

RULES – IMPLEMENTATION

DECEMBER 21, 2023

COMMERCIAL MULTIPLE LINE

LI-ML-2023-012

## NEW JERSEY 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 **1.9%** to be implemented.

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### BACKGROUND

In circular [LI-ML-2023-002](#), 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-2023-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

The ISO revision is subject to the following rule of application:

These changes are applicable to all policies written on or after May 1, 2024.

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## COMPANY ACTION

If you have authorized us to file on your behalf and decide:

- To use our revision and effective date, you are not required to file anything with the Insurance Department.
- To use our revision with a different effective date, to use our revision with modification, or to not use our revision, you must make an appropriate submission with the Insurance Department.

For guidance on submission requirements, consult the ISO State Filing Handbook.

WE WILL SUBMIT THIS REVISION TO THE INSURANCE DEPARTMENT ON APRIL 1, 2024. IF STATE FILING REQUIREMENTS DICTATE THAT YOU MAKE A SUBMISSION WITH THE INSURANCE DEPARTMENT, DO NOT SUBMIT IT PRIOR TO THIS DATE.

In all correspondence with the New Jersey Department of Banking & Insurance Department on this revision, you should refer to ISO Filing Number [ML-2023-RLA1](#) and SERFF Tracking Number [ISOF-133918896](#), 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-2023-005](#) 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 5-24 (or the earliest possible subsequent date), along with any new and/or revised manual pages.

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## REFERENCE(S)

- [LI-ML-2023-002](#) (07/26/2023) Commercial Package Policy Experience Reviewed By Staff
- [LI-CL-2023-005](#) (02/21/2023) Commercial Lines Revised Lead Time Requirements Listing

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## ATTACHMENT(S)

Filing [ML-2023-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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NEW JERSEY  
ADVISORY PACKAGE MODIFICATION FACTOR REVIEW  
COMMERCIAL PACKAGE POLICY  
ML-2023-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.

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	1.0%	-1.0%	-0.3%
Apartment	9.6%	0.0%	2.2%
Office	7.5%	0.0%	0.8%
Mercantile	6.8%	-1.3%	2.3%
Institutional	3.5%	-1.2%	2.1%
Services	2.0%	0.0%	1.0%
Indust./Proc.	9.5%	0.0%	3.8%
Contractors	<u>3.2%</u>	<u>-1.0%</u>	<u>-0.6%</u>
Statewide	5.6%	0.1%	1.9%

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NEW JERSEY

ADVISORY PACKAGE MODIFICATION FACTOR REVIEW

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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

The data used in this review is from ISO reporting companies for:

- Basic Group I: five fiscal accident years ending 12/31/21.
  - Basic Group II: ten fiscal accident years ending 12/31/21.
  - Special Causes of Loss: five fiscal accident years ending 12/31/21.
  - Crime: calendar year ending 06/30/22.
  - Inland Marine: five calendar accident years ending 12/31/16.
  - Fidelity: policy year ending 12/31/21.
  - Owners, Landlords, and Tenants: five fiscal accident years ending 12/31/21.
  - Manufacturers and Contractors: five fiscal accident years ending 12/31/21.
  - Products: three calendar accident years ending 12/31/21.
  - Local Products and Completed Operations: three calendar accident years ending 12/31/21.
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PRIOR ISO  
REVISIONS

The latest revisions in this state are:

<u>Filing</u>	ML-21-RLA1	ML-18-RLA1	ML-15-RLA1
<u>Dates</u>			
Implemented	9/1/2022	11/1/2018	11/1/2015
<u>Changes</u>			
Indicated	1.9%	-0.4%	0.6%
Filed	1.7%	-0.4%	0.6%
Implemented	1.7%	-0.4%	0.6%

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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 12/31/21 for the Annual Statement Line of Business (ASLOB) indicated.

COMMERCIAL MULTI PERIL (ASLOB 51 & 52)

1. Travelers Indemnity Company
  2. Liberty Mutual Insurance Company
  3. Tokio Marine Companies
  4. Insurance Company Of North America
  5. Hanover Insurance Company
  6. Continental Casualty Company
  7. Technology Insurance Company
  8. Westguard Insurance Company
  9. Utica Mutual Insurance Company
  10. Harleysville Insurance
- 

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 12/31/2021 is:

Commercial Multi-Peril (ASLOB 51 & 52). 58%.

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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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NEW JERSEY  
ADVISORY PACKAGE MODIFICATION FACTOR REVIEW  
COMMERCIAL PACKAGE POLICY  
ML-2023-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

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OBJECTIVE	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.
STEP 1: THE RELATIVITY ANALYSES	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.
STEP 2: CALCULATION OF THE PMFs	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.

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## 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> <p>The BG II relativity analysis is based on non-hurricane loss experience only, as it is assumed that type of policy relativities are the same for both non-hurricane and hurricane perils. The resulting relativities apply to the total (hurricane plus non-hurricane) BG II loss costs.</p>
COLUMN (1)	<p><u>AGGREGATE LOSS COSTS</u></p> <p>The latest fiscal 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 NON-HURRICANE EXPERIENCE RATIO</u></p> <p>These experience ratios are the ratio of the combined ten year CSP adjusted incurred non-hurricane losses (adjusted to current deductible and prospective cost levels 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>

## 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)

##### FORMULA RELATIVITY

The formula relativities are the ratios of the ten year non-hurricane experience ratios for the type of policy (either monoline vs. multiline or individual multiline programs) to the average ten year non-hurricane experience ratio for monoline and multiline combined. These relativities represent how much better or worse than average the experience for a given type of policy is. Again, any totals which are shown are weighted averages and the display of a dash indicates that the resulting IPMF was capped. Unlike the 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 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.

## 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 (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.

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

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.

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

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

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

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

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

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

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.

INDICATED  
CHANGES

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

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

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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INSURANCE SERVICES OFFICE, INC.

NEW JERSEY

COMMERCIAL PACKAGE POLICY  
SUMMARY OF THIS REVIEW

TYPE OF POLICY	PROPERTY PMFS			LIABILITY PMFS			PROP. & LIAB. TOTAL
	CURRENT	CAPPED	% CHANGE	CURRENT	CAPPED	% CHANGE	% CHANGE
MOTEL/HOTEL(31)	0.99	1.00	1.0%	0.99	0.98	-1.0%	-0.3%
APARTMENT (32)	0.83	0.91	9.6%	1.00	1.00	0.0%	2.2%
OFFICE (33)	0.80	0.86	7.5%	0.87	0.87	0.0%	0.8%
MERCANTILE (34)	0.88	0.94	6.8%	0.80	0.79	-1.3%	2.3%
INSTITUTION(35)	0.85	0.88	3.5%	0.85	0.84	-1.2%	2.1%
SERVICES (36)	0.98	1.00	2.0%	0.88	0.88	0.0%	1.0%
IND/PROC (37)	0.84	0.92	9.5%	0.85	0.85	0.0%	3.8%
CONTRACTORS(38)	0.94	0.97	3.2%	1.00	0.99	-1.0%	-0.6%
STATEWIDE			5.6%			0.1%	1.9%



## INSURANCE SERVICES OFFICE, INC.

## NEW JERSEY

## 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) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	406,861	0.860	8.5%	0.933	0.889
BASIC GRP II	284,821	1.010	2.7%	1.037	0.989
SP CAUSE/LOSS	326,222	1.177	7.1%	1.261	1.202
* CRIME	2,127	0.887	0.0%	0.887	0.887
* INL. MAR.	1,640	0.910	0.0%	0.910	0.910
* FIDELITY	1,372	1.000	0.0%	1.000	1.000
TOTAL	1,023,043	0.990	5.9%	1.049	1.000
LIABILITY-					
OL&T	2,090,067	0.989	-3.2%	0.957	0.981
TOTAL	2,090,067	0.990	-3.3%	0.957	0.980
-----					
PROP. & LIAB.	3,113,110		-0.3%		-0.3%
TOTAL					
APARTMENT (32) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	6,490,477	0.759	13.1%	0.858	0.872
BASIC GRP II	2,249,598	0.648	-3.0%	0.629	0.638
SP CAUSE/LOSS	3,545,831	1.272	6.5%	1.355	1.376
* CRIME	2,606	0.887	0.0%	0.887	0.887
* INL. MAR.	568	0.910	0.0%	0.910	0.910
* FIDELITY	23,228	1.000	0.0%	1.000	1.000
TOTAL	12,312,308	0.830	8.2%	0.898	0.910
LIABILITY-					
OL&T	41,020,081	1.000	0.5%	1.005	1.000
TOTAL	41,020,081	1.000	0.5%	1.005	1.000
-----					
PROP. & LIAB.	53,332,389		2.3%		2.2%
TOTAL					

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

## INSURANCE SERVICES OFFICE, INC.

NEW JERSEY  
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) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	879,026	0.774	6.6%	0.825	0.825
BASIC GRP II	494,945	0.640	-1.2%	0.632	0.632
SP CAUSE/LOSS	915,977	0.998	8.9%	1.087	1.087
* CRIME	8,563	0.887	0.0%	0.887	0.887
* INL. MAR.	16,873	0.910	0.0%	0.910	0.910
* FIDELITY	15,820	1.000	0.0%	1.000	1.000
TOTAL	2,331,204	0.800	7.3%	0.859	0.860
LIABILITY-					
OL&T	20,261,227	0.878	-0.1%	0.877	0.877
M&C	615,230	0.705	5.4%	0.743	0.743
TOTAL	20,876,457	0.870	0.3%	0.872	0.870
-----					
PROP. & LIAB.	23,207,661		1.0%		0.8%
TOTAL					

MERCANTILE (34) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	10,646,362	0.951	10.0%	1.046	1.046
BASIC GRP II	6,179,544	0.857	9.1%	0.935	0.935
SP CAUSE/LOSS	6,701,903	0.804	0.9%	0.811	0.811
* CRIME	57,225	0.887	0.0%	0.887	0.887
* INL. MAR.	235,226	0.910	0.0%	0.910	0.910
* FIDELITY	144,473	1.000	0.0%	1.000	1.000
TOTAL	23,964,733	0.880	7.1%	0.943	0.940
LIABILITY-					
OL&T	21,255,576	0.782	-0.9%	0.775	0.775
M&C	5,038,151	0.773	-4.1%	0.741	0.741
LOCAL PRODUCT	1,043,577	1.500	-0.2%	1.497	1.497
* MULTI PRODUCT	2,764,320	0.889	1.4%	0.901	0.901
TOTAL	30,101,624	0.800	-0.9%	0.793	0.790
-----					
PROP. & LIAB.	54,066,357		2.7%		2.3%
TOTAL					

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

## INSURANCE SERVICES OFFICE, INC.

NEW JERSEY  
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) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	6,465,219	0.925	-8.3%	0.848	0.848
BASIC GRP II	3,323,027	0.546	13.6%	0.620	0.620
SP CAUSE/LOSS	6,303,030	1.111	8.1%	1.201	1.201
* CRIME	39,696	0.887	0.0%	0.887	0.887
* INL. MAR.	18,666	0.910	0.0%	0.910	0.910
* FIDELITY	205,248	1.000	0.0%	1.000	1.000
TOTAL	16,354,886	0.850	3.8%	0.882	0.880
LIABILITY-					
OL&T	7,083,861	0.888	-3.8%	0.854	0.854
M&C	213,716	0.500	0.0%	0.500	0.500
TOTAL	7,297,577	0.850	-1.6%	0.836	0.840
-----					
PROP. & LIAB.	23,652,463		2.1%		2.1%
TOTAL					
SERVICES (36) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	6,427,084	0.851	8.8%	0.926	0.911
BASIC GRP II	5,423,288	1.433	-2.9%	1.391	1.369
SP CAUSE/LOSS	3,210,198	0.808	3.3%	0.835	0.821
* CRIME	25,915	0.887	0.0%	0.887	0.887
* INL. MAR.	68,414	0.910	0.0%	0.910	0.910
* FIDELITY	118,018	1.000	0.0%	1.000	1.000
TOTAL	15,272,917	0.980	3.7%	1.016	1.000
LIABILITY-					
OL&T	7,830,212	0.861	-0.1%	0.860	0.873
M&C	7,373,380	0.839	-4.6%	0.800	0.813
LOCAL PRODUCT	1,906,733	1.285	-1.6%	1.264	1.284
* MULTI PRODUCT	170,037	0.963	0.6%	0.969	0.969
TOTAL	17,280,362	0.880	-1.7%	0.865	0.880
-----					
PROP. & LIAB.	32,553,279		0.8%		1.0%
TOTAL					

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

## INSURANCE SERVICES OFFICE, INC.

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

IND/PROC (37) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	3,508,002	0.769	16.0%	0.892	0.892
BASIC GRP II	2,884,779	1.273	4.5%	1.330	1.330
SP CAUSE/LOSS	1,851,199	0.600	7.4%	0.644	0.644
* CRIME	12,740	0.887	0.0%	0.887	0.887
* INL. MAR.	9,891	0.910	0.0%	0.910	0.910
* FIDELITY	41,824	1.000	0.0%	1.000	1.000
TOTAL	8,308,435	0.840	9.0%	0.915	0.920
LIABILITY-					
M&C	9,012,919	0.818	0.2%	0.820	0.820
LOCAL PRODUCT	535,113	1.276	-2.1%	1.249	1.249
* MULTI PRODUCT	3,100,795	0.897	2.5%	0.919	0.919
TOTAL	12,648,827	0.850	0.6%	0.855	0.850
-----					
PROP. & LIAB.	20,957,262		3.9%		3.8%
TOTAL					
CONTRACTORS(38) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	1,848,492	0.957	5.4%	1.009	1.009
BASIC GRP II	1,161,073	0.909	-0.7%	0.903	0.903
SP CAUSE/LOSS	1,592,041	0.927	4.5%	0.969	0.969
* CRIME	10,808	0.887	0.0%	0.887	0.887
* INL. MAR.	5,018	0.910	0.0%	0.910	0.910
* FIDELITY	46,062	1.000	0.0%	1.000	1.000
TOTAL	4,663,494	0.940	2.9%	0.967	0.970
LIABILITY-					
M&C	29,902,239	0.946	-0.6%	0.940	0.940
LOCAL PRODUCT	17,350,226	1.105	-0.4%	1.101	1.102
TOTAL	47,252,465	1.000	-0.6%	0.994	0.990
-----					
PROP. & LIAB.	51,915,959		-0.3%		-0.6%
TOTAL					

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

INSURANCE SERVICES OFFICE, INC.

## NEW JERSEY

## COMMERCIAL PACKAGE POLICY

## CALCULATION OF REVISED CPP PACKAGE MODIFICATION FACTORS(PMF)

STATEWIDE *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	36,671,523	0.865	7.4%	0.929	0.928
BASIC GRP II	22,001,075	0.875	4.1%	0.911	0.908
SP CAUSE/LOSS	24,446,401	0.913	5.0%	0.959	0.958
* CRIME	159,680	0.887	0.0%	0.887	0.887
* INL. MAR.	356,296	0.910	0.0%	0.910	0.910
* FIDELITY	596,045	1.000	0.0%	1.000	1.000
TOTAL	84,231,020	0.882	5.8%	0.933	0.932
LIABILITY-					
OL&T	99,541,024	0.901	-0.4%	0.897	0.898
M&C	52,155,635	0.881	-1.3%	0.870	0.871
LOCAL PRODUCT	20,835,649	1.139	-0.5%	1.133	1.135
* MULTI PRODUCT	6,035,152	0.895	1.9%	0.912	0.912
TOTAL	178,567,460	0.911	0.1%	0.912	0.912
-----					
PROP. & LIAB.	262,798,480		1.9%		1.9%
TOTAL					

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

INSURANCE SERVICES OFFICE, INC.

NEW JERSEY

COMMERCIAL PACKAGE POLICY

CALCULATION OF REVISED CPP PACKAGE MODIFICATION FACTORS(PMF)

## COMBINED PMFs

TYPE OF POLICY	CURRENT COMBINED	INDICATED COMBINED	CAPPED COMBINED
MOTEL/HOTEL(31)	0.990	0.987	0.990
APARTMENT (32)	0.970	0.977	0.980
OFFICE (33)	0.870	0.871	0.870
MERCANTILE (34)	0.820	0.856	0.860
INSTITUTION(35)	0.850	0.868	0.870
SERVICES (36)	0.920	0.932	0.930
IND/PROC (37)	0.850	0.879	0.880
CONTRACTORS(38)	1.000	0.991	0.990

NOTE: Combined PMFs are provided for informational purposes only.

INSURANCE SERVICES OFFICE, INC.

NEW JERSEY

## BASIC GROUP I RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	(5)
	LEAST SQUARES		CREDIBILITY		
TYPE OF	FORMULA		WEIGHTED	BALANCED	INDICATED
POLICY	RELATIVITY	CREDIBILITY	RELATIVITY	RELATIVITY	CHANGE
10	0.542	0.121	0.929	0.937	
31	1.515	0.022	1.009	1.017	8.5%
32	1.263	0.213	1.051	1.060	13.1%
33	0.849	0.055	0.991	0.999	6.6%
34	1.072	0.334	1.023	1.031	10.0%
35	0.515	0.241	0.852	0.859	-8.3%
36	1.044	0.248	1.011	1.019	8.8%
37	1.647	0.151	1.078	1.087	16.0%
38	0.792	0.087	0.980	0.988	5.4%
TERRITORY					
Jersey City	0.666	0.062	0.975	0.979	
Newark	1.332	0.116	1.034	1.038	
Bal. Of State (NJ)	0.993	0.766	0.995	0.999	

INSURANCE SERVICES OFFICE, INC.

NEW JERSEY

## SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	(5)
	LEAST SQUARES		CREDIBILITY		
TYPE OF	FORMULA		WEIGHTED	BALANCED	INDICATED
POLICY	RELATIVITY	CREDIBILITY	RELATIVITY	RELATIVITY	CHANGE
10	0.767	0.191	0.951	0.956	
31	1.589	0.038	1.018	1.024	7.1%
32	1.050	0.267	1.013	1.018	6.5%
33	1.369	0.110	1.035	1.041	8.9%
34	0.911	0.433	0.960	0.965	0.9%
35	1.065	0.420	1.027	1.033	8.1%
36	0.941	0.274	0.983	0.988	3.3%
37	1.120	0.186	1.021	1.027	7.4%
38	0.963	0.166	0.994	0.999	4.5%
CATEGORY					
1	0.945	0.828	0.954	0.983	
2	0.775	0.212	0.947	0.975	
3	0.636	0.174	0.924	0.952	
4	1.284	0.282	1.073	1.105	
5	1.279	0.225	1.057	1.089	
6	1.043	0.119	1.005	1.035	
7	0.791	0.027	0.994	1.024	
8	1.084	0.254	1.021	1.052	
9	0.774	0.361	0.912	0.939	
10	1.750	0.077	1.044	1.075	
11	2.002	0.200	1.149	1.183	
12	1.079	0.205	1.016	1.046	
13	1.760	0.125	1.073	1.105	
14	0.659	0.262	0.896	0.923	



INSURANCE SERVICES OFFICE, INC.

NEW JERSEY

## BASIC GROUP I RELATIVITY ANALYSIS

## SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	(1)	(2)	(3)	(4)
	ACCIDENT YEAR			
	ENDING 12/31/21	5 - YEAR	5 - YEAR	RELATIVITY
	AGGREGATE LOSS COSTS	AGGREGATE LOSS COSTS	EXPERIENCE RATIO	
-----				
ENTIRE STATE				
10 MONOLINE	3,469,850	13,768,646	0.597	0.560
31 MULTILINE MOTEL/HOTEL	406,861	2,244,312	1.587	1.489
32 MULTILINE APARTMENT	6,490,477	27,093,105	1.345	1.261
33 MULTILINE OFFICE	879,026	5,802,155	0.873	0.819
34 MULTILINE MERCANTILE	10,646,362	50,241,151	1.170	1.097
35 MULTILINE INSTITUTIONAL	6,465,219	31,727,358	0.533	0.500
36 MULTILINE SERVICES	6,427,084	32,949,707	1.094	1.026
37 MULTILINE INDUST/PROCESS	3,508,002	17,752,995	1.746	1.638
38 MULTILINE CONTRACTORS	<u>1,848,492</u>	<u>9,509,962</u>	<u>0.824</u>	<u>0.773</u>
TOTAL ALL TOPS*	40,141,373	191,089,391	1.066	1.000

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

INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 12/31/21 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) CREDIBILITY WEIGHTED EXPERIENCE RATIO	(5) CREDIBILITY WEIGHTED RELATIVITY
-----	-----	-----	-----	-----	-----	-----
10 MONOLINE	01 BUILDINGS	1,109,511	4,597,784	0.717	0.730	0.721
	02 RES. APTS. AND COND	10,423	65,182	6.745	2.866	2.832
	03 OFFICES	134,635	801,579	0.867	0.886	0.875
	04 MERCANTILE - HIGH	276,003	1,296,158	1.191	1.147	1.133
	05 MERCANTILE - MEDIUM	98,677	420,169	0.623	0.741	0.732
	06 MERCANTILE - LOW	41,251	203,916	0.301	0.626	0.619
	07 MOTELS AND HOTELS	2,219	10,987	0.000	0.719	0.710
	08 INSTITUTIONAL - HIGH	113,814	491,775	0.312	0.525	0.519
	09 INSTITUTIONAL - LOW	50,470	277,839	2.510	1.805	1.784
	10 INDUST-PROC - HIGH	33,713	102,836	0.952	0.946	0.935
	11 INDUST-PROC - LOW	105,146	427,074	0.329	0.553	0.546
	12 SERVICE - HIGH	36,421	190,626	0.165	0.568	0.561
	13 SERVICE - LOW	76,743	381,449	3.777	2.678	2.646
	14 CONTRACTORS	32,962	154,509	0.101	0.568	0.561
	TOTAL*	2,121,988	9,421,883	0.902	0.877	0.867
31 MULTILINE MOTEL/HOTEL	01 BUILDINGS	275,234	1,191,470	2.945	1.518	1.500
	07 MOTELS AND HOTELS	50,988	408,779	2.593	1.271	1.256
	TOTAL*	326,222	1,600,249	2.890	1.479	1.462
32 MULTILINE APARTMENT	01 BUILDINGS	2,733,436	10,578,847	0.996	1.003	0.991
	02 RES. APTS. AND COND	812,395	3,981,532	0.608	0.822	0.812
	TOTAL*	3,545,831	14,560,379	0.907	0.962	0.950
33 MULTILINE OFFICE	01 BUILDINGS	604,871	3,214,112	1.711	1.318	1.302
	03 OFFICES	305,896	1,719,230	0.399	0.824	0.814
	04 MERCANTILE - HIGH	317	5,936	81.372	8.874	8.769
	08 INSTITUTIONAL - HIGH	2,817	12,901	0.000	0.918	0.907
	11 INDUST-PROC - LOW	29	104	0.000	0.920	0.909
	12 SERVICE - HIGH	568	1,554	0.000	0.920	0.909
	14 CONTRACTORS	1,479	4,605	0.000	0.919	0.908
	TOTAL*	915,977	4,958,442	1.291	1.154	1.140

INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 12/31/21 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) CREDIBILITY WEIGHTED EXPERIENCE RATIO	(5) CREDIBILITY WEIGHTED RELATIVITY
-----	-----	-----	-----	-----	-----	-----
34 MULTILINE MERCANTILE	01 BUILDINGS	4,509,827	20,208,865	0.836	0.871	0.861
	03 OFFICES	25,493	89,343	0.922	1.008	0.996
	04 MERCANTILE - HIGH	923,899	4,383,006	1.325	1.172	1.158
	05 MERCANTILE - MEDIUM	818,144	3,898,152	1.363	1.182	1.168
	06 MERCANTILE - LOW	392,480	1,742,089	0.840	0.962	0.951
	08 INSTITUTIONAL - HIG	416	2,016	0.000	0.920	0.909
	10 INDUST-PROC - HIGH	54	267	0.000	0.920	0.909
	11 INDUST-PROC - LOW	571	3,973	0.000	0.920	0.909
	12 SERVICE - HIGH	14,439	72,588	0.000	0.908	0.897
	13 SERVICE - LOW	2,086	27,042	1.345	1.052	1.040
	14 CONTRACTORS	14,494	83,069	0.000	0.906	0.895
	TOTAL*	6,701,903	30,510,410	0.965	0.957	0.945
35 MULTILINE INSTITUTIONAL	01 BUILDINGS	3,544,469	16,410,477	1.017	1.017	1.005
	03 OFFICES	31,519	112,148	0.000	0.902	0.891
	04 MERCANTILE - HIGH	10	160	0.000	0.920	0.909
	06 MERCANTILE - LOW	145	622	5.294	1.433	1.416
	08 INSTITUTIONAL - HIG	850,653	4,457,798	1.322	1.171	1.157
	09 INSTITUTIONAL - LOW	1,857,769	7,909,806	0.725	0.833	0.823
	12 SERVICE - HIGH	4,291	20,838	0.000	0.917	0.906
	13 SERVICE - LOW	13,731	48,656	0.000	0.912	0.901
	14 CONTRACTORS	443	2,585	0.000	0.920	0.909
	TOTAL*	6,303,030	28,963,090	0.964	0.983	0.971
36 MULTILINE SERVICES	01 BUILDINGS	1,922,480	8,804,177	0.872	0.902	0.891
	03 OFFICES	36,578	191,816	0.341	0.978	0.966
	04 MERCANTILE - HIGH	34,610	143,410	1.937	1.316	1.300
	05 MERCANTILE - MEDIUM	7,538	34,644	0.057	1.030	1.018
	06 MERCANTILE - LOW	9,047	33,319	10.998	2.344	2.316
	08 INSTITUTIONAL - HIG	27,447	133,091	0.289	0.998	0.986
	09 INSTITUTIONAL - LOW	46,806	275,805	0.000	0.846	0.836
	10 INDUST-PROC - HIGH	5	5	0.000	1.055	1.042
	11 INDUST-PROC - LOW	5,008	31,749	0.000	1.026	1.014
	12 SERVICE - HIGH	753,352	3,576,548	0.989	1.027	1.015
	13 SERVICE - LOW	337,483	1,678,209	1.880	1.621	1.602
	14 CONTRACTORS	29,844	176,486	0.167	0.947	0.936
	TOTAL*	3,210,198	15,079,259	1.012	1.017	1.005

INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 12/31/21 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) CREDIBILITY WEIGHTED EXPERIENCE RATIO	(5) CREDIBILITY WEIGHTED RELATIVITY
37 MULTILINE INDUST/PROC	01 BUILDINGS	924,268	4,620,202	1.026	1.050	1.038
	03 OFFICES	5,395	27,405	8.810	2.047	2.023
	04 MERCANTILE - HIGH	4,307	24,313	1.362	1.186	1.172
	05 MERCANTILE - MEDIUM	41	338	0.000	1.055	1.042
	06 MERCANTILE - LOW	271	719	0.000	1.054	1.042
	10 INDUST-PROC - HIGH	234,655	1,149,106	2.653	1.988	1.964
	11 INDUST-PROC - LOW	675,359	3,284,517	2.617	2.283	2.256
	12 SERVICE - HIGH	1,999	4,087	0.000	1.051	1.039
	13 SERVICE - LOW	539	3,324	0.000	1.052	1.040
	14 CONTRACTORS	4,365	38,157	3.278	1.426	1.409
	TOTAL*	1,851,199	9,152,168	1.840	1.623	1.604
38 MULTILINE CONTRACTORS	01 BUILDINGS	546,540	2,758,122	0.833	0.919	0.908
	03 OFFICES	39,352	217,963	1.138	1.158	1.144
	04 MERCANTILE - HIGH	9,049	51,504	5.844	1.790	1.769
	05 MERCANTILE - MEDIUM	2,036	9,668	0.000	1.046	1.034
	06 MERCANTILE - LOW	8,036	45,594	1.686	1.232	1.217
	08 INSTITUTIONAL - HIGH	755	5,556	1.899	1.236	1.221
	11 INDUST-PROC - LOW	9	1,716	0.000	1.053	1.041
	12 SERVICE - HIGH	595	1,680	0.000	1.053	1.041
	13 SERVICE - LOW	3,038	9,054	0.352	1.082	1.069
	14 CONTRACTORS	982,631	4,853,141	0.535	0.642	0.634
	TOTAL*	1,592,041	7,953,998	0.688	0.761	0.752
TOTAL ALL TOPS*	01 BUILDINGS	16,170,636	72,384,056	0.978	0.959	0.948
	02 RES. APTS. AND COND	822,818	4,046,714	0.686	0.848	0.838
	03 OFFICES	578,868	3,159,484	0.634	0.895	0.884
	04 MERCANTILE - HIGH	1,248,195	5,904,487	1.366	1.177	1.163
	05 MERCANTILE - MEDIUM	926,436	4,362,971	1.270	1.133	1.120
	06 MERCANTILE - LOW	451,230	2,026,259	1.010	0.964	0.953
	07 MOTELS AND HOTELS	53,207	419,766	2.485	1.248	1.233
	08 INSTITUTIONAL - HIGH	995,902	5,103,137	1.174	1.092	1.079
	09 INSTITUTIONAL - LOW	1,955,045	8,463,450	0.754	0.858	0.848
	10 INDUST-PROC - HIGH	268,427	1,252,214	2.439	1.857	1.835
	11 INDUST-PROC - LOW	786,122	3,749,133	2.292	2.043	2.018
	12 SERVICE - HIGH	811,665	3,867,921	0.925	1.004	0.992
	13 SERVICE - LOW	433,620	2,147,734	2.141	1.778	1.757
	14 CONTRACTORS	1,066,218	5,312,552	0.514	0.656	0.648
	TOTAL*	26,568,389	122,199,878	1.037	1.012	1.001

\* TOTALS IN COLUMNS (3), (4) &amp; (5) ARE AVERAGES USING COLUMN (1) AS WEIGHTS.

INSURANCE SERVICES OFFICE, INC.

## NEW JERSEY

## BASIC GROUP II RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	ACCIDENT YEAR ENDING 12/31/19 AGGR. LOSS COSTS AT CURRENT IMPLICIT PMF	ACCIDENT YEARS 2010 - 2019 EXPER. RATIO AT CURRENT PMF	FORMULA RELATIVITY (2)/ 0.839	CREDIBILITY C	CREDIBILITY WEIGHTED RELATIVITY D	BALANCED FORMULA RELATIVITY E	NORMALIZED FORMULA RELATIVITY F	INDICATED CHANGE
	-----	-----	-----	-----	-----	-----	-----	-----
MONOLINE	2,193,791	0.7430	0.8860	0.2700	0.970	0.9700	0.9638	
MULTILINE	22,001,075	0.8490	1.0120	0.8230	1.010	1.0100	1.0038	
	-----	-----	-----	-----	-----	-----	-----	
COVERAGE	24,194,866	0.8390	1.0010			1.0064	1.0002	
MULTILINE TOP								
31 MOTEL/HOTEL	284,821	0.8160	0.9730	0.0600	0.999	0.9960	0.9897	2.7%
32 APARTMENT	2,249,598	0.6630	0.7900	0.2700	0.944	0.9410	0.9350	-3.0%
33 OFFICE	494,945	0.5290	0.6310	0.1070	0.961	0.9580	0.9519	-1.2%
34 MERCANTILE	6,179,544	0.9320	1.1110	0.5460	1.061	1.0580	1.0513	9.1%
35 INSTITUTIONAL	3,323,027	1.0520	1.2540	0.4100	1.105	1.1020	1.0950	13.6%
36 SERVICES	5,423,288	0.7560	0.9010	0.5600	0.945	0.9420	0.9360	-2.9%
37 INDUST/PROCESS	2,884,779	0.8730	1.0410	0.4040	1.017	1.0140	1.0076	4.5%
38 CONTRACTORS	1,161,073	0.7010	0.8360	0.2110	0.966	0.9630	0.9569	-0.7%
	-----	-----	-----	-----	-----	-----	-----	
	22,001,075	0.8490	1.0120		1.0130	1.0100	1.0038	

C - CREDIBILITY = P/(P+K) WHERE P REPRESENTS THE TOTAL 10 YEAR ADJUSTED LOSS COSTS AND K = 45,000,000

D - (5) = (3) \* (4) + 1.001\*(1.000 - (4))

E - (6) = (5) \* (1.01/1.013)

F - (7) = (6) / 1.0064

INSURANCE SERVICES OFFICE, INC.

NEW JERSEY  
OWNERS, LANDLORDS AND TENANTS  
BASIC LIMIT RELATIVE CHANGE ANALYSIS

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TYPE OF POLICY	(1) BAILEY FORMULA RELATIVITY	(2) CREDIBILITY	(3) CREDIBILITY WEIGHTED RELATIVITY	(4) BALANCED RELATIVITY	(5) INDICATED CHANGE
10	1.018	0.320	1.006	1.002	
31	0.796	0.117	0.974	0.970	-3.2%
32	1.036	0.317	1.011	1.007	0.5%
33	1.023	0.219	1.005	1.001	-0.1%
34	0.986	0.230	0.997	0.993	-0.9%
35	0.814	0.162	0.967	0.964	-3.8%
36	1.032	0.146	1.005	1.001	-0.1%
CLASS GROUP					
1	0.728	0.093	0.971	0.968	
2	0.861	0.157	0.977	0.974	
3	1.194	0.099	1.018	1.015	
4	0.769	0.031	0.992	0.989	
5	0.654	0.061	0.974	0.972	
6	0.473	0.077	0.944	0.942	
7	0.774	0.140	0.965	0.962	
8	1.576	0.057	1.026	1.024	
9	1.129	0.153	1.019	1.016	
10	1.295	0.161	1.042	1.040	
11	1.076	0.281	1.021	1.018	
12	0.985	0.396	0.994	0.992	
13	0.893	0.045	0.995	0.992	
16	0.301	0.033	0.961	0.958	
TERRITORY					
501	0.473	0.061	0.955	0.948	
502	1.288	0.120	1.031	1.024	
503	0.906	0.081	0.992	0.985	
504	0.999	0.130	1.000	0.993	
505	0.876	0.118	0.985	0.978	
506	0.846	0.112	0.981	0.975	
507	0.768	0.067	0.982	0.976	
508	0.910	0.034	0.997	0.990	
509	0.575	0.058	0.969	0.962	
510	0.901	0.092	0.990	0.984	
511	0.418	0.036	0.969	0.963	
512	0.885	0.149	0.982	0.975	
513	1.079	0.209	1.016	1.009	
514	0.892	0.177	0.980	0.973	
515	1.064	0.425	1.027	1.019	

## INSURANCE SERVICES OFFICE, INC.

## NEW JERSEY

## MANUFACTURERS AND CONTRACTORS

## BASIC LIMIT RELATIVE CHANGE ANALYSIS

TYPE OF POLICY	(1)	(2)	(3)	(4)	(5)
	BAILEY FORMULA RELATIVITY	CREDIBILITY	CREDIBILITY WEIGHTED RELATIVITY	BALANCED RELATIVITY	INDICATED CHANGE
10	1.029	0.319	1.009	1.008	
33	3.358	0.051	1.064	1.062	5.4%
34	0.779	0.130	0.968	0.967	-4.1%
35	-	-	1.009	1.008	0.0%
36	0.743	0.124	0.964	0.962	-4.6%
37	1.114	0.103	1.011	1.010	0.2%
38	1.012	0.306	1.004	1.002	-0.6%
CLASS GROUP					
30	1.183	0.169	1.029	1.025	
31	0.981	0.241	0.995	0.992	
32	1.031	0.299	1.009	1.006	
33	1.049	0.139	1.007	1.003	
34	1.030	0.155	1.005	1.001	
35	0.284	0.032	0.961	0.958	
36	0.753	0.088	0.975	0.972	
37	0.567	0.049	0.973	0.969	
38	1.110	0.107	1.011	1.008	

## INSURANCE SERVICES OFFICE, INC.

NEW JERSEY  
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. 12/31/21 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2017-2021 AGG LOSS COST CURRENT LEVEL	FIVE YEAR EXPERIENCE RATIO	RELATIVITY	NUMBER OF OCCURRENCES	BAL CELL RELATIVITY
10 MONOLINE	01 FOOD&BEV.(RETAIL)	\$186,353	\$2,510,804	1.594		68	
	02 RESTAURANTS	\$586,779	\$5,395,664	1.046		97	
	03 STORES	\$588,418	\$2,821,906	1.239		62	
	04 VENDING & RENTAL	\$8,442	\$125,409	6.363		2	
	05 FOOD & BEV. DIST.	\$281,674	\$3,233,498	0.449		24	
	06 NON-FOOD&BEV.DIST	\$416,082	\$2,354,755	0.404		46	
	07 CLUBS,AMSMT&SPRTS	\$903,273	\$6,210,235	1.947		219	
	08 HEALTH CARE FACIL	\$31,444	\$187,827	3.867		8	
	09 HOTELS AND MOTELS	\$271,263	\$5,253,965	1.598		175	
	10 SCHLS & CHURCHES	\$601,180	\$3,993,444	0.955		56	
	11 APARTMENTS	\$3,236,189	\$18,337,630	1.435		297	
	12 BUILDINGS&OFFICES	\$7,329,613	\$50,120,243	0.959		753	
	13 MISC. PREMISES	\$136,672	\$1,219,644	0.780		17	
	16 GOVT SUBDIVISIONS	\$107,035	\$390,056	0.361		15	
	TOTAL *	\$14,684,416	\$102,155,080	1.137		1,839	
31 MULT MOTEL/HOTEL	09 HOTELS AND MOTELS	\$1,050,285	\$7,645,633	1.040		245	
	TOTAL *	\$1,050,285	\$7,645,633	1.040		245	
32 MULT APARTMENT	11 APARTMENTS	\$14,204,669	\$69,992,031	1.220		1121	
	12 BUILDINGS&OFFICES	\$6,408,437	\$38,231,986	1.332		690	
	TOTAL *	\$20,613,106	\$108,224,018	1.255		1,811	
33 MULT OFFICE	12 BUILDINGS&OFFICES	\$10,132,347	\$51,605,415	1.171		864	
	13 MISC. PREMISES	\$49,174	\$220,141	1.314		3	
	TOTAL *	\$10,181,521	\$51,825,556	1.172		867	
34 MULT MERCANTILE	01 FOOD&BEV.(RETAIL)	\$1,388,568	\$7,876,792	0.579		89	
	02 RESTAURANTS	\$3,030,562	\$19,361,209	1.010		346	
	03 STORES	\$1,327,867	\$7,844,156	1.449		100	
	04 VENDING & RENTAL	\$15,142	\$97,676	0.042		1	
	05 FOOD & BEV. DIST.	\$479,086	\$2,473,296	0.909		42	
	06 NON-FOOD&BEV.DIST	\$1,169,299	\$6,089,410	0.590		60	
	12 BUILDINGS&OFFICES	\$3,270,670	\$17,601,125	1.108		312	
	13 MISC. PREMISES	\$0	\$111	0.000		0	
	TOTAL *	\$10,681,194	\$61,343,776	0.987		950	
35 MULT INSTITUT.	07 CLUBS,AMSMT&SPRTS	\$325,036	\$1,762,485	0.091		8	
	08 HEALTH CARE FACIL	\$520,269	\$3,007,889	1.409		51	
	10 SCHLS & CHURCHES	\$2,556,387	\$13,958,845	1.348		404	
	12 BUILDINGS&OFFICES	\$41,361	\$211,672	0.148		2	
	13 MISC. PREMISES	\$45,101	\$212,176	0.071		0	
	16 GOVT SUBDIVISIONS	\$71,575	\$755,103	0.278		5	
	TOTAL *	\$3,559,729	\$19,908,171	1.191		470	



## INSURANCE SERVICES OFFICE, INC.

NEW JERSEY  
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. 12/31/21 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2017-2021 AGG LOSS COST CURRENT LEVEL	FIVE YEAR EXPERIENCE RATIO	RELATIVITY	NUMBER OF OCCURRENCES	BAL CELL RELATIVITY
36 MULT SERVICES	03 STORES	\$86,408	\$555,986	1.051		14	
	04 VENDING & RENTAL	\$79,094	\$606,909	0.464		14	
	07 CLUBS, AMSMT & SPRTS	\$2,063,487	\$10,710,995	0.602		128	
	08 HEALTH CARE FACIL	\$14,239	\$77,346	0.000		0	
	09 HOTELS AND MOTELS	\$94,774	\$373,822	0.254		2	
	10 SCHLS & CHURCHES	\$143,114	\$273,968	1.848		7	
	12 BUILDINGS & OFFICES	\$1,216,697	\$6,815,742	1.845		201	
	13 MISC. PREMISES	\$236,967	\$1,197,352	1.316		17	
	TOTAL *	\$3,934,780	\$20,612,119	1.071		383	
TOTAL ALL TOP	01 FOOD & BEV. (RETAIL)	\$1,574,921	\$10,387,596	0.699		157	
	02 RESTAURANTS	\$3,617,341	\$24,756,873	1.016		443	
	03 STORES	\$2,002,693	\$11,222,048	1.370		176	
	04 VENDING & RENTAL	\$102,678	\$829,994	0.887		17	
	05 FOOD & BEV. DIST.	\$760,760	\$5,706,795	0.739		66	
	06 NON-FOOD & BEV. DIST	\$1,585,381	\$8,444,165	0.541		106	
	07 CLUBS, AMSMT & SPRTS	\$3,291,796	\$18,683,716	0.921		355	
	08 HEALTH CARE FACIL	\$565,952	\$3,273,062	1.510		59	
	09 HOTELS AND MOTELS	\$1,416,323	\$13,273,419	1.094		422	
	10 SCHLS & CHURCHES	\$3,300,681	\$18,226,257	1.298		467	
	11 APARTMENTS	\$17,440,857	\$88,329,661	1.260		1,418	
	12 BUILDINGS & OFFICES	\$28,399,126	\$164,586,183	1.173		2,822	
	13 MISC. PREMISES	\$467,913	\$2,849,424	1.039		37	
	16 GOVT SUBDIVISIONS	\$178,610	\$1,145,159	0.328		20	
	TOTAL *	\$64,705,031	\$371,714,353	1.153		6,565	

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

## INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CLASS GROUP	(1)	(2)	(3)	(4)	(5)	(6)
		CALENDAR A.Y.E. 12/31/21 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2017-2021 AGG LOSS COST CURRENT LEVEL	FIVE YEAR EXPERIENCE RATIO	RELATIVITY	NUMBER OF OCCURRENCES	BAL CELL RELATIVITY
10 MONOLINE	30 SERVICE	\$1,098,931	\$4,569,879	1.238	1.288	131	1.033
	31 LIGHT CONTRACTING	\$2,498,893	\$13,176,143	1.019	1.060	449	1.000
	32 MEDIUM CONTRCTING	\$7,814,643	\$44,536,489	1.011	1.052	940	1.014
	33 HEAVY CONTRACTING	\$2,136,993	\$10,760,570	1.136	1.182	136	1.011
	34 DEALER OR DISTRIB	\$400,319	\$2,671,593	1.190	1.238	46	1.009
	35 LGT. MANUFACTURER	\$141,969	\$806,394	0.297	0.309	4	0.966
	36 MED. MANUFACTURER	\$1,027,084	\$4,893,843	0.699	0.727	35	0.980
	37 HVY. MANUFACTURER	\$274,538	\$1,487,550	0.081	0.084	5	0.977
	38 MISC. OPERATION	\$1,349,870	\$6,512,648	0.979	1.019	81	1.016
	TOTAL *	\$16,743,240	\$89,415,109	1.004		1,827	
33 MULT OFFICE	31 LIGHT CONTRACTING	\$8,995	\$45,585	1.078	1.122	4	1.054
	32 MEDIUM CONTRCTING	\$7,677	\$87,527	1.489	1.549	2	1.068
	33 HEAVY CONTRACTING	\$110,421	\$642,727	1.020	1.061	3	1.065
	38 MISC. OPERATION	\$182,067	\$1,027,971	5.193	5.404	37	1.070
	TOTAL *	\$309,161	\$1,803,810	3.491		46	
34 MULT MERCANTILE	30 SERVICE	\$147,127	\$605,335	0.758	0.789	17	0.991
	32 MEDIUM CONTRCTING	\$242,739	\$1,333,907	0.612	0.637	13	0.973
	34 DEALER OR DISTRIB	\$1,955,955	\$9,407,405	0.815	0.848	258	0.968
	38 MISC. OPERATION	\$185,912	\$911,802	0.673	0.700	18	0.975
	TOTAL *	\$2,531,734	\$12,258,448	0.782		306	
35 MULT INSTITUT.	31 LIGHT CONTRACTING	\$14,741	\$324,484	0.094	0.098	2	1.000
	32 MEDIUM CONTRCTING	\$92,654	\$692,655	0.676	0.703	19	1.014
	TOTAL *	\$107,395	\$1,017,139	0.596		21	
36 MULT SERVICES	30 SERVICE	\$61,838	\$377,811	0.841	0.875	29	0.986
	31 LIGHT CONTRACTING	\$238,840	\$1,502,764	1.010	1.051	39	0.954
	32 MEDIUM CONTRCTING	\$207,271	\$1,083,041	1.947	2.026	22	0.968
	33 HEAVY CONTRACTING	\$67,564	\$395,402	1.003	1.044	2	0.965
	34 DEALER OR DISTRIB	\$2,385,376	\$9,769,946	0.696	0.724	123	0.963
	36 MED. MANUFACTURER	\$12,874	\$103,525	0.266	0.277	1	0.935
	38 MISC. OPERATION	\$731,452	\$3,546,294	0.457	0.476	63	0.970
	TOTAL *	\$3,705,216	\$16,778,782	0.746		279	

## INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CLASS GROUP	(1)	(2)	(3)	(4)	(5)	(6)
		CALENDAR A.Y.E. 12/31/21 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2017-2021 AGG LOSS COST CURRENT LEVEL	FIVE YEAR EXPERIENCE RATIO	RELATIVITY	NUMBER OF OCCURRENCES	BAL CELL RELATIVITY
37 MULT INDUST/PROC	31 LIGHT CONTRACTING	\$2,254	\$13,730	0.000	0.000	0	1.002
	32 MEDIUM CONTRCTING	\$232,881	\$1,164,311	0.666	0.693	23	1.016
	33 HEAVY CONTRACTING	\$48,927	\$224,767	0.389	0.405	3	1.013
	34 DEALER OR DISTRIB	\$165,305	\$625,243	0.723	0.752	8	1.011
	35 LGT. MANUFACTURER	\$516,367	\$2,540,365	0.300	0.312	14	0.968
	36 MED. MANUFACTURER	\$2,319,548	\$10,656,324	0.826	0.860	102	0.982
	37 HVY. MANUFACTURER	\$1,199,924	\$5,681,199	0.715	0.744	38	0.979
	38 MISC. OPERATION	\$43,899	\$260,744	1.744	1.815	3	1.018
	TOTAL *	\$4,529,105	\$21,166,681	0.728		191	
38 MULT CONTRACTORS	30 SERVICE	\$2,736,661	\$13,239,072	1.127	1.173	336	1.027
	31 LIGHT CONTRACTING	\$3,963,238	\$20,490,395	0.922	0.959	555	0.994
	32 MEDIUM CONTRCTING	\$6,040,655	\$28,296,739	1.001	1.042	586	1.008
	33 HEAVY CONTRACTING	\$2,246,222	\$10,317,043	1.048	1.091	202	1.005
	38 MISC. OPERATION	\$39,475	\$212,576	3.985	4.147	4	1.010
	TOTAL *	\$15,026,251	\$72,555,825	1.018		1,683	
TOTAL ALL TOP	30 SERVICE	\$4,044,557	\$18,792,097	1.139		513	
	31 LIGHT CONTRACTING	\$6,726,961	\$35,553,100	0.959		1,049	
	32 MEDIUM CONTRCTING	\$14,638,520	\$77,194,669	1.006		1,605	
	33 HEAVY CONTRACTING	\$4,610,127	\$22,340,509	1.080		346	
	34 DEALER OR DISTRIB	\$4,906,956	\$22,474,186	0.785		435	
	35 LGT. MANUFACTURER	\$658,336	\$3,346,759	0.299		18	
	36 MED. MANUFACTURER	\$3,359,506	\$15,653,691	0.785		138	
	37 HVY. MANUFACTURER	\$1,474,462	\$7,168,749	0.597		43	
	38 MISC. OPERATION	\$2,532,675	\$12,472,035	1.169		206	
	TOTAL *	\$42,952,101	\$214,995,794	0.961		4,353	

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

INSURANCE SERVICES OFFICE, INC.

NEW JERSEY  
PRODUCTS  
BASIC LIMIT RELATIVE CHANGE ANALYSIS

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TYPE OF POLICY	(1) BAILEY FORMULA RELATIVITY	(2) CREDIBILITY	(3) CREDIBILITY WEIGHTED RELATIVITY	(4) BALANCED RELATIVITY	(5) INDICATED CHANGE
10	0.931	0.322	0.977	0.976	
34	1.050	0.356	1.017	1.016	4.1%
36	1.029	0.178	1.005	1.004	2.8%
37	1.010	0.431	1.004	1.003	2.8%
CLASS GROUP					
3	0.926	0.423	0.968	0.968	
4	1.072	0.394	1.028	1.028	
5	1.121	0.105	1.012	1.012	
6	0.995	0.299	0.998	0.998	
7	0.856	0.118	0.982	0.982	

NOTE: THE INDICATED CHANGES BY TOP WERE FURTHER ADJUSTED BY THE FOLLOWING  
DIFFERENTIALS: TOP 34: 0.974  
TOP 36: 0.979  
TOP 37: 0.997

## INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CLASS GROUP	(1)	(2)	(3)	(4)	(5)	(6)
		CALENDAR A.Y.E. 12/31/2021 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2017 - 2021 AGG LOSS COST CURRENT LEVEL	FIVE YEAR EXPERIENCE RATIO	RELATIVITY	NUMBER OF OCCURRENCES	BAL CELL RELATIVITY
10 MONOLINE	03 MAN,DLR,DSTFD/DRG	11,819,097	63,658,617	0.754	0.871	1,091	0.945
	04 DLR,DST-NOTFD/DRG	7,190,323	36,653,516	0.904	1.044	432	1.004
	05 MAN.NTFD/DRG(LOW)	1,226,514	7,102,146	0.769	0.888	56	0.988
	06 MAN.NTFD/DRG(MED)	8,466,486	42,680,135	0.786	0.908	423	0.975
	07 MAN.NTFD/DRG(HGH)	2,036,214	10,951,431	0.655	0.756	70	0.959
	TOTAL *	30,738,634	161,045,845	0.792		2,072	
34 MULT MERCANTILE	03 MAN,DLR,DSTFD/DRG	5,085,663	25,340,297	0.903	1.043	506	0.984
	04 DLR,DST-NOTFD/DRG	27,891,818	137,888,579	0.963	1.113	2,035	1.045
	06 MAN.NTFD/DRG(MED)	2,648	13,111	0.000	0.000	-	1.015
	TOTAL *	32,980,129	163,241,987	0.954		2,541	
36 MULT SERVICES	04 DLR,DST-NOTFD/DRG	3,130,195	15,943,473	0.964	1.114	631	1.032
	06 MAN.NTFD/DRG(MED)	30,963	176,926	0.027	0.032	1	1.003
	TOTAL *	3,161,158	16,120,400	0.955		632	
37 MULT INDUST/PROC.	03 MAN,DLR,DSTFD/DRG	11,666,754	62,347,318	0.776	0.896	1,979	0.971
	05 MAN.NTFD/DRG(LOW)	3,213,073	18,166,949	1.032	1.191	163	1.015
	06 MAN.NTFD/DRG(MED)	26,040,916	133,610,898	0.876	1.012	1,362	1.002
	07 MAN.NTFD/DRG(HGH)	6,218,877	29,699,655	0.760	0.878	210	0.985
	TOTAL *	47,139,619	243,824,820	0.847		3,714	
TOTAL ALL TOP	03 MAN,DLR,DSTFD/DRG	28,571,513	151,346,232	0.789		3,576	
	04 DLR,DST-NOTFD/DRG	38,212,336	190,485,568	0.952		3,098	
	05 MAN.NTFD/DRG(LOW)	4,439,588	25,269,095	0.959		219	
	06 MAN.NTFD/DRG(MED)	34,541,014	176,481,070	0.853		1,786	
	07 MAN.NTFD/DRG(HGH)	8,255,091	40,651,087	0.734		280	
	TOTAL *	114,019,542	584,233,052	0.866		8,959	

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

INSURANCE SERVICES OFFICE, INC.

NEW JERSEY

LOCAL PRODUCTS/COMPLETED OPERATIONS

BASIC LIMIT RELATIVE CHANGE ANALYSIS

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	(1)	(2)	(3)	(4)	(5)
	BAILEY		CREDIBILITY		
TYPE OF	FORMULA		WEIGHTED	BALANCED	INDICATED
POLICY	RELATIVITY	CREDIBILITY	RELATIVITY	RELATIVITY	CHANGE
10	1.007	0.779	1.005	1.006	
34	1.006	0.487	1.003	1.004	-0.2%
36	0.982	0.571	0.990	0.991	-1.6%
37	0.897	0.148	0.984	0.985	-2.1%
38	1.002	0.975	1.002	1.003	-0.4%
CLASS					
GROUP					
1	1.405	0.484	1.179	1.187	
2	1.038	0.553	1.021	1.028	
11	1.100	0.365	1.036	1.043	
12	0.979	1.000	0.979	0.986	
13	0.962	0.263	0.990	0.997	

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

STATE	(1)	(2)	(3)	(4)
	BAILEY	CREDIBILITY	CREDIBILITY	
	FORMULA		WEIGHTED	BALANCED
	RELATIVITY	CREDIBILITY	RELATIVITY	RELATIVITY
	1.267	0.358	1.088	1.093
	1.361	0.259	1.083	1.087
	1.844	0.110	1.070	1.074
	1.325	0.218	1.063	1.067
	1.300	0.230	1.062	1.066
	1.254	0.252	1.059	1.063
	1.279	0.222	1.056	1.060
	1.095	0.562	1.052	1.056
	1.165	0.306	1.048	1.052
	1.274	0.180	1.045	1.049
	1.088	0.487	1.042	1.046
	1.154	0.254	1.037	1.041
	1.085	0.410	1.034	1.038
	1.087	0.333	1.028	1.032
	1.086	0.323	1.027	1.031
	1.096	0.269	1.025	1.029
	1.234	0.111	1.024	1.028
	1.041	0.489	1.020	1.024
	1.039	0.466	1.018	1.022
	1.056	0.226	1.012	1.016
	1.043	0.211	1.009	1.013
	1.022	0.354	1.008	1.012
	1.018	0.243	1.004	1.008
	1.097	0.030	1.003	1.007
	1.005	0.436	1.002	1.006
New Jersey	0.994	0.436	0.997	1.001
	0.978	0.171	0.996	1.000
	0.974	0.163	0.996	1.000
	0.980	0.232	0.995	0.999
	0.969	0.162	0.995	0.999
	0.962	0.208	0.992	0.996
	0.982	0.493	0.991	0.995
	0.968	0.327	0.990	0.993
	0.920	0.133	0.989	0.993
	0.946	0.314	0.983	0.987
	0.973	0.688	0.981	0.985
	0.950	0.374	0.981	0.985
	0.867	0.137	0.981	0.985
	0.921	0.249	0.980	0.984
	0.938	0.371	0.977	0.980
	0.828	0.157	0.971	0.975
	0.953	0.635	0.970	0.974
	0.914	0.376	0.967	0.970
	0.908	0.357	0.966	0.970
	0.914	0.507	0.955	0.959
	0.899	0.432	0.955	0.959
	0.329	0.043	0.954	0.957
	0.702	0.163	0.944	0.948
	0.835	0.328	0.943	0.946
	0.823	0.363	0.932	0.935
	0.830	0.390	0.930	0.934
	0.697	0.237	0.918	0.922

\* Sorted by balanced relative change

## INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CLASS GROUP	(1)	(2)	(3)	(4)	(5)	(6)
		CALENDAR A.Y.E. 12/31/21 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2017-2021 AGG LOSS COST CURRENT LEVEL	FIVE YEAR EXPERIENCE RATIO	RELATIV.	NUMBER OF OCCURRENCES	BAL CELL RELATIV.
10 MONOLINE	01 RET.STRS-FOOD/DRG	\$15,246	\$163,697	0.214	0.231	7	1.196
	02 RET.STRS-NTFD/DRG	\$54,113	\$231,124	0.948	1.023	13	1.035
	11 COMP. OPS. (LOW)	\$152,546	\$818,648	1.310	1.414	15	1.050
	12 COMP. OPS. (MED)	\$3,472,416	\$18,752,866	1.255	1.354	299	0.993
	13 COMP. OPS. (HGH)	\$204,182	\$1,025,199	0.976	1.054	11	1.004
	TOTAL *	\$3,898,503	\$20,991,535	1.234		345	
34 MULT MERCANTILE	01 RET.STRS-FOOD/DRG	\$198,394	\$1,140,771	0.927	1.000	30	1.193
	02 RET.STRS-NTFD/DRG	\$224,603	\$1,114,435	0.280	0.302	11	1.033
	12 COMP. OPS. (MED)	\$178,489	\$812,066	1.098	1.185	12	0.991
	TOTAL *	\$601,486	\$3,067,272	0.736		53	
36 MULT SERVICES	01 RET.STRS-FOOD/DRG	\$36,168	\$220,728	1.695	1.829	4	1.177
	02 RET.STRS-NTFD/DRG	\$659,185	\$2,565,071	0.568	0.613	68	1.019
	11 COMP. OPS. (LOW)	\$121,416	\$692,348	0.774	0.836	8	1.034
	12 COMP. OPS. (MED)	\$258,890	\$1,680,737	0.086	0.093	8	0.978
	13 COMP. OPS. (HGH)	\$23,323	\$110,924	0.000	0.000	0	0.988
	TOTAL *	\$1,098,982	\$5,269,808	0.503		88	
37 MULT INDUST/PROC.	01 RET.STRS-FOOD/DRG	\$298	\$23,339	0.000	0.000	0	1.171
	11 COMP. OPS. (LOW)	\$5,676	\$30,251	0.000	0.000	0	1.028
	12 COMP. OPS. (MED)	\$302,448	\$1,592,514	0.669	0.721	14	0.972
	TOTAL *	\$308,422	\$1,646,105	0.656		14	
38 MULT CONTRACTORS	11 COMP. OPS. (LOW)	\$461,321	\$2,196,065	1.017	1.097	27	1.047
	12 COMP. OPS. (MED)	\$9,091,585	\$47,475,791	0.823	0.888	505	0.989
	13 COMP. OPS. (HGH)	\$447,224	\$2,420,681	1.338	1.444	14	1.000
	TOTAL *	\$10,000,130	\$52,092,538	0.855		546	
TOTAL ALL TOP	01 RET.STRS-FOOD/DRG	\$250,107	\$1,548,535	0.993		41	
	02 RET.STRS-NTFD/DRG	\$937,901	\$3,910,630	0.521		92	
	11 COMP. OPS. (LOW)	\$740,959	\$3,737,313	1.030		50	
	12 COMP. OPS. (MED)	\$13,303,828	\$70,313,974	0.922		838	
	13 COMP. OPS. (HGH)	\$674,728	\$3,556,805	1.183		25	
	TOTAL *	\$15,907,522	\$83,067,258	0.915		1,046	

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



## INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CLASS GROUP	(1)	(2)	(3)	(4)	(5)	(6)
		CALENDAR A.Y.E. 12/31/2019 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2015 - 2019 AGG LOSS COST CURRENT LEVEL	FIVE YEAR EXPERIENCE RATIO	RELATIV.	NUMBER OF OCCURRENCES	BAL CELL RELATIV.
10 MONOLINE	01 RET.STRS-FOOD/DRG	\$1,748,833	\$13,294,303	1.199		621	
	02 RET.STRS-NTFD/DRG	\$3,644,206	\$17,449,172	1.096		492	
	11 COMP. OPS. (LOW)	\$5,499,261	\$29,100,438	1.170		689	
	12 COMP. OPS. (MED)	\$120,011,947	\$572,386,816	0.921		7,034	
	13 COMP. OPS. (HGH)	\$7,536,492	\$38,042,850	0.641		262	
	TOTAL *	\$138,440,739	\$670,273,579	0.924		9,098	
34 MULT MERCANTILE	01 RET.STRS-FOOD/DRG	\$8,156,117	\$43,997,404	1.325		2,733	
	02 RET.STRS-NTFD/DRG	\$7,639,610	\$36,671,723	0.939		693	
	12 COMP. OPS. (MED)	\$3,008,570	\$14,169,615	0.904		125	
	TOTAL *	\$18,804,297	\$94,838,741	1.101		3,551	
36 MULT SERVICES	01 RET.STRS-FOOD/DRG	\$643,620	\$4,295,009	1.227		162	
	02 RET.STRS-NTFD/DRG	\$15,583,411	\$76,045,252	0.932		3,398	
	11 COMP. OPS. (LOW)	\$3,267,900	\$16,818,142	1.100		488	
	12 COMP. OPS. (MED)	\$5,157,211	\$26,533,736	0.947		778	
	13 COMP. OPS. (HGH)	\$1,204,826	\$5,882,500	0.592		61	
	TOTAL *	\$25,856,969	\$129,574,639	0.948		4,887	
37 MULT INDUST/PROC.	01 RET.STRS-FOOD/DRG	\$22,984	\$127,871	0.000		0	
	11 COMP. OPS. (LOW)	\$118,128	\$638,240	0.529		14	
	12 COMP. OPS. (MED)	\$5,046,084	\$25,673,289	0.830		313	
	13 COMP. OPS. (HGH)	\$2,262	\$21,501	0.000		0	
	TOTAL *	\$5,189,458	\$26,460,901	0.819		327	
38 MULT CONTRACTORS	11 COMP. OPS. (LOW)	\$11,708,508	\$61,005,531	0.926		812	
	12 COMP. OPS. (MED)	\$192,727,882	\$985,553,302	0.903		12,745	
	13 COMP. OPS. (HGH)	\$15,769,275	\$78,710,767	1.032		712	
	TOTAL *	\$220,205,665	\$1,125,269,600	0.913		14,269	
TOTAL ALL TOP	01 RET.STRS-FOOD/DRG	\$10,571,554	\$61,714,586	1.296		3,516	
	02 RET.STRS-NTFD/DRG	\$26,867,226	\$130,166,147	0.956		4,583	
	11 COMP. OPS. (LOW)	\$20,593,798	\$107,562,352	1.016		2,003	
	12 COMP. OPS. (MED)	\$325,951,694	\$1,624,316,756	0.909		20,995	
	13 COMP. OPS. (HGH)	\$24,512,856	\$122,657,618	0.890		1,035	
	TOTAL *	\$408,497,128	\$2,046,417,459	0.927		32,132	

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

COMMERCIAL PACKAGE POLICY

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**COMMERCIAL LINES MANUAL  
DIVISION NINE – MULTIPLE LINE  
COMMERCIAL PACKAGE POLICY  
PACKAGE MODIFICATION FACTORS**

**NEW JERSEY (29)**

**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	0.91	1.00	1.00
Contractors	.90	0.97	0.99	1.00
Industrial & Processing	.90	0.92	0.85	1.00
Institutional	.90	0.88	0.84	1.00
Mercantile	.90	0.94	0.79	1.00
Motel/Hotel	.90	1.00	0.98	1.00
Office	.90	0.86	0.87	1.00
Service	.90	1.00	0.88	1.00

**Table 1. Package Modification Factors**