

RULES – IMPLEMENTATION

OCTOBER 27, 2023

COMMERCIAL MULTIPLE LINE

LI-ML-2023-004

## MARYLAND 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 **0.4%** 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 effective 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 Insurance Department on this revision, you should refer to ISO Filing Number [ML-2023-RLA1](#) and SERFF Tracking Number [ISOF-133857276](#), 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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## CONTACT INFORMATION

If you have any questions concerning:

- The actuarial content of this circular, please contact:  
Rachelle Itzkowitz  
Actuarial Operations  
201-469-3775  
[Rachelle.Itzkowitz@verisk.com](mailto:Rachelle.Itzkowitz@verisk.com)  
[propertyactuarial@verisk.com](mailto:propertyactuarial@verisk.com)
- The non-actuarial content of this circular, please contact:  
Akpene Simpri  
Production Operations, Compliance and Product Services  
201-469-2969  
[prodops@verisk.com](mailto:prodops@verisk.com)
- Other issues for this circular, please contact Customer Support:  
E-mail: [info@verisk.com](mailto:info@verisk.com)  
Phone: 800-888-4476

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MARYLAND  
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.

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PMF CHANGES

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

<u>Type of Policy</u>	<u>Property</u>	<u>Liability</u>	<u>Prop. &amp; Liab. Total</u>
Motel/Hotel	0.0%	-8.0%	-4.3%
Apartment	0.0%	0.0%	0.0%
Office	1.1%	-1.1%	-0.2%
Mercantile	3.1%	-7.4%	-1.1%
Institutional	5.6%	-6.1%	3.2%
Services	0.0%	-2.2%	-0.8%
Indust./Proc.	-4.1%	-1.0%	-2.7%
Contractors	<u>2.1%</u>	<u>1.1%</u>	<u>1.2%</u>
Statewide	1.8%	-1.3%	0.4%

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MARYLAND

ADVISORY PACKAGE MODIFICATION FACTOR REVIEW

COMMERCIAL PACKAGE POLICY

ML-2023-RLA1

EXECUTIVE SUMMARY

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INDICATED  
VS. CAPPED

Indicated PMF changes are based on standard ISO methodology. Differences between indicated and capped PMF changes are caused by rounding each indicated PMF to the nearest one percent and applying an upper cap of 1.00, where necessary.

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HISTORICAL  
SOURCE DATA

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-2021-RLA1	ML-2018-RLA1	ML-2015-RLA1
<u>Dates</u>			
Implemented	7/1/2022	12/1/2018	12/1/2015
<u>Changes</u>			
Indicated	1.8%	-0.3%	-0.2%
Filed	1.8%	-0.3%	-0.2%
Implemented	1.8%	-0.3%	-0.2%

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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. Harford Mutual Insurance Company
  3. Tokio Marine Companies
  4. Liberty Mutual Insurance Company
  5. Insurance Company of North America
  6. Cincinnati Insurance Company
  7. Nationwide Mutual Insurance Company
  8. Continental Casualty Company
  9. Hanover Insurance Company
  10. Brethren Mutual Insurance Company
- 

SIZE OF ISO  
DATA BASE

The market share of ISO participating insurers as measured by Annual Statement Page 15 written premium for the year ending 12/31/2021 is:

Commercial Multi-Peril (ASLOB 51 & 52). 50.8%.

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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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MARYLAND  
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 relative to that for monoline policies providing the same coverages.

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#### 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.

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#### 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)	<u>LEAST SQUARES FORMULA RELATIVITIES</u>
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The Least Squares Formula Relativities are the marginal relativities which result from the application of the simultaneous review procedure to the raw experience (where marginal refers to the relativities for a given rating variable, e.g. type of policy, across all subsets of any other rating variables, i.e. territory for Basic Group I, and category for Special Causes of Loss).

The purpose of such a simultaneous review procedure is to arrive at a set of type of policy relativities (which will serve to price CPP policies relative to monoline policies via the 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.

## 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:

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

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

SPECIAL CAUSES OF LOSS:

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

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

- $TOP_i$  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

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

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

COMMERCIAL PACKAGE POLICY

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

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

ITERATIVE  
PROCEDURE

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

For Owners, Landlords and Tenants:

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

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

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

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

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

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

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

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

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

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

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

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

COMMERCIAL PACKAGE POLICY

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

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

For Manufacturers and Contractors, and Products:

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

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

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

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

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

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

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

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

COMMERCIAL PACKAGE POLICY

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

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

For Local Products/Completed Operations:

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

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

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

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

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

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

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

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

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

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

COMMERCIAL PACKAGE POLICY

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

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

ITERATIVE  
PROCEDURE  
(Cont'd)

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

---

APPLICATION OF  
CREDIBILITY

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

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

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

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

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

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

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

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

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

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

W is the credibility-weighted relativity.

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

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INDICATED  
CHANGES

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

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

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## COMMERCIAL PACKAGE POLICY

### SECTION B: CALCULATION OF PROPOSED CHANGES

#### LIABILITY COVERAGES: GENERAL LIABILITY

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

#### MULTILINE CONSIDERATIONS

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

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

For each CPP Type of Policy the indicated IPMF is subject to a minimum value of 0.50 and a maximum value of 1.50. If an indicated IPMF falls outside one of those limits, it is capped at that amount, the aggregate loss costs for that Type of Policy are adjusted to the capped IPMF level, and the entire relativity review as described above is re-performed to take this into account.

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INSURANCE SERVICES OFFICE, INC.

## MARYLAND

COMMERCIAL PACKAGE POLICY  
SUMMARY OF THIS REVIEW

	PROPERTY PMFS			LIABILITY PMFS			PROP. & LIAB. TOTAL
TYPE OF POLICY	CURRENT CAPPED % CHANGE			CURRENT CAPPED % CHANGE			% CHANGE
MOTEL/HOTEL(31)	1.00	1.00	0.0%	0.87	0.80	-8.0%	-4.3%
APARTMENT (32)	1.00	1.00	0.0%	1.00	1.00	0.0%	0.0%
OFFICE (33)	0.92	0.93	1.1%	0.93	0.92	-1.1%	-0.2%
MERCANTILE (34)	0.97	1.00	3.1%	0.95	0.88	-7.4%	-1.1%
INSTITUTION(35)	0.89	0.94	5.6%	0.82	0.77	-6.1%	3.2%
SERVICES (36)	1.00	1.00	0.0%	0.92	0.90	-2.2%	-0.8%
IND/PROC (37)	0.97	0.93	-4.1%	1.00	0.99	-1.0%	-2.7%
CONTRACTORS(38)	0.95	0.97	2.1%	0.89	0.90	1.1%	1.2%
STATEWIDE			1.8%			-1.3%	0.4%



## INSURANCE SERVICES OFFICE, INC.

MARYLAND  
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
<u>COVERAGE</u>					
PROPERTY-					
BASIC GRP I	749,114	1.127	-6.0%	1.059	1.079
BASIC GRP II	304,002	0.974	3.8%	1.011	1.030
SP CAUSE/LOSS	524,742	0.860	2.8%	0.884	0.901
* CRIME	9,314	0.910	0.0%	0.910	0.910
* INL. MAR.	3,861	0.910	0.0%	0.910	0.910
* FIDELITY	5,403	1.000	0.0%	1.000	1.000
<u>TOTAL</u>	<u>1,596,436</u>	<u>1.000</u>	<u>-1.8%</u>	<u>0.982</u>	<u>1.000</u>
LIABILITY-					
OL&T	1,825,525	0.867	-8.6%	0.792	0.799
<u>TOTAL</u>	<u>1,825,525</u>	<u>0.870</u>	<u>-8.9%</u>	<u>0.792</u>	<u>0.800</u>
-----					
PROP. & LIAB.	3,421,961		-5.6%		-4.3%
TOTAL					

  

APARTMENT (32) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
<u>COVERAGE</u>					
PROPERTY-					
BASIC GRP I	16,450,961	1.132	2.9%	1.165	1.121
BASIC GRP II	1,897,079	0.599	8.1%	0.648	0.623
SP CAUSE/LOSS	4,723,538	0.877	6.2%	0.931	0.896
* CRIME	1,881	0.910	0.0%	0.910	0.910
* INL. MAR.	4,135	0.910	0.0%	0.910	0.910
* FIDELITY	12,496	1.000	0.0%	1.000	1.000
<u>TOTAL</u>	<u>23,090,090</u>	<u>1.000</u>	<u>3.9%</u>	<u>1.039</u>	<u>1.000</u>
LIABILITY-					
OL&T	6,451,990	1.000	4.1%	1.041	1.000
<u>TOTAL</u>	<u>6,451,990</u>	<u>1.000</u>	<u>4.1%</u>	<u>1.041</u>	<u>1.000</u>
-----					
PROP. & LIAB.	29,542,080		4.0%		0.0%
TOTAL					

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

## INSURANCE SERVICES OFFICE, INC.

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

OFFICE (33) *****	(1) AGGREGATE LOSS <u>COSTS</u>	(2) CURRENT IMPLICIT <u>PMF</u>	(3) NET <u>INDICATION</u>	(4) INDIC. <u>PMF</u>	(5) CAPPED <u>PMF</u>
COVERAGE					
PROPERTY-					
BASIC GRP I	950,142	1.148	-8.6%	1.049	1.103
BASIC GRP II	608,543	0.970	-4.0%	0.931	0.979
SP CAUSE/LOSS	950,590	0.734	3.3%	0.758	0.797
* CRIME	5,216	0.910	0.0%	0.910	0.910
* INL. MAR.	15,528	0.910	0.0%	0.910	0.910
* FIDELITY	6,847	1.000	0.0%	1.000	1.000
TOTAL	2,536,866	0.920	-3.7%	0.886	0.930
LIABILITY-					
OL&T	3,630,439	0.966	-2.6%	0.941	0.947
M&C	373,337	0.692	0.9%	0.698	0.702
TOTAL	4,003,776	0.930	-2.1%	0.910	0.920
-----					
PROP. & LIAB.	6,540,642		-2.7%		-0.2%
TOTAL					

MERCANTILE (34) *****	(1) AGGREGATE LOSS <u>COSTS</u>	(2) CURRENT IMPLICIT <u>PMF</u>	(3) NET <u>INDICATION</u>	(4) INDIC. <u>PMF</u>	(5) CAPPED <u>PMF</u>
COVERAGE					
PROPERTY-					
BASIC GRP I	5,757,858	0.891	2.0%	0.909	0.905
BASIC GRP II	3,085,833	1.107	6.3%	1.177	1.172
SP CAUSE/LOSS	5,315,246	0.984	5.0%	1.033	1.029
* CRIME	42,436	0.910	0.0%	0.910	0.910
* INL. MAR.	143,292	0.910	0.0%	0.910	0.910
* FIDELITY	157,697	1.000	0.0%	1.000	1.000
TOTAL	14,502,362	0.970	3.5%	1.004	1.000
LIABILITY-					
OL&T	7,117,634	0.912	-10.3%	0.818	0.830
M&C	803,108	1.036	0.8%	1.044	1.060
LOCAL PRODUCT	762,652	1.312	-0.2%	1.309	1.328
* MULTI PRODUCT	1,089,446	0.889	1.4%	0.901	0.901
TOTAL	9,772,840	0.950	-8.2%	0.872	0.880
-----					
PROP. & LIAB.	24,275,202		-1.2%		-1.1%
TOTAL					

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

## INSURANCE SERVICES OFFICE, INC.

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

INSTITUTION(35) *****	(1) AGGREGATE LOSS <u>COSTS</u>	(2) CURRENT IMPLICIT <u>PMF</u>	(3) NET <u>INDICATION</u>	(4) INDIC. <u>PMF</u>	(5) CAPPED <u>PMF</u>
COVERAGE					
PROPERTY-					
BASIC GRP I	3,686,199	0.907	-7.1%	0.843	0.885
BASIC GRP II	1,943,988	0.856	12.2%	0.960	1.009
SP CAUSE/LOSS	3,294,610	0.880	4.7%	0.921	0.968
* CRIME	29,497	0.910	0.0%	0.910	0.910
* INL. MAR.	24,519	0.910	0.0%	0.910	0.910
* FIDELITY	79,479	1.000	0.0%	1.000	1.000
TOTAL	9,058,292	0.890	1.0%	0.899	0.940
LIABILITY-					
OL&T	2,315,648	0.819	-6.1%	0.769	0.774
M&C	14,042	0.538	0.6%	0.541	0.544
TOTAL	2,329,690	0.820	-6.5%	0.767	0.770
-----					
PROP. & LIAB. TOTAL	11,387,982		-0.5%		3.2%

SERVICES (36) *****	(1) AGGREGATE LOSS <u>COSTS</u>	(2) CURRENT IMPLICIT <u>PMF</u>	(3) NET <u>INDICATION</u>	(4) INDIC. <u>PMF</u>	(5) CAPPED <u>PMF</u>
COVERAGE					
PROPERTY-					
BASIC GRP I	3,280,155	0.942	-0.1%	0.941	0.935
BASIC GRP II	2,290,733	1.339	0.8%	1.350	1.341
SP CAUSE/LOSS	2,804,534	0.909	-1.8%	0.893	0.887
* CRIME	56,081	0.910	0.0%	0.910	0.910
* INL. MAR.	25,646	0.910	0.0%	0.910	0.910
* FIDELITY	70,010	1.000	0.0%	1.000	1.000
TOTAL	8,527,159	1.000	0.6%	1.006	1.000
LIABILITY-					
OL&T	2,371,027	0.955	-6.6%	0.892	0.907
M&C	1,818,433	0.925	-0.5%	0.920	0.936
LOCAL PRODUCT	757,389	0.812	-1.6%	0.799	0.813
* MULTI PRODUCT	136,770	0.963	0.6%	0.969	0.969
TOTAL	5,083,619	0.920	-3.4%	0.888	0.900
-----					
PROP. & LIAB. TOTAL	13,610,778		-0.9%		-0.8%

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

## INSURANCE SERVICES OFFICE, INC.

MARYLAND  
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	1,771,365	1.309	-14.9%	1.114	1.171
BASIC GRP II	451,369	0.746	-1.9%	0.732	0.769
SP CAUSE/LOSS	1,014,825	0.734	-0.1%	0.733	0.771
* CRIME	4,726	0.910	0.0%	0.910	0.910
* INL. MAR.	6,055	0.910	0.0%	0.910	0.910
* FIDELITY	18,058	1.000	0.0%	1.000	1.000
TOTAL	3,266,398	0.970	-8.5%	0.888	0.930
LIABILITY-					
M&C	1,633,157	1.109	-4.9%	1.055	1.061
LOCAL PRODUCT	168,657	0.829	-2.1%	0.812	0.816
* MULTI PRODUCT	988,292	0.897	2.5%	0.919	0.919
TOTAL	2,790,106	1.000	-1.7%	0.983	0.990
-----					
PROP. & LIAB. TOTAL	6,056,504		-5.3%		-2.7%

CONTRACTORS(38) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	893,066	0.850	-4.2%	0.814	0.856
BASIC GRP II	567,867	1.019	-0.3%	1.016	1.068
SP CAUSE/LOSS	1,515,214	0.991	-3.6%	0.955	1.004
* CRIME	11,991	0.910	0.0%	0.910	0.910
* INL. MAR.	8,382	0.910	0.0%	0.910	0.910
* FIDELITY	79,392	1.000	0.0%	1.000	1.000
TOTAL	3,075,912	0.950	-3.1%	0.921	0.970
LIABILITY-					
M&C	14,015,298	1.007	1.4%	1.021	1.027
LOCAL PRODUCT	7,552,772	0.726	-0.4%	0.723	0.728
TOTAL	21,568,070	0.890	0.4%	0.894	0.900
-----					
PROP. & LIAB. TOTAL	24,643,982		0.0%		1.2%

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

INSURANCE SERVICES OFFICE, INC.

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

STATEWIDE *****	(1) AGGREGATE LOSS <u>COSTS</u>	(2) CURRENT IMPLICIT <u>PMF</u>	(3) NET <u>INDICATION</u>	(4) INDIC. <u>PMF</u>	(5) CAPPED <u>PMF</u>
COVERAGE					
PROPERTY-					
BASIC GRP I	33,538,860	1.034	-0.3%	1.031	1.020
BASIC GRP II	11,149,414	0.926	5.2%	0.974	0.982
SP CAUSE/LOSS	20,143,299	0.898	3.2%	0.927	0.933
* CRIME	161,142	0.910	0.0%	0.910	0.910
* INL. MAR.	231,418	0.910	0.0%	0.910	0.910
* FIDELITY	429,382	1.000	0.0%	1.000	1.000
<hr/> TOTAL	<hr/> 65,653,515	<hr/> 0.966	<hr/> 2.0%	<hr/> 0.985	<hr/> 0.984
LIABILITY-					
OL&T	23,712,263	0.932	-4.3%	0.892	0.889
M&C	18,657,375	0.998	0.6%	1.004	1.012
LOCAL PRODUCT	9,241,470	0.762	-0.5%	0.758	0.765
* MULTI PRODUCT	2,214,508	0.897	1.8%	0.913	0.913
<hr/> TOTAL	<hr/> 53,825,616	<hr/> 0.915	<hr/> -1.5%	<hr/> 0.901	<hr/> 0.903
-----					
PROP. & LIAB.	119,479,131		0.4%		0.4%
TOTAL					

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

INSURANCE SERVICES OFFICE, INC.

MARYLAND  
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)	0.910	0.874	0.890
APARTMENT (32)	1.000	1.040	1.000
OFFICE (33)	0.930	0.901	0.920
MERCANTILE (34)	0.960	0.950	0.950
INSTITUTION(35)	0.870	0.870	0.910
SERVICES (36)	0.960	0.960	0.960
IND/PROC (37)	0.980	0.931	0.960
CONTRACTORS(38)	0.890	0.897	0.910

NOTE: Combined PMFs are provided for informational purposes only.

INSURANCE SERVICES OFFICE, INC.

MARYLAND  
BASIC GROUP I RELATIVITY ANALYSIS

TYPE OF POLICY	(1) LEAST SQUARES FORMULA RELATIVITY	(2) CREDIBILITY	(3) WEIGHTED RELATIVITY	(4) BALANCED RELATIVITY	(5) INDICATED CHANGE
10	1.265	0.086	1.020	1.003	
31	0.309	0.036	0.959	0.943	-6.0%
32	1.119	0.425	1.049	1.032	2.9%
33	0.240	0.049	0.932	0.917	-8.6%
34	1.192	0.222	1.040	1.023	2.0%
35	0.720	0.162	0.948	0.932	-7.1%
36	1.133	0.149	1.019	1.002	-0.1%
37	0.192	0.086	0.868	0.854	-14.9%
38	0.603	0.045	0.977	0.961	-4.2%
TERRITORY					
Baltimore City	1.277	0.288	1.073	1.059	
Anne Arundel County	0.815	0.176	0.965	0.952	
Baltimore County Excl. Baltimore City	0.619	0.263	0.881	0.869	
Montgomery County	0.455	0.224	0.838	0.827	
Prince Georges County	0.939	0.428	0.973	0.960	
Balance Of State (Maryland)	1.222	0.527	1.111	1.096	

## INSURANCE SERVICES OFFICE, INC.

MARYLAND  
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	0.884	0.183	0.978	0.971	
31	1.077	0.062	1.005	0.998	2.8%
32	1.109	0.359	1.038	1.031	6.2%
33	1.089	0.111	1.010	1.003	3.3%
34	1.070	0.397	1.027	1.020	5.0%
35	1.082	0.296	1.024	1.017	4.7%
36	0.857	0.262	0.960	0.954	-1.8%
37	0.812	0.112	0.977	0.970	-0.1%
38	0.692	0.162	0.942	0.936	-3.6%
CATEGORY					
1	1.018	0.831	1.015	1.007	
2	0.942	0.127	0.992	0.984	
3	0.910	0.144	0.987	0.979	
4	0.995	0.183	0.999	0.991	
5	1.038	0.214	1.008	1.000	
6	0.978	0.082	0.998	0.990	
7	1.002	0.040	1.000	0.992	
8	1.058	0.181	1.010	1.002	
9	0.984	0.255	0.996	0.988	
10	0.992	0.048	1.000	0.992	
11	0.858	0.108	0.984	0.976	
12	0.866	0.174	0.975	0.967	
13	0.883	0.139	0.983	0.975	
14	0.954	0.239	0.989	0.981	



INSURANCE SERVICES OFFICE, INC.

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

	(1)	(2)	(3)	(4)
	ACCIDENT YEAR			
	ENDING 12/31/19	5 - YEAR	5 - YEAR	RELATIVITY
TYPE OF POLICY	AGGREGATE LOSS COSTS	AGGREGATE LOSS COSTS	EXPERIENCE RATIO	
-----				
ENTIRE STATE				
10 MONOLINE	2,113,876	9,379,335	1.728	1.248
31 MULTILINE MOTEL/HOTEL	749,114	3,730,602	1.882	1.360
32 MULTILINE APARTMENT	16,450,961	73,848,307	1.397	1.010
33 MULTILINE OFFICE	950,142	5,117,544	0.337	0.243
34 MULTILINE MERCANTILE	5,757,858	28,587,488	1.901	1.373
35 MULTILINE INSTITUTIONAL	3,686,199	19,387,976	1.063	0.768
36 MULTILINE SERVICES	3,280,155	17,563,063	1.490	1.077
37 MULTILINE INDUST/PROCESS	1,771,365	9,424,754	0.356	0.257
38 MULTILINE CONTRACTORS	<u>893,066</u>	<u>4,692,562</u>	<u>0.670</u>	<u>0.484</u>
TOTAL ALL TOPS*	35,652,736	171,731,631	1.384	1.000

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

## INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 12/31/19 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	1,160,749	5,431,521	0.873	0.873	0.901
	02 RES. APTS. AND COND	27,664	122,158	0.968	0.900	0.929
	03 OFFICES	136,048	711,917	0.272	0.606	0.625
	04 MERCANTILE - HIGH	168,776	721,075	0.457	0.688	0.710
	05 MERCANTILE - MEDIUM	35,311	182,545	2.461	1.336	1.379
	06 MERCANTILE - LOW	26,474	131,596	0.034	0.647	0.668
	07 MOTELS AND HOTELS	4,719	43,511	0.074	0.688	0.710
	08 INSTITUTIONAL - HIG	75,681	311,309	0.490	0.746	0.770
	09 INSTITUTIONAL - LOW	86,534	409,258	0.842	0.863	0.891
	10 INDUST-PROC - HIGH	13,101	71,979	0.000	0.660	0.681
	11 INDUST-PROC - LOW	38,715	184,269	0.734	0.834	0.861
	12 SERVICE - HIGH	33,506	161,060	3.859	1.718	1.773
	13 SERVICE - LOW	75,685	346,333	1.138	0.966	0.997
	14 CONTRACTORS	24,506	115,493	2.934	1.419	1.464
	TOTAL*	1,907,469	8,944,024	0.875	0.861	0.888
31 MULTILINE	01 BUILDINGS	411,710	2,053,680	1.052	1.059	1.093
MOTEL/HOTEL	07 MOTELS AND HOTELS	113,032	581,632	0.888	1.043	1.076
	TOTAL*	524,742	2,635,312	1.017	1.056	1.089
32 MULTILINE	01 BUILDINGS	4,265,005	20,385,629	1.210	1.090	1.125
APARTMENT	02 RES. APTS. AND COND	458,533	2,050,420	0.589	1.008	1.040
	TOTAL*	4,723,538	22,436,049	1.150	1.082	1.117
33 MULTILINE	01 BUILDINGS	687,201	3,684,201	1.103	1.066	1.100
OFFICE	03 OFFICES	259,314	1,305,991	0.381	0.988	1.020
	04 MERCANTILE - HIGH	1,892	8,511	38.866	4.843	4.998
	08 INSTITUTIONAL - HIG	265	1,938	0.000	0.954	0.985
	11 INDUST-PROC - LOW	254	825	0.000	0.954	0.985
	12 SERVICE - HIGH	1,283	5,493	0.000	0.954	0.985
	14 CONTRACTORS	381	1,884	0.000	0.954	0.985
	TOTAL*	950,590	5,008,843	0.979	1.052	1.086

## INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 12/31/19 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	3,717,607	18,561,766	1.013	1.051	1.085
	03 OFFICES	16,011	93,835	1.262	1.081	1.116
	04 MERCANTILE - HIGH	520,634	2,424,490	0.896	1.042	1.075
	05 MERCANTILE - MEDIUM	781,850	3,867,639	1.150	1.071	1.105
	06 MERCANTILE - LOW	247,262	1,148,142	0.603	1.012	1.044
	08 INSTITUTIONAL - HIG	271	3,562	0.000	0.954	0.985
	11 INDUST-PROC - LOW	316	2,939	0.000	0.954	0.985
	12 SERVICE - HIGH	6,308	38,421	0.124	0.967	0.998
	13 SERVICE - LOW	10,612	77,015	0.491	1.003	1.035
	14 CONTRACTORS	14,375	89,286	0.000	0.954	0.985
	TOTAL*	5,315,246	26,307,095	0.998	1.051	1.085
35 MULTILINE INSTITUTIONAL	01 BUILDINGS	1,849,180	9,270,382	1.076	1.063	1.097
	03 OFFICES	12,718	52,738	0.558	1.010	1.042
	04 MERCANTILE - HIGH	293	438	0.000	0.954	0.985
	06 Mercantile - Low	1	130	142.008	15.155	15.640
	08 INSTITUTIONAL - HIG	470,658	2,877,660	1.478	1.109	1.144
	09 INSTITUTIONAL - LOW	950,535	4,550,239	0.788	1.027	1.060
	12 SERVICE - HIGH	1,384	4,478	0.594	1.014	1.046
	13 SERVICE - LOW	9,358	42,403	0.730	1.027	1.060
	14 CONTRACTORS	483	6,601	0.000	0.954	0.985
	TOTAL*	3,294,610	16,805,069	1.047	1.059	1.093
36 MULTILINE SERVICES	01 BUILDINGS	1,695,890	8,780,383	0.901	0.843	0.870
	03 OFFICES	21,848	94,304	0.104	0.670	0.691
	04 MERCANTILE - HIGH	9,261	36,231	1.163	0.787	0.812
	05 MERCANTILE - MEDIUM	1,120	19,861	1.406	0.811	0.837
	06 MERCANTILE - LOW	2,881	13,949	9.340	1.620	1.672
	08 INSTITUTIONAL - HIG	31,052	120,006	0.000	0.656	0.677
	09 INSTITUTIONAL - LOW	31,471	164,277	0.000	0.651	0.672
	11 INDUST-PROC - LOW	3,118	12,534	0.000	0.667	0.688
	12 SERVICE - HIGH	584,176	2,931,977	0.667	0.713	0.736
	13 SERVICE - LOW	400,678	1,953,075	0.677	0.722	0.745
	14 CONTRACTORS	23,039	98,299	0.000	0.658	0.679
	TOTAL*	2,804,534	14,224,896	0.795	0.792	0.817

## INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 12/31/19 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	535,697	2,668,980	0.891	0.798	0.824
	03 OFFICES	5,676	23,483	0.000	0.666	0.687
	04 MERCANTILE - HIGH	8,027	46,553	0.031	0.667	0.688
	05 MERCANTILE - MEDIUM	392	8,672	0.564	0.725	0.748
	10 INDUST-PROC - HIGH	143,003	685,351	0.934	0.779	0.804
	11 INDUST-PROC - LOW	317,296	1,613,276	0.493	0.671	0.692
	12 SERVICE - HIGH	1,118	3,582	0.000	0.668	0.689
	13 SERVICE - LOW	1,431	4,714	0.000	0.668	0.689
	14 CONTRACTORS	2,185	13,906	0.000	0.667	0.688
	TOTAL*	1,014,825	5,068,517	0.757	0.753	0.777
38 MULTILINE CONTRACTORS	01 BUILDINGS	564,989	2,893,623	0.580	0.679	0.701
	03 OFFICES	44,581	251,148	2.127	0.931	0.961
	04 MERCANTILE - HIGH	19,419	128,347	1.693	0.856	0.883
	05 MERCANTILE - MEDIUM	1,469	8,470	4.506	1.124	1.160
	06 Mercantile - Low	5,267	37,268	2.714	0.951	0.981
	08 INSTITUTIONAL - HIG	2,043	8,407	0.000	0.668	0.689
	11 INDUST-PROC - LOW	125	7,852	0.000	0.668	0.689
	12 SERVICE - HIGH	1,892	9,363	0.732	0.742	0.766
	13 SERVICE - LOW	483	6,296	0.000	0.668	0.689
	14 CONTRACTORS	874,946	4,387,442	0.521	0.637	0.657
	TOTAL*	1,515,214	7,738,216	0.616	0.666	0.687
TOTAL ALL TOPS*	01 BUILDINGS	14,888,028	73,730,165	1.038	1.004	1.036
	02 RES. APTS. AND COND	486,197	2,172,578	0.611	1.002	1.034
	03 OFFICES	496,196	2,533,416	0.524	0.864	0.892
	04 MERCANTILE - HIGH	728,302	3,365,645	0.908	0.957	0.988
	05 MERCANTILE - MEDIUM	820,142	4,087,187	1.213	1.082	1.117
	06 MERCANTILE - LOW	281,885	1,331,085	0.679	0.983	1.014
	07 MOTELS AND HOTELS	117,751	625,143	0.855	1.029	1.062
	08 INSTITUTIONAL - HIG	579,970	3,322,882	1.263	1.036	1.069
	09 INSTITUTIONAL - LOW	1,068,540	5,123,774	0.769	1.003	1.035
	10 INDUST-PROC - HIGH	156,104	757,330	0.856	0.769	0.794
	11 INDUST-PROC - LOW	359,824	1,821,695	0.514	0.689	0.711
	12 SERVICE - HIGH	629,667	3,154,374	0.829	0.770	0.795
	13 SERVICE - LOW	498,247	2,429,836	0.741	0.771	0.795
	14 CONTRACTORS	939,915	4,712,911	0.561	0.663	0.684
	TOTAL*	22,050,768	109,168,021	0.964	0.969	1.000

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

## INSURANCE SERVICES OFFICE, INC.

MARYLAND  
BASIC GROUP II RELATIVITY ANALYSIS

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	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	ACCIDENT YEAR ENDING 12/31/21 AGGR. LOSS COSTS AT CURRENT IMPLICIT PMF	ACCIDENT YEARS 2012 - 2021 EXPER. RATIO AT CURRENT PMF	FORMULA RELATIVITY (2)/ 1.004	CREDIBILITY C	CREDIBILITY WEIGHTED RELATIVITY D	BALANCED FORMULA RELATIVITY E	NORMALIZED FORMULA RELATIVITY F	INDICATED CHANGE
	-----	-----	-----	-----	-----	-----	-----	-----
MONOLINE	1,299,486	0.8140	0.8110	0.1860	0.965	0.9650	0.9556	
MULTILINE	11,149,414	1.0260	1.0220	0.7000	1.015	1.0150	1.0055	
	-----	-----	-----	-----	-----	-----	-----	
COVERAGE	12,448,900	1.0040	1.0000			1.0098	1.0003	
MULTILINE TOP								
31 MOTEL/HOTEL	304,002	1.1270	1.1230	0.0560	1.007	1.0020	0.9923	3.8%
32 APARTMENT	1,897,079	1.1760	1.1710	0.2810	1.048	1.0430	1.0329	8.1%
33 OFFICE	608,543	0.3770	0.3750	0.1110	0.931	0.9260	0.9170	-4.0%
34 MERCANTILE	3,085,833	1.0880	1.0840	0.3720	1.031	1.0260	1.0160	6.3%
35 INSTITUTIONAL	1,943,988	1.2960	1.2910	0.3040	1.088	1.0830	1.0725	12.2%
36 SERVICES	2,290,733	0.9380	0.9340	0.3340	0.978	0.9730	0.9636	0.8%
37 INDUST/PROCESS	451,369	0.4610	0.4590	0.0880	0.952	0.9470	0.9378	-1.9%
38 CONTRACTORS	567,867	0.7080	0.7050	0.1130	0.967	0.9620	0.9527	-0.3%
	-----	-----	-----	-----	-----	-----	-----	
	11,149,414	1.0260	1.0220		1.0200	1.0150	1.0055	

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

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

E - (6) = (5) \* (1.015/1.02)

F - (7) = (6) / 1.0098

## INSURANCE SERVICES OFFICE, INC.

MARYLAND  
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	1.127	0.262	1.032	1.033	
31	0.652	0.137	0.943	0.944	-8.6%
32	1.416	0.204	1.074	1.075	4.1%
33	1.035	0.152	1.005	1.006	-2.6%
34	0.705	0.220	0.926	0.927	-10.3%
35	0.766	0.117	0.969	0.970	-6.1%
36	0.756	0.132	0.964	0.965	-6.6%
CLASS GROUP					
1	1.063	0.118	1.007	1.010	
2	1.239	0.168	1.037	1.039	
3	0.847	0.097	0.984	0.987	
4	1.128	0.030	1.004	1.006	
5	0.565	0.048	0.973	0.975	
6	1.092	0.064	1.006	1.008	
7	1.058	0.105	1.006	1.009	
8	1.780	0.053	1.031	1.034	
9	1.070	0.187	1.013	1.015	
10	0.980	0.112	0.998	1.000	
11	0.990	0.212	0.998	1.001	
12	0.895	0.248	0.973	0.976	
13	1.751	0.067	1.038	1.041	
16	0.753	0.030	0.992	0.994	
TERRITORY					
501	0.953	0.334	0.984	0.985	
502	0.961	0.207	0.992	0.993	
503	1.098	0.279	1.026	1.027	

## INSURANCE SERVICES OFFICE, INC.

## MARYLAND

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	1.007	0.270	1.002	0.996	
33	1.423	0.031	1.011	1.005	0.9%
34	1.132	0.085	1.011	1.004	0.8%
35	2.900	0.007	1.007	1.002	0.6%
36	0.978	0.126	0.997	0.991	-0.5%
37	0.478	0.065	0.953	0.947	-4.9%
38	1.051	0.325	1.016	1.010	1.4%
CLASS GROUP					
30	1.107	0.156	1.016	1.023	
31	1.058	0.237	1.013	1.020	
32	0.933	0.285	0.980	0.987	
33	0.969	0.135	0.996	1.002	
34	0.867	0.111	0.984	0.991	
35	5.758	0.031	1.056	1.062	
36	1.383	0.048	1.016	1.022	
37	0.851	0.027	0.996	1.002	
38	0.909	0.101	0.990	0.997	

## INSURANCE SERVICES OFFICE, INC.

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

TERRITORY ALL		(1)	(2)	(3)	(4)	(5)	(6)
TYPE OF POLICY	CLASS GROUP	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)	\$143,507	\$960,678	1.568		80	
	02 RESTAURANTS	\$221,794	\$2,063,971	0.770		100	
	03 STORES	\$108,022	\$588,509	1.256		34	
	04 VENDING & RENTAL	\$11,767	\$133,085	2.042		4	
	05 FOOD & BEV. DIST.	\$50,706	\$370,834	1.351		16	
	06 NON-FOOD&BEV.DIST	\$145,341	\$486,397	2.248		37	
	07 CLUBS,AMSMT&SPRTS	\$488,595	\$1,831,968	1.435		73	
	08 HEALTH CARE FACIL	\$11,304	\$86,595	0.072		2	
	09 HOTELS AND MOTELS	\$603,424	\$5,334,808	1.431		286	
	10 SCHLS & CHURCHES	\$387,973	\$1,801,369	1.431		45	
	11 APARTMENTS	\$1,330,895	\$7,376,169	1.347		173	
	12 BUILDINGS&OFFICES	\$1,982,080	\$9,674,194	0.970		354	
	13 MISC. PREMISES	\$38,384	\$379,125	4.034		31	
	TOTAL *	\$5,523,792	\$31,087,702	1.257		1,235	
31 MULT MOTEL/HOTEL	09 HOTELS AND MOTELS	\$1,154,665	\$8,177,621	0.797		340	
	TOTAL *	\$1,154,665	\$8,177,621	0.797		340	
32 MULT APARTMENT	11 APARTMENTS	\$3,468,031	\$15,812,973	1.554		636	
	12 BUILDINGS&OFFICES	\$612,924	\$2,663,723	1.609		116	
	TOTAL *	\$4,080,955	\$18,476,696	1.563		752	
33 MULT OFFICE	12 BUILDINGS&OFFICES	\$2,270,125	\$11,816,578	1.074		415	
	13 MISC. PREMISES	\$26,169	\$121,369	1.180		2	
	TOTAL *	\$2,296,293	\$11,937,946	1.075		417	
34 MULT MERCANTILE	01 FOOD&BEV.(RETAIL)	\$797,005	\$4,438,787	0.836		171	
	02 RESTAURANTS	\$1,698,788	\$9,453,200	1.080		409	
	03 STORES	\$717,986	\$3,747,077	0.641		117	
	04 VENDING & RENTAL	\$5,581	\$44,331	0.000		0	
	05 FOOD & BEV. DIST.	\$245,303	\$1,176,122	0.306		26	
	06 NON-FOOD&BEV.DIST	\$311,185	\$1,896,909	0.463		37	
	12 BUILDINGS&OFFICES	\$726,106	\$3,295,964	0.765		113	
	13 MISC. PREMISES	\$27	\$95	0.000		0	
	TOTAL *	\$4,501,982	\$24,052,485	0.830		873	
35 MULT INSTITUT.	07 CLUBS,AMSMT&SPRTS	\$15,355	\$62,461	3.142		5	
	08 HEALTH CARE FACIL	\$300,377	\$1,554,541	1.640		48	
	10 SCHLS & CHURCHES	\$999,630	\$5,566,948	0.834		178	
	12 BUILDINGS&OFFICES	\$7,253	\$36,769	0.000		0	
	13 MISC. PREMISES	\$13,473	\$74,341	0.072		1	
	16 GOVT SUBDIVISIONS	\$128,584	\$1,096,188	0.623		16	
	TOTAL *	\$1,464,673	\$8,391,247	0.994		248	



## INSURANCE SERVICES OFFICE, INC.

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

TERRITORY ALL		(1)	(2)	(3)	(4)	(5)	(6)
TYPE OF POLICY	CLASS GROUP	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	\$89,358	\$515,792	0.674		20	
	04 VENDING & RENTAL	\$90,703	\$510,035	0.966		12	
	07 CLUBS,AMSMT&SPRTS	\$719,681	\$3,519,168	0.772		120	
	08 HEALTH CARE FACIL	\$1,174	\$15,259	1.218		1	
	09 HOTELS AND MOTELS	\$62,155	\$192,179	0.058		2	
	10 SCHLS & CHURCHES	\$38,625	\$180,075	0.485		4	
	12 BUILDINGS&OFFICES	\$402,527	\$2,257,926	1.291		108	
	13 MISC. PREMISES	\$95,478	\$620,967	1.216		47	
	TOTAL *	\$1,499,701	\$7,811,401	0.909		314	
TOTAL ALL TOP	01 FOOD&BEV.(RETAIL)	\$940,512	\$5,399,465	0.948		251	
	02 RESTAURANTS	\$1,920,582	\$11,517,171	1.044		509	
	03 STORES	\$915,365	\$4,851,378	0.717		171	
	04 VENDING & RENTAL	\$108,051	\$687,452	1.033		16	
	05 FOOD & BEV. DIST.	\$296,010	\$1,546,957	0.485		42	
	06 NON-FOOD&BEV.DIST	\$456,526	\$2,383,306	1.031		74	
	07 CLUBS,AMSMT&SPRTS	\$1,223,631	\$5,413,597	1.067		198	
	08 HEALTH CARE FACIL	\$312,856	\$1,656,395	1.582		51	
	09 HOTELS AND MOTELS	\$1,820,244	\$13,704,608	0.982		628	
	10 SCHLS & CHURCHES	\$1,426,228	\$7,548,392	0.987		227	
	11 APARTMENTS	\$4,798,926	\$23,189,142	1.497		809	
	12 BUILDINGS&OFFICES	\$6,001,015	\$29,745,153	1.070		1,106	
	13 MISC. PREMISES	\$173,531	\$1,195,896	1.745		81	
	16 GOVT SUBDIVISIONS	\$128,584	\$1,096,188	0.623		16	
	TOTAL *	\$20,522,062	\$109,935,100	1.134		4,179	

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

## INSURANCE SERVICES OFFICE, INC.

MARYLAND  
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	\$936,890	\$3,691,768	0.695	0.725	111	1.019
	31 LIGHT CONTRACTING	\$630,100	\$3,301,795	1.364	1.422	370	1.016
	32 MEDIUM CONTRCTING	\$3,535,481	\$19,051,058	0.94	0.98	685	0.983
	33 HEAVY CONTRACTING	\$739,128	\$3,699,516	0.831	0.867	55	0.998
	34 DEALER OR DISTRIB	\$102,131	\$997,446	0.525	0.547	15	0.987
	35 LGT. MANUFACTURER	\$5,594	\$117,749	4.443	4.633	3	1.058
	36 MED. MANUFACTURER	\$186,630	\$581,908	1.867	1.947	12	1.018
	37 HVY. MANUFACTURER	\$147,653	\$752,708	0	0	0	0.998
	38 MISC. OPERATION	\$286,713	\$1,195,291	1.336	1.393	61	0.993
	TOTAL *	\$6,570,320	\$33,389,239	0.952		1,312	
33 MULT OFFICE	31 LIGHT CONTRACTING	\$5,047	\$24,181	0	0	0	1.025
	32 MEDIUM CONTRCTING	\$7,577	\$30,928	5.175	5.396	1	0.992
	33 HEAVY CONTRACTING	\$39,312	\$217,682	0.101	0.105	2	1.007
	38 MISC. OPERATION	\$184,204	\$744,496	1.379	1.438	14	1.002
	TOTAL *	\$236,140	\$1,017,286	1.259		17	
34 MULT MERCANTILE	30 SERVICE	\$38,741	\$288,671	0.994	1.036	6	1.027
	32 MEDIUM CONTRCTING	\$61,563	\$336,619	0.186	0.194	8	0.991
	34 DEALER OR DISTRIB	\$358,936	\$1,896,955	1.085	1.131	88	0.995
	38 MISC. OPERATION	\$48,735	\$299,613	1.13	1.178	27	1.001
	TOTAL *	\$507,975	\$2,821,858	0.973		129	
35 MULT INSTITUT.	31 LIGHT CONTRACTING	\$2,451	\$8,836	0	0	0	1.022
	32 MEDIUM CONTRCTING	\$6,431	\$32,931	3.716	3.875	1	0.989
	TOTAL *	\$8,882	\$41,767	2.691		1	
36 MULT SERVICES	30 SERVICE	\$59,401	\$265,406	3.258	3.397	45	1.014
	31 LIGHT CONTRACTING	\$104,446	\$598,226	0.687	0.716	29	1.011
	32 MEDIUM CONTRCTING	\$117,014	\$453,106	1.012	1.055	9	0.978
	33 HEAVY CONTRACTING	\$12,253	\$99,425	0.344	0.359	3	0.993
	34 DEALER OR DISTRIB	\$517,029	\$2,456,006	0.785	0.819	120	0.982
	36 MED. MANUFACTURER	\$5,178	\$19,748	1.026	1.07	1	1.013
	38 MISC. OPERATION	\$334,858	\$2,061,284	0.573	0.597	81	0.988
	TOTAL *	\$1,150,179	\$5,953,201	0.862		288	

## INSURANCE SERVICES OFFICE, INC.

MARYLAND  
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	\$837	\$4,091	0	0	0	0.966
	32 MEDIUM CONTRACTING	\$141,708	\$796,169	0.43	0.448	21	0.935
	33 HEAVY CONTRACTING	\$12,760	\$62,887	0	0	0	0.949
	34 DEALER OR DISTRIB	\$14,363	\$88,501	0	0	0	0.938
	35 LGT. MANUFACTURER	\$105,320	\$397,231	2.696	2.811	14	1.006
	36 MED. MANUFACTURER	\$470,623	\$2,493,689	0.426	0.444	29	0.968
	37 HVY. MANUFACTURER	\$243,290	\$1,215,484	0.888	0.926	13	0.949
	38 MISC. OPERATION	\$44,088	\$241,636	0	0	0	0.944
	TOTAL *	\$1,032,990	\$5,299,689	0.737		77	
38 MULT CONTRACTORS	30 SERVICE	\$1,069,405	\$6,064,747	1.326	1.383	278	1.033
	31 LIGHT CONTRACTING	\$1,711,211	\$9,355,297	0.968	1.009	613	1.03
	32 MEDIUM CONTRACTING	\$4,484,097	\$23,823,141	0.908	0.947	738	0.997
	33 HEAVY CONTRACTING	\$1,542,755	\$8,118,808	1.066	1.112	268	1.012
	38 MISC. OPERATION	\$57,364	\$291,149	0.006	0.006	0	1.007
	TOTAL *	\$8,864,831	\$47,653,142	0.992		1,897	
TOTAL ALL TOP	30 SERVICE	\$2,104,437	\$10,310,592	1.094		440	
	31 LIGHT CONTRACTING	\$2,454,092	\$13,292,426	1.054		1,012	
	32 MEDIUM CONTRACTING	\$8,353,871	\$44,523,952	0.916		1,463	
	33 HEAVY CONTRACTING	\$2,346,208	\$12,198,317	0.966		328	
	34 DEALER OR DISTRIB	\$992,459	\$5,438,908	0.855		223	
	35 LGT. MANUFACTURER	\$110,914	\$514,980	2.784		17	
	36 MED. MANUFACTURER	\$662,431	\$3,095,346	0.837		42	
	37 HVY. MANUFACTURER	\$390,943	\$1,968,192	0.553		13	
	38 MISC. OPERATION	\$955,962	\$4,833,469	0.925		183	
	TOTAL *	\$18,371,318	\$96,176,182	0.959		3,721	

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

INSURANCE SERVICES OFFICE, INC.

MARYLAND  
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	

## 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. 12/31/2019 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2015 - 2019 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.

## MARYLAND

## LOCAL PRODUCTS/COMPLETED OPERATIONS

## BASIC LIMIT RELATIVE CHANGE ANALYSIS

	(1)	(2)	(3)	(4)	(5)
TYPE OF	BAILEY		CREDIBILITY		
POLICY	FORMULA		WEIGHTED	BALANCED	INDICATED
	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	BALANCED
	FORMULA		WEIGHTED	
	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
	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
Maryland	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.

MARYLAND  
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	\$19,377	\$112,944	1.208	1.304	10	1.115
	02 RET.STRS-NTFD/DRG	\$26,422	\$130,707	0.273	0.294	3	0.966
	11 COMP. OPS. (LOW)	\$109,690	\$682,908	1.732	1.869	18	0.980
	12 COMP. OPS. (MED)	\$2,008,149	\$10,412,565	0.726	0.784	151	0.926
	13 COMP. OPS. (HGH)	\$76,453	\$550,695	0.772	0.834	4	0.936
	TOTAL *	\$2,240,092	\$11,889,820	0.776		186	
34 MULT MERCANTILE	01 RET.STRS-FOOD/DRG	\$200,583	\$1,167,637	0.375	0.404	66	1.113
	02 RET.STRS-NTFD/DRG	\$192,466	\$986,233	0.159	0.172	8	0.963
	12 COMP. OPS. (MED)	\$51,905	\$307,287	0.017	0.018	1	0.924
	TOTAL *	\$444,954	\$2,461,157	0.240		75	
36 MULT SERVICES	01 RET.STRS-FOOD/DRG	\$15,432	\$107,024	0.462	0.498	3	1.098
	02 RET.STRS-NTFD/DRG	\$269,284	\$1,258,987	1.550	1.672	151	0.951
	11 COMP. OPS. (LOW)	\$40,883	\$208,661	1.540	1.662	21	0.964
	12 COMP. OPS. (MED)	\$103,906	\$503,241	0.478	0.516	18	0.912
	13 COMP. OPS. (HGH)	\$12,380	\$60,696	0.000	0.000	0	0.922
	TOTAL *	\$441,884	\$2,138,609	1.215		193	
37 MULT INDUST/PROC.	01 RET.STRS-FOOD/DRG	\$652	\$3,180	0.000	0.000	0	1.092
	11 COMP. OPS. (LOW)	\$983	\$5,779	0.000	0.000	0	0.959
	12 COMP. OPS. (MED)	\$96,765	\$545,861	1.127	1.217	10	0.907
	TOTAL *	\$98,400	\$554,819	1.109		10	
38 MULT CONTRACTORS	11 COMP. OPS. (LOW)	\$276,208	\$1,454,997	0.299	0.322	18	0.976
	12 COMP. OPS. (MED)	\$3,904,773	\$21,978,827	0.770	0.831	337	0.923
	13 COMP. OPS. (HGH)	\$225,538	\$1,169,079	1.380	1.489	17	0.933
	TOTAL *	\$4,406,518	\$24,602,902	0.772		372	
TOTAL ALL TOP	01 RET.STRS-FOOD/DRG	\$236,044	\$1,390,785	0.448		79	
	02 RET.STRS-NTFD/DRG	\$488,172	\$2,375,927	0.932		162	
	11 COMP. OPS. (LOW)	\$427,764	\$2,352,345	0.784		57	
	12 COMP. OPS. (MED)	\$6,165,498	\$33,747,781	0.750		517	
	13 COMP. OPS. (HGH)	\$314,371	\$1,780,469	1.178		21	
	TOTAL *	\$7,631,848	\$41,647,307	0.772		836	

\* 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. 12/31/2021 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	\$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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SECTION C - REVISED CLM DIVISION NINE

Commercial Package Policy Package Modification Factors (Revised MLCP-PMF-1) ..... C-2

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

**MARYLAND (19)**

**PACKAGE MODIFICATION FACTORS**

<b>Package Modification Assignment (PMA)</b>	<b>Premium From CLM Division</b>			
	<b>Two</b>	<b>Three, Four, Five, Eight  Property</b>	<b>Four, Six  Liability</b>	<b>All Other Divisions</b>
Apartment House	.90	1.00	1.00	1.00
Contractors	.90	0.97	0.90	1.00
Industrial & Processing	.90	0.93	0.99	1.00
Institutional	.90	0.94	0.77	1.00
Mercantile	.90	1.00	0.88	1.00
Motel/Hotel	.90	1.00	0.80	1.00
Office	.90	0.93	0.92	1.00
Service	.90	1.00	0.90	1.00

**Table 1. Package Modification Factors**