATIVE CHANGE ANALYSIS

Territory: All		(1)	(2)	(3)	(4)	(5)	(6)
		Calendar A.Y.E 9/30/2022	Calendar A.Y.E 2018-2022	Five Year Experience			
<u>Type of Policy</u>	<u>Class Group</u>	<u>Agg. Loss Costs at Current Level</u>	<u>Agg. Loss Costs at Current Level</u>	<u>Ratio</u>	<u>Relativity</u>	<u>Number of Occurrences</u>	<u>Bal Cell Relativity</u>
35 MULT INSTITUT.	7 CLUBS,AMSMT&SPRTS	\$29,388	\$270,951	0.373		9	
	8 HEALTH CARE FACIL	\$349,487	\$1,980,114	1.618		55	
	10 SCHLS & CHURCHES	\$2,179,695	\$13,217,087	0.871		475	
	12 BUILDINGS&OFFICES	\$30,583	\$183,169	0.151		14	
	16 GOVT SUBDIVISIONS	\$10,644	\$102,979	3.210		12	
	TOTAL *	\$2,599,796	\$15,754,300	0.967		565	
36 MULT SERVICES	3 STORES	\$309,265	\$1,154,017	0.949		31	
	4 VENDING & RENTAL	\$114,167	\$710,308	1.480		21	
	7 CLUBS,AMSMT&SPRTS	\$2,311,002	\$10,241,195	0.533		165	
	8 HEALTH CARE FACIL	\$6,612	\$32,853	0.150		0	
	9 HOTELS AND MOTELS	\$52,568	\$231,902	0.785		1	
	10 SCHLS & CHURCHES	\$29,587	\$76,903	0.000		0	
	12 BUILDINGS&OFFICES	\$634,085	\$3,379,842	0.994		99	
	13 MISC. PREMISES	\$223,201	\$1,090,949	1.605		55	
	TOTAL *	\$3,680,487	\$16,917,969	0.741		372	
TOTAL ALL TOP	1 FOOD&BEV.(RETAIL)	\$2,591,714	\$12,917,930	0.927		337	
	2 RESTAURANTS	\$4,121,988	\$21,327,125	0.884		676	
	3 STORES	\$2,018,504	\$11,326,525	0.959		336	
	4 VENDING & RENTAL	\$227,659	\$1,389,218	0.904		28	
	5 FOOD & BEV. DIST.	\$986,901	\$5,051,872	0.860		100	
	6 NON-FOOD&BEV.DIST	\$1,977,378	\$9,432,867	0.653		142	
	7 CLUBS,AMSMT&SPRTS	\$3,032,507	\$15,149,212	0.772		281	
	8 HEALTH CARE FACIL	\$476,813	\$2,639,941	1.497		68	
	9 HOTELS AND MOTELS	\$1,916,444	\$12,987,986	1.006		506	
	10 SCHLS & CHURCHES	\$3,936,026	\$18,698,584	1.094		595	
	11 APARTMENTS	\$6,211,837	\$27,490,544	1.652		715	
	12 BUILDINGS&OFFICES	\$14,778,492	\$73,181,399	1.289		1962	
	13 MISC. PREMISES	\$400,756	\$2,128,353	1.398		87	
	16 GOVT SUBDIVISIONS	\$253,138	\$1,294,767	0.306		27	
	TOTAL *	\$42,930,157	\$215,016,321	1.154		5860	

\* TOTALS IN COLUMN (3) ARE AVERAGES USING COLUMN (1) AS WEIGHTS.

ILLINOIS  
MANUFACTURERS AND CONTRACTORS  
SUMMARY OF EXPERIENCE USED IN BASIC LIMIT RELATIVE CHANGE ANALYSIS

<u>Type of Policy</u>	<u>Class Group</u>	(1) Calendar A.Y.E 9/30/2022 Agg. Loss Costs at <u>Current Level</u>	(2) Calendar A.Y.E 2018-2022 Agg. Loss Costs at <u>Current Level</u>	(3) Five Year Experience <u>Ratio</u>	(4) <u>Relativity</u>	(5) Number of <u>Occurrences</u>	(6) Bal Cell <u>Relativity</u>
10 MONOLINE	30 SERVICE	\$710,871	\$3,407,757	0.761	0.774	67	1.024
	31 LIGHT CONTRACTING	\$767,176	\$3,695,408	1.216	1.237	130	1.012
	32 MEDIUM CONTRCTING	\$5,867,603	\$33,008,119	0.850	0.865	544	0.986
	33 HEAVY CONTRACTING	\$1,960,861	\$7,945,041	1.059	1.077	97	0.996
	34 DEALER OR DISTRIB	\$593,743	\$3,580,763	1.297	1.319	80	1.028
	35 LGT. MANUFACTURER	\$256,048	\$1,296,180	0.613	0.624	9	0.996
	36 MED. MANUFACTURER	\$865,910	\$5,198,992	0.890	0.905	59	0.984
	37 HVY. MANUFACTURER	\$618,848	\$3,058,914	0.826	0.840	22	0.980
	38 MISC. OPERATION	\$1,386,358	\$6,015,223	1.608	1.636	130	1.054
	TOTAL *	\$13,027,419	\$67,206,398	0.996		1138	
33 MULT OFFICE	31 LIGHT CONTRACTING	\$17,703	\$62,067	0.017	0.017	0	1.021
	32 MEDIUM CONTRCTING	\$61,342	\$264,333	0.000	0.000	0	0.995
	33 HEAVY CONTRACTING	\$201,598	\$1,121,965	1.400	1.424	15	1.005
	38 MISC. OPERATION	\$525,733	\$2,802,593	1.919	1.952	49	1.064
	TOTAL *	\$806,376	\$4,250,959	1.602		64	
34 MULT MERCANTILE	30 SERVICE	\$75,511	\$701,508	0.342	0.348	8	0.992
	32 MEDIUM CONTRCTING	\$318,221	\$1,511,180	1.573	1.600	23	0.955
	34 DEALER OR DISTRIB	\$1,184,530	\$6,196,594	0.557	0.567	89	0.996
	38 MISC. OPERATION	\$76,286	\$480,213	2.967	3.018	27	1.021
	TOTAL *	\$1,654,548	\$8,889,494	0.854		147	
35 MULT INSTITUT.	31 LIGHT CONTRACTING	\$53,686	\$227,142	0.751	0.764	7	1.004
	32 MEDIUM CONTRCTING	\$72,819	\$424,119	0.878	0.893	9	0.978
	TOTAL *	\$126,505	\$651,262	0.824		16	
36 MULT SERVICES	30 SERVICE	\$109,254	\$479,457	0.772	0.785	25	0.987
	31 LIGHT CONTRACTING	\$144,632	\$848,566	0.698	0.710	32	0.976
	32 MEDIUM CONTRCTING	\$409,558	\$1,682,587	0.701	0.713	27	0.951
	33 HEAVY CONTRACTING	\$45,739	\$254,825	0.245	0.249	3	0.960
	34 DEALER OR DISTRIB	\$950,021	\$4,727,462	1.342	1.365	183	0.991
	36 MED. MANUFACTURER	\$25,890	\$111,949	0.000	0.000	0	0.949
	38 MISC. OPERATION	\$1,172,822	\$5,467,578	0.891	0.906	148	1.016
	TOTAL *	\$2,857,915	\$13,572,424	0.981		418	

ILLINOIS  
MANUFACTURERS AND CONTRACTORS  
SUMMARY OF EXPERIENCE USED IN BASIC LIMIT RELATIVE CHANGE ANALYSIS

<u>Type of Policy</u>	<u>Class Group</u>	(1) Calendar A.Y.E 9/30/2022 Agg. Loss Costs at <u>Current Level</u>	(2) Calendar A.Y.E 2018-2022 Agg. Loss Costs at <u>Current Level</u>	(3) Five Year Experience <u>Ratio</u>	(4) <u>Relativity</u>	(5) Number of <u>Occurrences</u>	(6) Bal Cell <u>Relativity</u>
37 MULT INDUST/PROC.	31 LIGHT CONTRACTING	\$3,436	\$16,849	0.045	0.046	1	0.993
	32 MEDIUM CONTRCTING	\$239,146	\$993,079	1.825	1.857	13	0.967
	33 HEAVY CONTRACTING	\$137,483	\$718,456	0.359	0.365	13	0.977
	34 DEALER OR DISTRIB	\$65,263	\$276,106	0.151	0.154	5	1.009
	35 LGT. MANUFACTURER	\$374,065	\$2,111,633	0.819	0.833	19	0.977
	36 MED. MANUFACTURER	\$1,543,377	\$7,933,066	0.664	0.675	95	0.965
	37 HVY. MANUFACTURER	\$1,368,874	\$7,174,305	0.557	0.567	64	0.961
	38 MISC. OPERATION	\$29,689	\$216,185	0.278	0.283	5	1.034
	TOTAL *	\$3,761,332	\$19,439,679	0.691		215	
38 MULT CONTRACTORS	30 SERVICE	\$1,854,479	\$9,421,273	1.380	1.404	257	1.037
	31 LIGHT CONTRACTING	\$1,833,142	\$10,497,004	1.066	1.084	304	1.025
	32 MEDIUM CONTRCTING	\$6,506,185	\$33,192,638	0.996	1.013	710	0.999
	33 HEAVY CONTRACTING	\$1,890,951	\$9,775,749	0.872	0.887	143	1.009
	38 MISC. OPERATION	\$135,874	\$740,642	0.208	0.212	2	1.068
	TOTAL *	\$12,220,632	\$63,627,306	1.037		1416	
TOTAL ALL TOP	30 SERVICE	\$2,750,115	\$14,009,995	1.167		357	
	31 LIGHT CONTRACTING	\$2,819,775	\$15,347,036	1.074		474	
	32 MEDIUM CONTRCTING	\$13,474,874	\$71,076,055	0.947		1326	
	33 HEAVY CONTRACTING	\$4,236,632	\$19,816,036	0.960		271	
	34 DEALER OR DISTRIB	\$2,793,556	\$14,780,924	0.972		357	
	35 LGT. MANUFACTURER	\$630,113	\$3,407,814	0.735		28	
	36 MED. MANUFACTURER	\$2,435,177	\$13,244,007	0.737		154	
	37 HVY. MANUFACTURER	\$1,987,722	\$10,233,220	0.641		86	
	38 MISC. OPERATION	\$3,326,762	\$15,722,435	1.366		361	
	TOTAL *	\$34,454,726	\$177,637,522	0.983		3414	

ILLINOIS  
PRODUCTS  
BASIC LIMIT RELATIVE CHANGE ANALYSIS

	(1)	(2)	(3)	(4)	(5)
<u>TOP</u>	<u>Bailey Formula Relativity</u>	<u>Credibility Z</u>	<u>Credibility Weighted Relativity</u>	<u>Balanced Relativity</u>	<u>Indicated Change</u>
10	0.928	0.322	0.976	0.976	
34	1.049	0.356	1.017	1.016	4.2%
36	1.049	0.178	1.008	1.008	3.3%
37	1.011	0.431	1.005	1.004	2.9%
<u>Class Group</u>					
3	0.930	0.423	0.970	0.970	
4	1.069	0.394	1.027	1.027	
5	1.116	0.105	1.012	1.012	
6	0.992	0.299	0.998	0.998	
7	0.865	0.118	0.983	0.983	

Note: The indicated changes by TOP were further adjusted by the following differentials

TOP 34: 0.974

TOP 36: 0.978

TOP 37: 0.996

MULTISTATE  
PRODUCTS  
SUMMARY OF EXPERIENCE USED IN BASIC LIMIT RELATIVE CHANGE ANALYSIS

		(1)	(2)	(3)	(4)	(5)	(6)
		Calendar A.Y.E 12/31/2021	Calendar A.Y.E 2017-2021	Five Year Experience			
<u>Type of Policy</u>	<u>Class Group</u>	Agg. Loss Costs at <u>Current Level</u>	Agg. Loss Costs at <u>Current Level</u>	<u>Ratio</u>	<u>Relativity</u>	<u>Number of Occurrences</u>	<u>Bal Cell Relativity</u>
10 MONOLINE	3 MAN,DLR,DSTFD/DRG	11,819,097	63,658,617	0.783	0.870	1,091	0.946
	4 DLR,DST-NOTFD/DRG	7,190,323	36,653,516	0.937	1.042	432	1.002
	5 MAN.NTFD/DRG(LOW)	1,226,514	7,102,146	0.788	0.876	56	0.987
	6 MAN.NTFD/DRG(MED)	8,466,486	42,680,135	0.814	0.905	423	0.973
	7 MAN.NTFD/DRG(HGH)	2,036,214	10,951,431	0.681	0.757	70	0.959
	TOTAL *	30,738,634	161,045,845	0.821		2,072	
34 MULT MERCANTILE	3 MAN,DLR,DSTFD/DRG	5,085,663	25,340,297	0.947	1.053	506	0.986
	4 DLR,DST-NOTFD/DRG	27,891,818	137,888,579	0.997	1.108	2,035	1.044
	6 MAN.NTFD/DRG(MED)	2,648	13,111	0.000	0.000	-	1.014
	TOTAL *	32,980,129	163,241,987	0.989		2,541	
36 MULT SERVICES	4 DLR,DST-NOTFD/DRG	3,130,195	15,943,473	1.018	1.131	631	1.035
	6 MAN.NTFD/DRG(MED)	30,963	176,926	0.028	0.031	1	1.005
	TOTAL *	3,161,158	16,120,400	1.008		632	
37 MULT INDUST/PROC.	3 MAN,DLR,DSTFD/DRG	11,666,754	62,347,318	0.810	0.901	1,979	0.974
	5 MAN.NTFD/DRG(LOW)	3,213,073	18,166,949	1.070	1.190	163	1.015
	6 MAN.NTFD/DRG(MED)	26,040,916	133,610,898	0.908	1.010	1,362	1.001
	7 MAN.NTFD/DRG(HGH)	6,218,877	29,699,655	0.800	0.890	210	0.987
	TOTAL *	47,139,619	243,824,820	0.881		3,714	
TOTAL ALL TOP	3 MAN,DLR,DSTFD/DRG	28,571,513	151,346,232	0.823		3,576	
	4 DLR,DST-NOTFD/DRG	38,212,336	190,485,568	0.987		3,098	
	5 MAN.NTFD/DRG(LOW)	4,439,588	25,269,095	0.992		219	
	6 MAN.NTFD/DRG(MED)	34,541,014	176,481,070	0.884		1,786	
	7 MAN.NTFD/DRG(HGH)	8,255,091	40,651,087	0.771		280	
	TOTAL *	114,019,542	584,233,052	0.899		8,959	

ILLINOIS  
LOCAL PRODUCTS/COMPLETED OPERATIONS  
BASIC LIMIT RELATIVE CHANGE ANALYSIS

	(1)	(2)	(3)	(4)	(5)
<u>TOP</u>	Bailey Formula Relativity	Credibility <u>Z</u>	Credibility Weighted Relativity	Balanced Relativity	Indicated Change
10	1.006	0.779	1.005	1.006	
34	1.009	0.487	1.004	1.005	0.0%
36	0.988	0.571	0.993	0.994	-1.2%
37	0.887	0.148	0.982	0.983	-2.2%
38	1.001	0.975	1.001	1.002	-0.4%
<u>Class Group</u>					
1	1.380	0.484	1.169	1.175	
2	1.005	0.553	1.003	1.008	
11	1.100	0.365	1.036	1.041	
12	0.983	1.000	0.983	0.988	
13	0.961	0.263	0.990	0.995	

MULTISTATE  
LOCAL PRODUCTS/COMPLETED OPERATIONS  
BASIC LIMIT RELATIVE CHANGE ANALYSIS \*

State	(1) Bailey Formula	(2) Credibility	(3) Credibility Weighted	(4) Balanced
	Relativity	Relativity	Relativity	Relativity
	1.268	0.358	1.089	1.092
	1.365	0.259	1.084	1.087
	1.833	0.110	1.069	1.073
	1.342	0.222	1.068	1.071
	1.300	0.230	1.062	1.066
	1.301	0.218	1.059	1.063
	1.251	0.252	1.058	1.062
	1.289	0.180	1.047	1.050
	1.156	0.306	1.045	1.049
	1.080	0.562	1.044	1.048
	1.169	0.254	1.040	1.044
	1.081	0.487	1.039	1.042
	1.077	0.410	1.031	1.034
	1.114	0.269	1.030	1.033
	1.085	0.323	1.027	1.030
	1.260	0.111	1.026	1.029
	1.080	0.333	1.026	1.029
	1.033	0.489	1.016	1.019
	1.027	0.466	1.013	1.016
	1.047	0.211	1.010	1.013
	1.037	0.226	1.008	1.012
	1.015	0.243	1.004	1.007
	1.010	0.354	1.004	1.007
	1.111	0.030	1.003	1.007
	0.995	0.171	0.999	1.003
	0.996	0.436	0.998	1.002
	0.995	0.688	0.997	1.000
	0.984	0.327	0.995	0.998
	0.965	0.163	0.994	0.998
	0.960	0.162	0.993	0.997
	0.984	0.436	0.993	0.996
	0.966	0.208	0.993	0.996
	0.968	0.232	0.992	0.996
	0.936	0.133	0.991	0.995
	0.960	0.249	0.990	0.993
	0.977	0.493	0.988	0.992
	0.973	0.635	0.982	0.986
	0.873	0.137	0.982	0.985
	0.947	0.374	0.980	0.983
	0.924	0.314	0.975	0.979
	0.930	0.371	0.973	0.977
	0.835	0.157	0.972	0.975
	0.913	0.357	0.968	0.971
	0.899	0.376	0.961	0.964
	0.340	0.043	0.955	0.958
	0.898	0.432	0.955	0.958
	0.896	0.507	0.946	0.949
	0.690	0.163	0.941	0.944
	0.825	0.328	0.939	0.942
	0.827	0.390	0.928	0.932
ILLINOIS	0.811	0.363	0.927	0.930
	0.683	0.237	0.914	0.917

\* Sorted by balanced relative change

ILLINOIS  
LOCAL PRODUCTS/COMPLETED OPERATIONS  
SUMMARY OF EXPERIENCE USED IN BASIC LIMIT RELATIVE CHANGE ANALYSIS

<u>Type of Policy</u>	<u>Class Group</u>	(1)	(2)	(3)	(4)	(5)	(6)
		Calendar A.Y.E 12/31/2021	Calendar A.Y.E 2017-2021	Five Year Experience		Number of	Bal Cell
		Agg. Loss Costs at <u>Current Level</u>	Agg. Loss Costs at <u>Current Level</u>	<u>Ratio</u>	<u>Relativity</u>	<u>Occurrences</u>	<u>Relativity</u>
10 MONOLINE	1 RET.STRS-FOOD/DRG	\$21,342	\$177,669	1.623	1.685	16	1.099
	2 RET.STRS-NTFD/DRG	\$84,953	\$391,865	1.756	1.823	12	0.943
	11 COMP. OPS. (LOW)	\$120,837	\$716,342	0.423	0.439	7	0.974
	12 COMP. OPS. (MED)	\$1,839,079	\$10,429,053	0.873	0.906	121	0.924
	13 COMP. OPS. (HGH)	\$124,191	\$676,743	0.681	0.707	4	0.931
	TOTAL *	\$2,190,402	\$12,391,672	0.879		160	
34 MULT MERCANTILE	1 RET.STRS-FOOD/DRG	\$129,589	\$665,121	3.324	3.450	77	1.099
	2 RET.STRS-NTFD/DRG	\$128,678	\$675,270	0.536	0.556	12	0.943
	12 COMP. OPS. (MED)	\$55,169	\$328,205	0.713	0.740	2	0.924
	TOTAL *	\$313,436	\$1,668,596	1.720		91	
36 MULT SERVICES	1 RET.STRS-FOOD/DRG	\$14,970	\$114,030	1.497	1.554	7	1.086
	2 RET.STRS-NTFD/DRG	\$304,042	\$1,508,659	1.168	1.212	83	0.932
	11 COMP. OPS. (LOW)	\$68,507	\$328,007	2.204	2.288	28	0.962
	12 COMP. OPS. (MED)	\$261,713	\$1,086,282	0.475	0.493	23	0.913
	13 COMP. OPS. (HGH)	\$32,985	\$156,382	0.000	0.000	0	0.920
	TOTAL *	\$682,217	\$3,193,360	0.957		141	
37 MULT INDUST/PROC.	1 RET.STRS-FOOD/DRG	\$96	\$863	0.000	0.000	0	1.075
	11 COMP. OPS. (LOW)	\$3,267	\$15,207	0.522	0.541	1	0.952
	12 COMP. OPS. (MED)	\$100,356	\$484,615	2.291	2.378	11	0.904
	13 COMP. OPS. (HGH)	\$306	\$1,057	0.000	0.000	0	0.910
	TOTAL *	\$104,025	\$501,743	2.226		12	
38 MULT CONTRACTORS	11 COMP. OPS. (LOW)	\$316,150	\$1,646,272	0.298	0.309	16	0.970
	12 COMP. OPS. (MED)	\$4,568,569	\$25,019,923	0.620	0.644	286	0.921
	13 COMP. OPS. (HGH)	\$491,004	\$2,340,356	0.973	1.010	19	0.927
	TOTAL *	\$5,375,723	\$29,006,551	0.633		321	

ILLINOIS  
 LOCAL PRODUCTS/COMPLETED OPERATIONS  
 SUMMARY OF EXPERIENCE USED IN BASIC LIMIT RELATIVE CHANGE ANALYSIS

		(1)	(2)	(3)	(4)	(5)	(6)
		Calendar A.Y.E 12/31/2021	Calendar A.Y.E 2017-2021	Five Year Experience		Number of	Bal Cell
<u>Type of Policy</u>	<u>Class Group</u>	<u>Agg. Loss Costs at Current Level</u>	<u>Agg. Loss Costs at Current Level</u>	<u>Ratio</u>	<u>Relativity</u>	<u>Occurrences</u>	<u>Relativity</u>
10 MONOLINE	1 RET.STRS-FOOD/DRG	\$21,342	\$177,669	1.623	1.685	16	1.099
TOTAL ALL	1 RET.STRS-FOOD/DRG	\$165,998	\$957,684	2.938		100	
TOP	2 RET.STRS-NTFD/DRG	\$517,673	\$2,575,794	1.107		107	
	11 COMP. OPS. (LOW)	\$508,761	\$2,705,828	0.586		52	
	12 COMP. OPS. (MED)	\$6,824,886	\$37,348,078	0.708		443	
	13 COMP. OPS. (HGH)	\$648,486	\$3,174,538	0.867		23	
	TOTAL *	\$8,665,804	\$46,761,921	0.779		725	

MULTISTATE  
LOCAL PRODUCTS/COMPLETED OPERATIONS  
SUMMARY OF EXPERIENCE USED IN BASIC LIMIT RELATIVE CHANGE ANALYSIS

		(1)	(2)	(3)	(4)	(5)	(6)
		Calendar A.Y.E	Calendar A.Y.E	Five Year			
		12/31/2021	2017-2021	Experience			
<u>Type of Policy</u>	<u>Class Group</u>	<u>Agg. Loss Costs at</u>	<u>Agg. Loss Costs at</u>	<u>Ratio</u>	<u>Relativity</u>	<u>Number of</u>	<u>Bal Cell</u>
		<u>Current Level</u>	<u>Current Level</u>			<u>Occurrences</u>	<u>Relativity</u>
10 MONOLINE	1 RET.STRS-FOOD/DRG	1,748,833	13,294,303	1.231		621	
	2 RET.STRS-NTFD/DRG	3,644,206	17,449,172	1.109		492	
	11 COMP. OPS. (LOW)	5,499,261	29,100,438	1.217		689	
	12 COMP. OPS. (MED)	120,011,947	572,386,816	0.962		7,034	
	13 COMP. OPS. (HGH)	7,536,492	38,042,850	0.672		262	
	TOTAL *	138,440,739	670,273,579	0.964		9,098	
34 MULT MERCANTILE	1 RET.STRS-FOOD/DRG	8,156,117	43,997,404	1.362		2,733	
	2 RET.STRS-NTFD/DRG	7,639,610	36,671,723	0.951		693	
	12 COMP. OPS. (MED)	3,008,570	14,169,615	0.939		125	
	TOTAL *	18,804,297	94,838,741	1.127		3,551	
36 MULT SERVICES	1 RET.STRS-FOOD/DRG	643,620	4,295,009	1.241		162	
	2 RET.STRS-NTFD/DRG	15,583,411	76,045,252	0.943		3,398	
	11 COMP. OPS. (LOW)	3,267,900	16,818,142	1.161		488	
	12 COMP. OPS. (MED)	5,157,211	26,533,736	0.988		778	
	13 COMP. OPS. (HGH)	1,204,826	5,882,500	0.609		61	
	TOTAL *	25,856,969	129,574,639	0.971		4,887	
37 MULT INDUST/PROC.	1 RET.STRS-FOOD/DRG	22,984	127,871	0.000		-	
	11 COMP. OPS. (LOW)	118,128	638,240	0.539		14	
	12 COMP. OPS. (MED)	5,046,084	25,673,289	0.857		313	
	13 COMP. OPS. (HGH)	2,262	21,501	0.000		-	
	TOTAL *	5,189,458	26,460,901	0.846		327	
38 MULT CONTRACTORS	11 COMP. OPS. (LOW)	11,708,508	61,005,531	0.958		812	
	12 COMP. OPS. (MED)	192,727,882	985,553,302	0.941		12,745	
	13 COMP. OPS. (HGH)	15,769,275	78,710,767	1.070		712	
	TOTAL *	220,205,665	1,125,269,600	0.951		14,269	

MULTISTATE  
LOCAL PRODUCTS/COMPLETED OPERATIONS  
SUMMARY OF EXPERIENCE USED IN BASIC LIMIT RELATIVE CHANGE ANALYSIS

		(1)	(2)	(3)	(4)	(5)	(6)
		Calendar A.Y.E 12/31/2021	Calendar A.Y.E 2017-2021	Five Year Experience		Number of	Bal Cell
<u>Type of Policy</u>	<u>Class Group</u>	Agg. Loss Costs at <u>Current Level</u>	Agg. Loss Costs at <u>Current Level</u>	<u>Ratio</u>	<u>Relativity</u>	<u>Occurrences</u>	<u>Relativity</u>
TOTAL ALL	TOP						
	1 RET.STRS-FOOD/DRG	10,571,554	61,714,586	1.330		3,516	
	2 RET.STRS-NTFD/DRG	26,867,226	130,166,147	0.968		4,583	
	11 COMP. OPS. (LOW)	20,593,798	107,562,352	1.057		2,003	
	12 COMP. OPS. (MED)	325,951,694	1,624,316,756	0.948		20,995	
	13 COMP. OPS. (HGH)	24,512,856	122,657,618	0.925		1,035	
	TOTAL *	408,497,128	2,046,417,459	0.963		32,132	

COMMERCIAL PACKAGE POLICY

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SECTION C - REVISED CLM DIVISION NINE

Commercial Package Policy Package Modification Factors (Revised MLCP-PMF-1) .....	C-2
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**COMMERCIAL LINES MANUAL  
DIVISION NINE – MULTIPLE LINE  
COMMERCIAL PACKAGE POLICY  
PACKAGE MODIFICATION FACTORS**

**PACKAGE MODIFICATION FACTORS**

<b>Package Modification Assignment (PMA)</b>	<b>Premium From CLM Division</b>			
	<b>Two</b>	<b>Three, Four, Five, Eight  Property</b>	<b>Four, Six  Liability</b>	<b>All Other Divisions</b>
Apartment House	.90	1.00	1.00	1.00
Contractors	.90	0.96	1.00	1.00
Industrial & Processing	.90	0.90	0.84	1.00
Institutional	.90	0.80	0.90	1.00
Mercantile	.90	1.00	1.00	1.00
Motel/Hotel	.90	1.00	1.00	1.00
Office	.90	0.82	0.99	1.00
Service	.90	1.00	1.00	1.00

**Table 1. Package Modification Factors**