

RULES – IMPLEMENTATION

JUNE 2, 2021

COMMERCIAL MULTIPLE LINE

LI-ML-2021-024

## OHIO COMMERCIAL PACKAGE POLICY REVISED PACKAGE MODIFICATION FACTOR REVISION TO BE IMPLEMENTED; EXHIBITS NEWLY PRESENTED IN EXCEL

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### KEY MESSAGE

Revised Commercial Package Policy package modification factors for an overall statewide change of -1.4% to be implemented.

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### UPGRADE TO WORD AND EXCEL DOCUMENTS

As previously noted, ISO is implementing changes to our authoring and delivery systems so that **newly created** documents will be delivered in Office 365 .docx/.xlsx format to be phased in by product/service tentatively beginning in second quarter 2021. We are pleased to announce that you will soon be receiving **form** documents in .docx format delivered/accessed via Circulars, CLM, EFD, ERC, Filings, FIRST, Forms Library, PRM and Suite +. Changes continue for other document types to be phased in by product/service. Products impacted include, but are not limited to, documents delivered/accessed via Circulars, CLM, EFD, ERC, Filings, FIRST, Forms Library (including PolicyWriting Support Forms Instructional Supplement), PRM, Statistical Plans and Suite +.

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### BACKGROUND

In circular [LI-ML-2021-001](#), 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-2021-RLA1, which presents a review of Commercial Package Policy modification factors experience. Refer to the attachment(s) for complete details.

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## IMPORTANT NOTE

### Change in Format

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

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

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

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## EFFECTIVE DATE

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

These changes are applicable to all policies written on or after October 1, 2021.

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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 SEPTEMBER 1, 2021. 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-2021-RLA1, NOT this circular number. Communications with the regulator concerning a filing affecting multiple lines of business (i.e., CL, PL, AL filing designation) should specify the line(s) of business that you are addressing.

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## RATING SOFTWARE IMPACT

No new attributes are being introduced with this revision.

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## POLICYHOLDER NOTIFICATION

If you decide to implement this revision, you should check all applicable laws for the state(s) to which this revision applies, to determine whether or not a specific policyholder notice requirement may apply. Please note that circular [LI-CL-2021-004](#) 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 10-21 (or the earliest possible subsequent date), along with any new and/or revised manual pages.

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## REFERENCE(S)

- [LI-CL-2021-004](#) (02/17/2021) Revised Lead Time Requirements Listing
- [LI-ML-2021-001](#) (02/03/2021) Commercial Package Policy Experience Reviewed By Staff

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## ATTACHMENT(S)

Filing [ML-2021-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

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

OHIO  
ADVISORY PACKAGE MODIFICATION FACTOR REVIEW  
COMMERCIAL PACKAGE POLICY  
ML-2021-RLA1  
EXECUTIVE SUMMARY

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PURPOSE

This document:

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

ISO has considered whether any adjustments need to be made to prospective loss costs or rating factors, which are based on historical experience (pre-COVID-19), to reflect the conditions in which these loss costs or rating factors will be effective (post-COVID-19). Commercial Package Policy Modification Factors are applied to separate underlying coverages that are then combined to create a package policy. Any adjustment that is made to the underlying coverage loss costs to reflect the potential impact of COVID-19 will therefore also be reflected in commercial package policy rating. While there will almost certainly be long-term behavioral, social and economic changes as a result of COVID-19, we expect, based on the information currently available, that those changes will have negligible effects on Commercial Package Policy Modification Factors. Therefore, ISO is not making any explicit adjustment to those factors due to COVID-19.

PMF CHANGES

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

<u>Type of Policy</u>	<u>Property</u>	<u>Liability</u>	<u>Prop. &amp; Liab. Total</u>
Motel/Hotel	-3.2%	-3.0%	-3.1%
Apartment	-3.2%	0.0%	-2.7%
Office	-5.5%	-5.3%	-5.4%
Mercantile	-5.4%	-2.3%	-4.4%
Institutional	-6.7%	0.0%	-5.6%
Services	2.0%	-2.1%	0.9%
Indust./Proc.	1.3%	2.3%	1.7%
Contractors	<u>-1.1%</u>	<u>6.0%</u>	<u>4.5%</u>
Statewide	-3.0%	1.2%	-1.4%

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OHIO

ADVISORY PACKAGE MODIFICATION FACTOR REVIEW

COMMERCIAL PACKAGE POLICY

ML-2021-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 09/30/19.
  - Basic Group II: ten fiscal accident years ending 09/30/19.
  - Special Causes of Loss: five fiscal accident years ending 09/30/19.
  - Crime: calendar year ending 06/30/16.
  - Inland Marine: five calendar accident years ending 12/31/16.
  - Fidelity: policy year ending 12/31/15.
  - Owners, Landlords, and Tenants: five fiscal accident years ending 09/30/19.
  - Manufacturers and Contractors: five fiscal accident years ending 09/30/19.
  - Products: three calendar accident years ending 12/31/18.
  - Local Products and Completed Operations: three calendar accident years ending 12/31/18.
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PRIOR ISO  
REVISIONS

The latest revisions in this state are:

<u>Filing</u>	ML-17-RLA1	ML-12-RLA1	ML-10-RLA1
<u>Dates</u>			
Implemented	6/1/2018	10/1/2012	10/1/2010
<u>Changes</u>			
Indicated	-3.9%	3.6%	5.7%
Filed	-3.9%	3.6%	5.7%
Implemented	-3.9%	3.6%	5.7%

OHIO  
ADVISORY PACKAGE MODIFICATION FACTOR REVIEW  
COMMERCIAL PACKAGE POLICY  
ML-2021-RLA1  
EXECUTIVE SUMMARY

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ADJUSTMENTS  
TO REPORTED  
EXPERIENCE

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

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TEN LARGEST  
GROUPS IN  
ISO DATA BASE

Insurers are listed in descending order based on the percent of statewide written premium volume from Annual Statement Page 15 for the year ending 12/31/18 for the Annual Statement Line of Business (ASLOB) indicated.

COMMERCIAL MULTI PERIL (ASLOB 51 & 52)

1. Cincinnati Insurance Company
  2. Westfield Insurance Company
  3. Travelers Indemnity Company
  4. Liberty Mutual Insurance Company
  5. Nationwide Mutual Insurance Company
  6. Continental Casualty Company
  7. Tokio Marine Companies
  8. Motorists Mutual Insurance Company
  9. Insurance Company Of North America
  10. Hanover 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 12/31/18 is:

Commercial Multi Peril (ASLOB 51 & 52). 56.9%.

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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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OHIO  
ADVISORY PACKAGE MODIFICATION FACTOR REVIEW  
COMMERCIAL PACKAGE POLICY  
ML-2021-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

### TABLE OF CONTENTS

	<u>Explanatory Pages</u>	<u>Corresponding Exhibits</u>
<u>SECTION A – SCOPE OF REVISION</u>		
Methodology Overview	Page 6	--
Summary of Package Modification Factor (PMF) Review	--	Exhibit A1
Calculation of Revised Package Modification Factors	Page 7-9	Exhibit A2
<u>SECTION B – CALCULATION OF PROPOSED CHANGES</u>		
<u>PROPERTY COVERAGES</u>		
Commercial Fire and Allied Lines Distribution of Advisory Loss Cost Level Change	Page 10-19	Exhibits B1-B5
Crime and Fidelity	Page 20	--
Commercial Inland Marine	Page 21	Exhibits B6-B7
<u>LIABILITY COVERAGES</u>		
Distribution of Advisory Loss Cost Level Change	Page 22-27	Exhibits B8-B17
<u>SECTION C- REVISED CLM DIVISION NINE</u>		
Commercial Package Policy Package Modification Factors (Revised MLCP-PMF-1)	--	C-2

## COMMERCIAL PACKAGE POLICY 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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## EXPLANATORY NOTES TO EXHIBIT A2

### CALCULATION OF REVISED PACKAGE MODIFICATION FACTORS

**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.

## EXPLANATORY NOTES TO EXHIBIT A2 (Cont'd)

### 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.

## EXPLANATORY NOTES TO EXHIBIT A2 (Cont'd)

### 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) shown 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).

## EXPLANATORY NOTES TO EXHIBITS B1 AND B2

### BASIC GROUP I AND SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

#### OBJECTIVE

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:

- (1) determine monoline classification and territorial loss cost level needs for Basic Group I;
- (2) determine monoline category loss cost level need for Special Causes of Loss;
- (3) determine indicated changes to the eight property CPP Package Modification Factors based on Basic Group I/Special Causes of Loss experience.

#### COLUMN (1)

#### LEAST SQUARES FORMULA RELATIVITIES

The Least Squares Formula Relativities are the marginal relativities which result from the application of the simultaneous review procedure to the raw experience (where marginal refers to the relativities for a given rating variable, e.g. type of policy, across all subsets of any other rating variables, i.e. rating group and 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 rating group/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.

EXPLANATORY NOTES TO EXHIBITS B1 AND B2 (Cont'd)

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:

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

$$RG_j = \frac{\sum_{k=1}^t \sum_{i=1}^m W_{ijk}^2 R_{ijk} TOP_i TER_k}{\sum_{k=1}^t \sum_{i=1}^m W_{ijk}^2 TOP_i^2 TER_k^2}, \text{ where } 1 \leq j \leq n$$

$$TER_k = \frac{\sum_{j=1}^n \sum_{i=1}^m W_{ijk}^2 R_{ijk} TOP_i RG_j}{\sum_{j=1}^n \sum_{i=1}^m W_{ijk}^2 TOP_i^2 RG_j^2}, \text{ where } 1 \leq k \leq t$$

EXPLANATORY NOTES TO EXHIBITS B1 AND B2 (Cont'd)

COLUMN (1)  
(Cont'd)

SPECIAL CAUSES OF LOSS:

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

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

- $TOP_i$  is the relativity for the  $i$ th Type of Policy;
- $RG_j$  is the relativity for the  $j$ th Rating Group;
- $CAT_j$  is the relativity for the  $j$ th Category;
- $TER_k$  is the relativity for the  $k$ th Territory;
- $W_{ijk}$  is the loss cost volume at current level for the  $i$ th Type of Policy,  $j$ th Rating Group or Category and  $k$ th Territory;
- $R_{ijk}$  is the experience ratio relativity for the  $i$ th Type of Policy,  $j$ th Rating Group or Category and  $k$ th Territory;
- $R_{ij}$  is the experience ratio relativity for the  $i$ th Type of Policy,  $j$ th Rating Group or Category;



EXPLANATORY NOTES TO EXHIBITS B1 AND B2 (Cont'd)

COLUMN (1)  
(Cont'd)

- 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 n Rating Group and t Territory relativities 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 is the 5-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, \$40,000,000 for rating group, and \$100,000,000 for type of policy. For Special Causes of Loss, K equals an aggregate loss cost volume of \$15,000,000.

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.

EXPLANATORY NOTES TO EXHIBITS B1 AND B2 (Cont'd)

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 and B2.

## EXPLANATORY NOTES TO EXHIBITS B3 AND B4

### BASIC GROUP I/SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

**INTRODUCTION**      The experience used in the relativity analysis and displayed in Exhibits B3 and B4 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 and the Special Causes of Loss excess 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)**      CREDIBILITY (Z) WEIGHTED EXPERIENCE RATIO

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, rating group or category, and territory (where applicable).

## EXPLANATORY NOTES TO EXHIBITS B3 AND B4 (Cont'd)

COLUMN (4)  
(Cont'd)

The important concept underlying empirical Bayesian credibility is that the credibility should depend both on the overall variation of the group of which the cell is a member, in addition to the variation of the yearly experience ratios for each cell. Therefore, if a cell's data is itself very stable then we would assign a relatively high credibility value, 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 (Territory, TOP and Rating Group/Category) within a class group. The K value is estimated from the underlying data using the empirical Bayes method and varies by TOP group and by territory where applicable. 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.

The calculated credibility (Z) is then applied to the five-year experience ratio with the complement of credibility applied to the credibility-weighted average of the individual experience ratios of the group, where group refers to the specified TOP/territory group. In a non-territory state, K values would be determined for the three TOP groups on an entire state basis.

COLUMN (5)

### 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, rating groups 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.

## EXPLANATORY NOTES TO EXHIBIT B5

### BASIC GROUP II RELATIVITY ANALYSIS

#### OBJECTIVE

The explanations which follow clarify Exhibit B5, the Basic Group II (BG II) relativity analysis. The purpose of this analysis is to:

- (1) determine the monoline loss cost level need;
- (2) determine indicated changes to the eight property Commercial Package Policy (CPP) Package Modification Factors (PMFs) based on Basic Group II experience.

#### COLUMN (1)

##### AGGREGATE LOSS COSTS

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

#### COLUMN (2)

##### 10 - YEAR EXPERIENCE RATIO

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

#### COLUMN (3)

##### FORMULA RELATIVITY

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

## EXPLANATORY NOTES TO EXHIBIT B5 (Cont'd)

COLUMN (3)  
(Cont'd)

Unlike the BGI and SCL relativity analyses, the BGII analysis does not employ a simultaneous review procedure since a one way review is involved. That is, the overall loss cost change is only distributed across type of policy; no other rating variables are considered.

COLUMN (4)

### CREDIBILITY

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

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

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

COLUMN (5)

### Z - WEIGHTED RELATIVITY

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

COLUMN (6)

### BALANCED FORMULA RELATIVITY

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

EXPLANATORY NOTES TO EXHIBIT B5 (Cont'd)

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.

## CRIME AND FIDELITY

The reviews for Burglary and Theft and for Fidelity are done on a multistate basis, combining both multiline and monoline experience. However, 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.



## EXPLANATORY NOTES TO EXHIBITS B6 AND B7

### COMMERCIAL INLAND MARINE RELATIVITY ANALYSIS

EXPERIENCE BASE	The Commercial Inland Marine IPMF review presented in the attached exhibits is based on a review of the latest available five years of monoline and multiline experience through accident year 2016 for all companies reporting data to Insurance Services Office under the Inland Marine Module of the Commercial Statistical Plan (CSP) and the Intermediate Level of the Commercial Minimum Statistical Plan (CMSP).
ADJUSTMENT OF DATA	Aggregate loss costs for each year in the review period have been adjusted to the levels which would have been earned had the current loss costs applied throughout the experience period. Reported premiums are adjusted to current level on an individual policy basis by applying a factor equal to all loss cost level changes that have been implemented subsequent to the policy being written. These adjusted premiums are then converted to a loss cost at current level. In order to eliminate the impact of company deviations from the manual level and individual risk modifications which were in effect at the time the policy was written, aggregate loss costs are further adjusted based on reported Rate Modification and Rate Departure Factors/Loss Cost Multipliers. Multiline aggregate loss costs are further adjusted to the level of the current Implicit Package Modification Factor (IPMF). Incurred losses are loaded for all loss adjustment expenses by applying a factor of 1.105.
RELATIVITY ANALYSIS	For Inland Marine coverage, a <u>multistate</u> IPMF level is determined via a two-way relativity analysis similar to the analysis used in Basic Group I. The experience for all reviewed classes is used to form class group relativities. These relativities for monoline and multiline (all programs combined) are determined through an iterative procedure. The ratio of the multiline relativity to the monoline relativity is multiplied by the current IPMF to yield the indicated IPMF. The indicated IPMF is subject to a minimum value of 0.500 and a maximum value of 1.500. If an indicated IPMF falls outside one of those limits, it is capped at that amount, the premiums for that Type of Policy (i.e., TOP 10 versus TOP 3X) are adjusted to the capped IPMF level, and the entire relativity review is performed again to take this into account.

## EXPLANATORY NOTES TO GENERAL LIABILITY

### RELATIVITY ANALYSIS - EXHIBITS B8 THROUGH B17.

#### OBJECTIVES

The objectives of this procedure are to:

- 1) determine monoline loss cost level needs for the appropriate rating variables;
- 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.

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#### EXPERIENCE BASE

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.

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#### SIMULTANEOUS DETERMINATION OF RATING VARIABLE RELATIVITIES

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.

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.

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.

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#### 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

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EXPLANATORY NOTES TO GENERAL LIABILITY  
RELATIVITY ANALYSIS - EXHIBITS B8 THROUGH 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;

EXPLANATORY NOTES TO GENERAL LIABILITY  
RELATIVITY ANALYSIS - EXHIBITS B8 THROUGH 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  $i^{th}$  type of policy;

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

$W_{ij}$  is the aggregate loss costs at current level for the  $i^{th}$

type of policy and  $j^{th}$  class group;

$r_{ij}$  is the relative change for the  $i^{th}$  type of policy

and  $j^{th}$  class group;

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

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

EXPLANATORY NOTES TO GENERAL LIABILITY  
RELATIVITY ANALYSIS - EXHIBITS B8 THROUGH 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;

EXPLANATORY NOTES TO GENERAL LIABILITY  
RELATIVITY ANALYSIS - EXHIBITS B8 THROUGH 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  $Z = \sqrt{P/18,000}$  for Owners, Landlords and Tenants,  $Z = \sqrt{P/18,000}$  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:

$$W = R^Z \quad \text{where:}$$

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

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

W is the credibility-weighted relativity.

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

INDICATED  
CHANGES

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

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

EXPLANATORY NOTES TO GENERAL LIABILITY  
RELATIVITY ANALYSIS - EXHIBITS B8 THROUGH 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.

## OHIO

COMMERCIAL PACKAGE POLICY  
SUMMARY OF THIS REVIEW

TYPE OF POLICY	PROPERTY PMFS			LIABILITY PMFS			PROP. & LIAB. TOTAL
	CURRENT	CAPPED	% CHANGE	CURRENT	CAPPED	% CHANGE	% CHANGE
MOTEL/HOTEL(31)	0.94	0.91	-3.2%	0.99	0.96	-3.0%	-3.1%
APARTMENT (32)	0.94	0.91	-3.2%	1.00	1.00	0.0%	-2.7%
OFFICE (33)	0.91	0.86	-5.5%	0.95	0.90	-5.3%	-5.4%
MERCANTILE (34)	0.93	0.88	-5.4%	0.86	0.84	-2.3%	-4.4%
INSTITUTION(35)	0.89	0.83	-6.7%	1.00	1.00	0.0%	-5.6%
SERVICES (36)	0.98	1.00	2.0%	0.94	0.92	-2.1%	0.9%
IND/PROC (37)	0.75	0.76	1.3%	0.87	0.89	2.3%	1.7%
CONTRACTORS(38)	0.93	0.92	-1.1%	0.83	0.88	6.0%	4.5%
STATEWIDE			-3.0%			1.2%	-1.4%



## INSURANCE SERVICES OFFICE, INC.

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

MOTEL/HOTEL(31) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	1,348,900	0.755	-7.0%	0.702	0.702
BASIC GRP II	659,823	1.500	-8.2%	1.377	1.377
SP CAUSE/LOSS	563,674	1.199	5.8%	1.269	1.269
* CRIME	2,622	0.910	0.0%	0.910	0.910
* INL. MAR.	11,783	0.910	0.0%	0.910	0.910
* FIDELITY	18,303	1.000	0.0%	1.000	1.000
TOTAL	2,605,105	0.940	-3.0%	0.912	0.910
LIABILITY-					
OL&T	1,686,026	0.990	-2.6%	0.964	0.964
TOTAL	1,686,026	0.990	-2.6%	0.964	0.960
-----					
PROP. & LIAB. TOTAL	4,291,131		-2.9%		-3.1%

APARTMENT (32) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	11,223,858	0.867	-7.9%	0.799	0.801
BASIC GRP II	6,537,256	1.242	-5.9%	1.169	1.172
SP CAUSE/LOSS	4,300,481	0.866	7.3%	0.929	0.932
* CRIME	8,221	0.910	0.0%	0.910	0.910
* INL. MAR.	3,718	0.910	0.0%	0.910	0.910
* FIDELITY	29,479	1.000	0.0%	1.000	1.000
TOTAL	22,103,013	0.940	-3.1%	0.911	0.910
LIABILITY-					
OL&T	3,827,306	1.000	1.7%	1.017	1.000
TOTAL	3,827,306	1.000	1.7%	1.017	1.000
-----					
PROP. & LIAB. TOTAL	25,930,319		-2.4%		-2.7%

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

## INSURANCE SERVICES OFFICE, INC.

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

OFFICE (33) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	2,932,447	0.793	-5.0%	0.753	0.753
BASIC GRP II	2,256,951	0.757	-5.7%	0.714	0.714
SP CAUSE/LOSS	4,207,800	1.163	-7.0%	1.082	1.082
* CRIME	11,379	0.910	0.0%	0.910	0.910
* INL. MAR.	139,645	0.910	0.0%	0.910	0.910
* FIDELITY	73,065	1.000	0.0%	1.000	1.000
TOTAL	9,621,287	0.910	-5.6%	0.859	0.860
LIABILITY-					
OL&T	9,228,883	0.953	-6.8%	0.888	0.888
M&C	676,244	0.978	2.6%	1.003	1.003
TOTAL	9,905,127	0.950	-5.7%	0.896	0.900
-----					
PROP. & LIAB. TOTAL	19,526,414		-5.6%		-5.4%

MERCANTILE (34) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	19,608,402	0.931	-11.5%	0.824	0.824
BASIC GRP II	10,470,686	1.117	-2.1%	1.094	1.094
SP CAUSE/LOSS	9,565,370	0.800	-0.3%	0.798	0.798
* CRIME	75,900	0.910	0.0%	0.910	0.910
* INL. MAR.	994,039	0.910	0.0%	0.910	0.910
* FIDELITY	444,546	1.000	0.0%	1.000	1.000
TOTAL	41,158,943	0.930	-5.6%	0.878	0.880
LIABILITY-					
OL&T	12,403,301	0.817	-2.5%	0.797	0.797
M&C	2,211,359	1.045	-2.5%	1.019	1.019
LOCAL PRODUCT	1,279,334	1.034	-1.0%	1.024	1.024
* MULTI PRODUCT	2,775,311	0.832	4.5%	0.870	0.870
TOTAL	18,669,305	0.860	-2.1%	0.842	0.840
-----					
PROP. & LIAB. TOTAL	59,828,248		-4.5%		-4.4%

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

## INSURANCE SERVICES OFFICE, INC.

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

INSTITUTION(35) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	7,555,027	0.787	-8.0%	0.724	0.734
BASIC GRP II	6,632,446	0.960	-15.0%	0.816	0.828
SP CAUSE/LOSS	6,006,170	0.962	-2.6%	0.937	0.950
* CRIME	70,523	0.910	0.0%	0.910	0.910
* INL. MAR.	193,097	0.910	0.0%	0.910	0.910
* FIDELITY	270,973	1.000	0.0%	1.000	1.000
TOTAL	20,728,236	0.890	-8.6%	0.814	0.830
LIABILITY-					
OL&T	4,102,716	1.037	6.4%	1.103	1.037
M&C	147,542	0.500	0.0%	0.500	0.500
TOTAL	4,250,258	1.000	6.1%	1.061	1.000
-----					
PROP. & LIAB. TOTAL	24,978,494		-6.1%		-5.6%

SERVICES (36) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	11,010,514	0.991	1.1%	1.002	1.002
BASIC GRP II	7,932,330	1.204	-5.9%	1.133	1.133
SP CAUSE/LOSS	6,278,207	0.794	10.4%	0.877	0.877
* CRIME	39,429	0.910	0.0%	0.910	0.910
* INL. MAR.	113,191	0.910	0.0%	0.910	0.910
* FIDELITY	390,504	1.000	0.0%	1.000	1.000
TOTAL	25,764,175	0.980	1.7%	0.996	1.000
LIABILITY-					
OL&T	4,209,686	0.809	3.4%	0.837	0.837
M&C	3,470,680	0.919	-2.7%	0.894	0.894
LOCAL PRODUCT	1,643,851	1.346	-1.1%	1.331	1.331
* MULTI PRODUCT	435,987	0.899	5.8%	0.951	0.951
TOTAL	9,760,204	0.940	-2.3%	0.919	0.920
-----					
PROP. & LIAB. TOTAL	35,524,379		0.6%		0.9%

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

INSURANCE SERVICES OFFICE, INC.

OHIO  
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	12,462,198	0.886	1.5%	0.899	0.899
BASIC GRP II	5,392,440	0.808	-2.6%	0.787	0.787
SP CAUSE/LOSS	4,033,900	0.500	0.0%	0.500	0.500
* CRIME	16,945	0.910	0.0%	0.910	0.910
* INL. MAR.	30,295	0.910	0.0%	0.910	0.910
* FIDELITY	232,731	1.000	0.0%	1.000	1.000
TOTAL	22,168,509	0.750	1.8%	0.764	0.760
LIABILITY-					
M&C	5,285,983	0.873	-3.2%	0.845	0.845
LOCAL PRODUCT	310,129	0.666	2.5%	0.683	0.683
* MULTI PRODUCT	5,835,839	0.884	6.1%	0.938	0.938
TOTAL	11,431,951	0.870	1.9%	0.886	0.890
-----					
PROP. & LIAB.	33,600,460		1.8%		1.7%
TOTAL					

CONTRACTORS(38) *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	3,313,323	0.997	-1.6%	0.981	0.981
BASIC GRP II	1,760,042	0.969	-6.4%	0.907	0.907
SP CAUSE/LOSS	2,472,990	0.821	5.4%	0.865	0.865
* CRIME	6,854	0.910	0.0%	0.910	0.910
* INL. MAR.	44,167	0.910	0.0%	0.910	0.910
* FIDELITY	183,217	1.000	0.0%	1.000	1.000
TOTAL	7,780,593	0.930	-0.7%	0.923	0.920
LIABILITY-					
M&C	13,465,368	0.875	6.9%	0.935	0.935
LOCAL PRODUCT	14,885,139	0.802	3.0%	0.826	0.826
TOTAL	28,350,507	0.830	5.5%	0.876	0.880
-----					
PROP. & LIAB.	36,131,100		4.2%		4.5%
TOTAL					

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

INSURANCE SERVICES OFFICE, INC.

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

STATEWIDE *****	(1) AGGREGATE LOSS COSTS	(2) CURRENT IMPLICIT PMF	(3) NET INDICATION	(4) INDIC. PMF	(5) CAPPED PMF
COVERAGE					
PROPERTY-					
BASIC GRP I	69,454,669	0.895	-5.4%	0.847	0.849
BASIC GRP II	41,641,974	1.040	-6.0%	0.978	0.980
SP CAUSE/LOSS	37,428,592	0.809	1.7%	0.823	0.826
* CRIME	231,873	0.910	0.0%	0.910	0.910
* INL. MAR.	1,529,935	0.910	0.0%	0.910	0.910
* FIDELITY	1,642,818	1.000	0.0%	1.000	1.000
TOTAL	151,929,861	0.903	-3.2%	0.874	0.876
LIABILITY-					
OL&T	35,457,918	0.896	-1.4%	0.883	0.875
M&C	25,257,176	0.892	2.5%	0.914	0.914
LOCAL PRODUCT	18,118,453	0.843	2.3%	0.862	0.863
* MULTI PRODUCT	9,047,137	0.868	5.6%	0.917	0.917
TOTAL	87,880,684	0.877	1.6%	0.891	0.888
-----					
PROP. & LIAB.	239,810,545		-1.4%		-1.4%
TOTAL					

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

INSURANCE SERVICES OFFICE, INC.

OHIO  
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)	0.960	0.932	0.930
APARTMENT (32)	0.950	0.926	0.930
OFFICE (33)	0.930	0.877	0.880
MERCANTILE (34)	0.910	0.866	0.870
INSTITUTION(35)	0.910	0.852	0.850
SERVICES (36)	0.970	0.974	0.970
IND/PROC (37)	0.800	0.802	0.800
CONTRACTORS(38)	0.850	0.885	0.890

NOTE: Combined PMFs are provided for informational purposes only.

INSURANCE SERVICES OFFICE, INC.

OHIO  
BASIC GROUP I RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	(5)
	LEAST SQUARES		CREDIBILITY		
TYPE OF POLICY	FORMULA RELATIVITY	CREDIBILITY	WEIGHTED RELATIVITY	BALANCED RELATIVITY	INDICATED CHANGE
10	1.160	0.285	1.043	1.051	
31	0.619	0.064	0.970	0.977	-7.0%
32	0.905	0.397	0.961	0.968	-7.9%
33	0.932	0.133	0.991	0.998	-5.0%
34	0.853	0.504	0.923	0.930	-11.5%
35	0.868	0.286	0.960	0.967	-8.0%
36	1.162	0.362	1.056	1.063	1.1%
37	1.162	0.387	1.060	1.067	1.5%
38	1.201	0.146	1.027	1.034	-1.6%
RATING GROUP					
1	0.945	0.550	0.969	0.975	
2	1.084	0.405	1.033	1.040	
3	1.210	0.407	1.081	1.087	
4	0.964	0.701	0.975	0.981	
5	1.273	0.093	1.023	1.029	
6	0.798	0.262	0.943	0.948	
7	0.866	0.252	0.964	0.970	
8	0.945	0.464	0.974	0.980	
9	0.922	0.319	0.974	0.980	
10	1.451	0.154	1.059	1.066	
11	1.083	0.107	1.009	1.015	
12	0.832	0.010	0.998	1.004	
13	1.126	0.329	1.040	1.046	
14	0.988	0.278	0.997	1.003	
15	1.083	0.264	1.021	1.028	
17	0.917	0.135	0.988	0.994	
18	1.001	0.123	1.000	1.006	
19	0.982	0.023	1.000	1.006	
20	0.854	0.053	0.992	0.998	
21	0.949	0.400	0.979	0.985	
22	0.969	0.344	0.989	0.995	
TERRITORY					
Cincinnati	1.100	0.304	1.029	1.062	
Cleveland	0.956	0.273	0.988	1.019	
Columbus	1.547	0.294	1.137	1.173	
Toledo	0.985	0.177	0.997	1.029	
Akron	1.868	0.111	1.072	1.106	
Dayton	0.968	0.142	0.995	1.027	
Balance of State	0.939	0.850	0.948	0.978	

INSURANCE SERVICES OFFICE, INC.

OHIO  
SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	(5)
	LEAST SQUARES		CREDIBILITY		
TYPE OF POLICY	FORMULA RELATIVITY	CREDIBILITY	WEIGHTED RELATIVITY	BALANCED RELATIVITY	INDICATED CHANGE
10	0.957	0.379	0.983	0.985	
31	1.634	0.068	1.034	1.042	5.8%
32	1.141	0.359	1.048	1.057	7.3%
33	0.762	0.353	0.909	0.916	-7.0%
34	0.954	0.555	0.974	0.982	-0.3%
35	0.899	0.467	0.951	0.959	-2.6%
36	1.183	0.449	1.078	1.087	10.4%
37	-----	-----	0.977	0.985	0.0%
38	1.129	0.238	1.029	1.038	5.4%
CATEGORY					
1	0.950	0.903	0.955	0.974	
2	0.807	0.156	0.967	0.986	
3	0.870	0.407	0.945	0.963	
4	1.065	0.441	1.028	1.048	
5	1.466	0.385	1.159	1.181	
6	0.884	0.204	0.975	0.994	
7	0.580	0.040	0.978	0.998	
8	1.969	0.375	1.289	1.315	
9	0.738	0.238	0.930	0.949	
10	0.984	0.090	0.999	1.018	
11	0.731	0.380	0.888	0.905	
12	1.052	0.349	1.018	1.038	
13	0.943	0.312	0.982	1.001	
14	1.178	0.277	1.046	1.067	



## INSURANCE SERVICES OFFICE, INC.

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

ENTIRE STATE		(1) ACCIDENT YEAR ENDING 09/30/19 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) CREDIBILITY WEIGHTED EXPERIENCE RATIO	(5) CREDIBILITY WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
10 MONOLINE	01 APARTMENTS	940,610	5,033,453	1.219	1.414	1.457
	02 OTHER HABITATIONAL	873,866	4,946,029	0.975	1.179	1.214
	03 RESTAURANTS & BARS	276,353	1,366,787	0.468	0.991	1.020
	04 OTHER MERCANTILE RS	1,569,193	8,088,759	0.981	1.086	1.119
	05 PUBLIC BUILDINGS	182,500	863,492	1.058	1.003	1.032
	06 CHURCHES	69,217	353,175	6.785	1.960	2.019
	07 SCHOOLS	137,510	915,014	0.120	0.878	0.903
	08 OFFICES AND BANKS	733,523	3,521,655	1.068	1.115	1.148
	09 REC. FACILITIES	498,401	2,467,717	0.249	0.925	0.953
	10 HOTELS AND MOTELS	57,420	363,657	3.755	1.672	1.722
	11 HOSPITALS/NURS HOME	133,334	507,334	3.674	1.433	1.476
	12 BLDGS UNDER CONST.	1,078	8,578	0.000	0.882	0.908
	13 MOTOR VEHICLE RISKS	287,998	1,527,103	3.310	1.496	1.541
	14 OTHER NON-MANUF.	362,645	2,927,789	0.651	1.005	1.035
	15 STORAGE	359,901	1,832,005	1.340	1.075	1.107
	17 FOOD MANUFACTURING	95,060	452,622	0.908	1.065	1.096
	18 WOOD MANUFACTURING	77,095	403,379	1.494	1.143	1.177
	19 WEARING APPAREL	34,717	163,340	0.000	0.526	0.541
	20 CHEM. MANUFACTURING	88,195	412,808	0.019	1.046	1.077
	21 METAL MANUFACTURING	447,820	2,238,096	0.826	0.992	1.022
	22 OTHER MANUFACTURING	294,787	1,515,065	1.463	1.076	1.108
	TOTAL*	7,521,223	39,907,857	1.148	1.142	1.176
31 MULTILINE MOTEL/HOTEL	10 HOTELS AND MOTELS	1,348,900	6,890,617	0.872	0.878	0.904
	TOTAL*	1,348,900	6,890,617	0.872	0.878	0.904
32 MULTILINE APARTMENT	01 APARTMENTS	7,598,843	43,902,966	0.913	0.886	0.912
	02 OTHER HABITATIONAL	3,625,015	21,976,466	1.045	0.960	0.989
	TOTAL*	11,223,858	65,879,432	0.956	0.910	0.937
33 MULTILINE OFFICE	08 OFFICES AND BANKS	2,932,447	15,313,849	0.987	0.875	0.901
	TOTAL*	2,932,447	15,313,849	0.987	0.875	0.901

## INSURANCE SERVICES OFFICE, INC.

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

ENTIRE STATE		(1) ACCIDENT YEAR ENDING 09/30/19 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) CREDIBILITY WEIGHTED EXPERIENCE RATIO	(5) CREDIBILITY WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
34 MULTILINE MERCANTILE	03 RESTAURANTS & BARS	4,928,581	23,860,654	0.909	0.916	0.944
	04 OTHER MERCANTILE RS	11,614,187	61,479,022	0.811	0.803	0.827
	08 OFFICES AND BANKS	673,458	3,648,634	1.021	0.936	0.964
	13 MOTOR VEHICLE RISKS	568,418	3,110,927	0.859	0.857	0.882
	14 OTHER NON-MANUF.	370,945	1,972,815	0.599	0.801	0.825
	15 STORAGE	1,452,813	7,579,265	1.355	1.192	1.227
	TOTAL*	19,608,402	101,651,317	0.880	0.866	0.892
35 MULTILINE INSTITUTIONAL	02 OTHER HABITATIONAL	79,562	335,204	0.241	0.792	0.816
	05 PUBLIC BUILDINGS	637,836	3,245,016	1.571	1.024	1.055
	06 CHURCHES	2,502,528	13,865,980	0.586	0.734	0.756
	07 SCHOOLS	2,431,879	12,531,029	0.567	0.724	0.745
	08 OFFICES AND BANKS	535,356	2,862,900	0.197	0.733	0.755
	09 REC. FACILITIES	212,928	1,233,787	0.394	0.753	0.776
	11 HOSPITALS/NURS HOME	845,425	4,261,515	0.999	0.928	0.956
	13 MOTOR VEHICLE RISKS	10,513	69,061	0.000	0.692	0.713
	14 OTHER NON-MANUF.	299,000	1,559,433	0.270	0.743	0.765
	TOTAL*	7,555,027	39,963,925	0.659	0.778	0.802
36 MULTILINE SERVICES	03 RESTAURANTS & BARS	521,183	2,256,489	0.425	1.008	1.038
	04 OTHER MERCANTILE RS	1,308,976	6,589,914	1.106	1.078	1.110
	08 OFFICES AND BANKS	880,307	4,468,995	0.705	1.071	1.103
	09 REC. FACILITIES	2,796,679	15,000,451	0.799	1.002	1.032
	13 MOTOR VEHICLE RISKS	2,903,709	14,759,553	1.775	1.271	1.309
	14 OTHER NON-MANUF.	1,325,095	6,691,211	1.460	1.336	1.375
	15 STORAGE	803,992	4,295,233	1.553	1.166	1.201
	21 METAL MANUFACTURING	148,045	672,868	4.480	1.518	1.563
	22 OTHER MANUFACTURING	322,528	2,127,597	1.105	1.070	1.101
	TOTAL*	11,010,514	56,862,311	1.261	1.149	1.183
37 MULTILINE INDUST/PROCESS	04 OTHER MERCANTILE RS	1,031,958	4,981,263	1.019	1.051	1.082
	08 OFFICES AND BANKS	258,626	1,238,879	2.344	1.312	1.352
	13 MOTOR VEHICLE RISKS	25,197	133,243	9.555	1.833	1.887
	14 OTHER NON-MANUF.	303,960	1,463,913	0.441	0.992	1.021
	15 STORAGE	134,501	628,028	0.000	1.002	1.031
	17 FOOD MANUFACTURING	1,344,857	5,802,368	1.136	1.057	1.088
	18 WOOD MANUFACTURING	1,047,133	5,181,884	1.533	1.129	1.163
	19 WEARING APPAREL	118,331	798,240	1.277	1.093	1.125
	20 CHEM. MANUFACTURING	241,532	1,838,548	0.028	0.929	0.957
	21 METAL MANUFACTURING	4,592,106	23,747,898	0.830	1.029	1.059
	22 OTHER MANUFACTURING	3,363,997	17,376,118	0.932	1.046	1.077
	TOTAL*	12,462,198	63,190,382	0.984	1.052	1.083

INSURANCE SERVICES OFFICE, INC.

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

ENTIRE STATE		(1) ACCIDENT YEAR ENDING 09/30/19 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) CREDIBILITY WEIGHTED EXPERIENCE RATIO	(5) CREDIBILITY WEIGHTED RELATIVITY
TYPE OF POLICY	CATEGORY					
38 MULTILINE	04 OTHER MERCANTILE RS	2,382,339	12,488,682	1.179	1.096	1.129
CONTRACTORS	08 OFFICES AND BANKS	686,293	3,508,465	0.640	1.034	1.064
	12 BLDGS UNDER CONST.	85,492	391,724	0.000	0.919	0.947
	14 OTHER NON-MANUF.	159,199	756,954	0.744	1.061	1.093
	TOTAL*	3,313,323	17,145,825	1.016	1.077	1.109
TOTAL ALL TOPS*	01 APARTMENTS	8,539,453	48,936,419	0.947	0.944	0.972
	02 OTHER HABITATIONAL	4,578,443	27,257,699	1.017	0.999	1.029
	03 RESTAURANTS & BARS	5,726,117	27,483,930	0.844	0.928	0.956
	04 OTHER MERCANTILE RS	17,906,653	93,627,640	0.908	0.901	0.928
	05 PUBLIC BUILDINGS	820,336	4,108,508	1.457	1.020	1.050
	06 CHURCHES	2,571,745	14,219,155	0.753	0.767	0.790
	07 SCHOOLS	2,569,389	13,446,043	0.543	0.732	0.754
	08 OFFICES AND BANKS	6,700,010	34,563,377	0.916	0.955	0.984
	09 REC. FACILITIES	3,508,008	18,701,955	0.696	0.976	1.005
	10 HOTELS AND MOTELS	1,406,320	7,254,274	0.990	0.911	0.937
	11 HOSPITALS/NURS HOME	978,759	4,768,849	1.364	0.997	1.027
	12 BLDGS UNDER CONST.	86,570	400,302	0.000	0.919	0.946
	13 MOTOR VEHICLE RISKS	3,795,835	19,599,887	1.801	1.228	1.265
	14 OTHER NON-MANUF.	2,820,844	15,372,115	0.966	1.107	1.140
	15 STORAGE	2,751,207	14,334,531	1.345	1.160	1.194
	17 FOOD MANUFACTURING	1,439,917	6,254,990	1.121	1.057	1.089
	18 WOOD MANUFACTURING	1,124,228	5,585,263	1.530	1.130	1.164
	19 WEARING APPAREL	153,048	961,580	0.987	0.964	0.993
	20 CHEM. MANUFACTURING	329,727	2,251,356	0.026	0.960	0.989
	21 METAL MANUFACTURING	5,187,971	26,658,862	0.933	1.039	1.071
	22 OTHER MANUFACTURING	3,981,312	21,018,780	0.985	1.050	1.082
	TOTAL*	76,975,892	406,805,515	0.977	0.971	1.000

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

INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 09/30/19 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	3,153,362	15,296,499	1.052	1.024	1.128
	02 RES. APTS. AND COND	44,792	223,547	0.627	0.790	0.870
	03 OFFICES	247,619	1,363,128	0.489	0.687	0.757
	04 MERCANTILE - HIGH	416,420	2,154,760	0.298	0.557	0.613
	05 MERCANTILE - MEDIUM	141,334	777,588	0.538	0.734	0.808
	06 MERCANTILE - LOW	63,968	350,479	0.826	0.842	0.927
	07 MOTELS AND HOTELS	4,140	26,675	0.702	0.816	0.899
	08 INSTITUTIONAL - HIG	107,609	667,418	0.307	0.659	0.726
	09 INSTITUTIONAL - LOW	49,525	306,201	1.674	1.081	1.191
	10 INDUST-PROC - HIGH	40,006	204,748	0.023	0.633	0.697
	11 INDUST-PROC - LOW	244,292	1,272,934	0.102	0.522	0.575
	12 SERVICE - HIGH	106,223	586,345	1.009	0.902	0.993
	13 SERVICE - LOW	219,909	1,156,989	0.799	0.827	0.911
	14 CONTRACTORS	8,590	58,251	1.610	1.022	1.126
	TOTAL*	4,847,789	24,445,562	0.858	0.906	0.998
31 MULTILINE	01 BUILDINGS	454,890	2,311,752	2.021	1.424	1.568
MOTEL/HOTEL	07 MOTELS AND HOTELS	108,784	599,957	0.719	0.869	0.957
	TOTAL*	563,674	2,911,709	1.770	1.317	1.450
32 MULTILINE	01 BUILDINGS	3,878,657	19,897,778	1.006	0.994	1.095
APARTMENT	02 RES. APTS. AND COND	421,824	2,544,776	0.768	0.844	0.930
	TOTAL*	4,300,481	22,442,554	0.983	0.979	1.079
33 MULTILINE	01 BUILDINGS	2,555,157	13,456,672	0.606	0.663	0.730
OFFICE	03 OFFICES	1,647,905	8,309,759	0.501	0.610	0.672
	04 MERCANTILE - HIGH	1,143	3,498	0.000	0.822	0.905
	08 INSTITUTIONAL - HIG	2,192	13,169	0.000	0.819	0.902
	11 INDUST-PROC - LOW	159	162	0.000	0.823	0.906
	12 SERVICE - HIGH	474	1,266	0.000	0.822	0.905
	14 CONTRACTORS	770	850	0.000	0.822	0.905
	TOTAL*	4,207,800	21,785,376	0.564	0.642	0.708

INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 09/30/19 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	5,801,667	29,995,563	0.819	0.828	0.912
	03 OFFICES	33,473	153,950	0.639	0.876	0.965
	04 MERCANTILE - HIGH	1,439,362	7,662,471	1.000	0.976	1.075
	05 MERCANTILE - MEDIUM	1,586,727	8,512,352	1.419	1.288	1.419
	06 MERCANTILE - LOW	638,580	3,200,013	0.649	0.773	0.851
	08 INSTITUTIONAL - HIGH	279	2,093	0.000	0.822	0.905
	10 INDUST-PROC - HIGH	146	146	0.000	0.823	0.906
	11 INDUST-PROC - LOW	846	2,191	0.000	0.822	0.905
	12 SERVICE - HIGH	15,469	74,009	1.427	0.975	1.074
	13 SERVICE - LOW	40,754	210,729	1.746	1.040	1.145
	14 CONTRACTORS	8,067	37,586	0.000	0.814	0.896
	TOTAL*	9,565,370	49,851,103	0.938	0.924	1.018
35 MULTILINE INSTITUTIONAL	01 BUILDINGS	3,990,377	22,409,996	0.763	0.781	0.860
	03 OFFICES	17,019	50,161	0.000	0.811	0.893
	06 MERCANTILE - LOW	140	381	0.000	0.823	0.906
	08 INSTITUTIONAL - HIGH	1,225,162	8,166,817	1.894	1.632	1.797
	09 INSTITUTIONAL - LOW	761,635	4,320,295	0.401	0.606	0.667
	12 SERVICE - HIGH	6,439	32,499	0.000	0.815	0.898
	13 SERVICE - LOW	4,179	14,468	0.000	0.819	0.902
	14 CONTRACTORS	1,219	6,412	0.000	0.821	0.904
	TOTAL*	6,006,170	35,001,029	0.944	0.933	1.027
36 MULTILINE SERVICES	01 BUILDINGS	3,638,625	18,904,700	1.019	0.996	1.097
	03 OFFICES	34,668	157,844	1.555	0.998	1.099
	04 MERCANTILE - HIGH	54,410	324,899	0.672	0.896	0.987
	05 MERCANTILE - MEDIUM	9,563	44,187	0.013	0.841	0.926
	06 MERCANTILE - LOW	9,434	38,814	0.067	0.847	0.933
	08 INSTITUTIONAL - HIGH	27,517	147,797	0.000	0.829	0.913
	09 INSTITUTIONAL - LOW	14,512	65,705	0.000	0.837	0.922
	10 INDUST-PROC - HIGH	322	778	0.000	0.845	0.931
	11 INDUST-PROC - LOW	20,666	110,206	0.100	0.843	0.928
	12 SERVICE - HIGH	1,394,649	7,339,047	1.226	1.089	1.199
	13 SERVICE - LOW	1,067,705	5,383,123	0.981	0.953	1.050
	14 CONTRACTORS	6,136	28,440	0.000	0.842	0.927
	TOTAL*	6,278,207	32,545,540	1.045	1.006	1.108

INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 09/30/19 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	2,288,120	12,249,254	0.608	0.720	0.793
	03 OFFICES	7,256	35,443	0.824	0.919	1.012
	04 MERCANTILE - HIGH	40,619	190,418	0.472	0.877	0.966
	05 MERCANTILE - MEDIUM	1,350	5,375	0.000	0.844	0.930
	06 MERCANTILE - LOW	17	17	0.000	0.845	0.931
	08 INSTITUTIONAL - HIG	-	19	0.000	1.000	1.000
	10 INDUST-PROC - HIGH	262,043	1,285,876	1.230	0.996	1.097
	11 INDUST-PROC - LOW	1,427,206	7,806,570	0.649	0.775	0.854
	12 SERVICE - HIGH	2,654	18,183	0.747	0.912	1.004
	13 SERVICE - LOW	3,981	18,253	1.633	0.995	1.096
	14 CONTRACTORS	654	1,297	0.000	0.845	0.931
	TOTAL*	4,033,900	21,610,705	0.663	0.760	0.837
38 MULTILINE CONTRACTORS	01 BUILDINGS	917,400	4,834,363	0.926	0.928	1.022
	03 OFFICES	44,951	220,427	0.872	0.923	1.017
	04 MERCANTILE - HIGH	310,187	1,502,176	0.627	0.856	0.943
	05 MERCANTILE - MEDIUM	7,379	35,237	0.000	0.841	0.926
	06 MERCANTILE - LOW	50,446	256,388	0.306	0.854	0.941
	08 INSTITUTIONAL - HIG	-	416	0.000	1.000	1.000
	11 INDUST-PROC - LOW	824	3,204	0.000	0.844	0.930
	12 SERVICE - HIGH	2,949	6,266	0.000	0.844	0.930
	13 SERVICE - LOW	7,154	26,116	0.270	0.867	0.955
	14 CONTRACTORS	1,131,700	5,608,906	1.419	1.163	1.281
	TOTAL*	2,472,990	12,493,499	1.094	1.024	1.128
TOTAL ALL TOPS*	01 BUILDINGS	26,678,255	139,356,577	0.878	0.880	0.969
	02 RES. APTS. AND COND	466,616	2,768,323	0.754	0.839	0.924
	03 OFFICES	2,032,891	10,290,712	0.525	0.640	0.705
	04 MERCANTILE - HIGH	2,262,141	11,838,222	0.802	0.879	0.968
	05 MERCANTILE - MEDIUM	1,746,353	9,374,739	1.333	1.238	1.364
	06 MERCANTILE - LOW	762,585	3,846,092	0.634	0.785	0.865
	07 MOTELS AND HOTELS	112,924	626,632	0.718	0.867	0.955
	08 INSTITUTIONAL - HIG	1,362,759	8,997,729	1.727	1.537	1.693
	09 INSTITUTIONAL - LOW	825,672	4,692,201	0.470	0.639	0.703
	10 INDUST-PROC - HIGH	302,517	1,491,548	1.068	0.948	1.044
	11 INDUST-PROC - LOW	1,693,993	9,195,267	0.563	0.739	0.814
	12 SERVICE - HIGH	1,528,857	8,057,615	1.204	1.072	1.182
	13 SERVICE - LOW	1,343,682	6,809,678	0.970	0.935	1.029
	14 CONTRACTORS	1,157,136	5,741,742	1.400	1.157	1.274
	TOTAL*	42,276,381	223,087,077	0.907	0.908	1.000

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

INSURANCE SERVICES OFFICE, INC.

## OHIO

## BASIC GROUP II RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	ACCIDENT YEAR ENDING 09/30/19 AGGR. LOSS COSTS AT CURRENT IMPLICIT PMF	ACCIDENT YEARS 2010 - 2019 EXPER. RATIO AT CURRENT PMF A	FORMULA RELATIVITY (2)/ 1.171 B	CREDIBILITY C	CREDIBILITY WEIGHTED RELATIVITY D	BALANCED FORMULA RELATIVITY E	NORMALIZED FORMULA RELATIVITY F	INDICATED CHANGE
MONOLINE	4,204,554	1.3010	1.1110	0.4750	1.053	1.0530	1.0574	
MULTILINE	41,641,974	1.1580	0.9890	0.9050	0.990	0.9900	0.9940	
COVERAGE	45,846,528	1.1710	1.0000			0.9958	0.9998	
MULTILINE TOP								
31 MOTEL/HOTEL	659,823	0.8800	0.7510	0.1140	0.972	0.9670	0.9711	-8.2%
32 APARTMENT	6,537,256	1.1640	0.9940	0.5900	0.996	0.9910	0.9952	-5.9%
33 OFFICE	2,256,951	1.1650	0.9950	0.3030	0.998	0.9930	0.9972	-5.7%
34 MERCANTILE	10,470,686	1.2320	1.0520	0.6960	1.036	1.0310	1.0353	-2.1%
35 INSTITUTIONAL	6,632,446	0.9940	0.8490	0.6630	0.900	0.8950	0.8988	-15.0%
36 SERVICES	7,932,330	1.1630	0.9930	0.6330	0.996	0.9910	0.9952	-5.9%
37 INDUST/PROCESS	5,392,440	1.2390	1.0580	0.5290	1.031	1.0260	1.0303	-2.6%
38 CONTRACTORS	1,760,042	1.1350	0.9690	0.2850	0.991	0.9860	0.9902	-6.4%
	41,641,974	1.1580	0.9890		0.9950	0.9900	0.9940	

B - AVERAGE WEIGHTED BY COLUMN (1)

C - CREDIBILITY =  $P/(P+K)$  WHERE P REPRESENTS THE TOTAL 10 YEAR ADJUSTED LOSS COSTS AND K = 45,000,000D -  $(5) = (3) * (4) + (1.000 - (4))$ E -  $(6) = (5) * (0.990/0.995)$ F -  $(7) = (6) / 0.996$

INSURANCE SERVICES OFFICE, INC.

OHIO

COMMERCIAL I.M. RELATIVITY ANALYSIS

(1)	(2)	(3)	(4)	(5)
TOP	BALANCED	CURRENT	INDICATED	SELECTED
10	RELATIVITY	IPMF	IPMF	IPMF
3X & 7X	1.000	0.910	0.910	0.910

## CLASSIFICATION

150	0.923
191	1.100
192	0.785
220	0.789
221	0.755
234	1.202
235	1.088
240	0.789
241	0.715
327	0.757
328	0.932
340	0.646
341	0.757
342	0.751
343	0.767
403	0.640
451	0.946
452	0.778
453	0.811
454	0.713
460	0.479
482	0.889
510	0.662
514	0.631
530	0.628
534	0.757



INSURANCE SERVICES OFFICE, INC.

## OHIO

COMMERCIAL INLAND MARINE RELATIVITY ANALYSIS  
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	RATING GROUP	(1) 2016 AGGREGATE LOSS COSTS	(2) 2012 - 2016 AGGREGATE LOSS COSTS	(3) FIVE-YEAR EXP RATIO	(4) RELATIVITY
MONOLINE 10	150	311,633	1,898,096	1.151	1.353
	191	5,446,492	15,816,054	1.032	1.213
	192	862,002	2,760,886	0.627	0.737
	220	5,112	87,903	5.716	6.717
	221	1,491	2,853	1.199	1.409
	234	5,224,155	20,144,072	0.600	0.705
	235	8,439,000	24,407,283	0.761	0.894
	240	928,183	3,685,254	0.656	0.771
	241	15,553	114,739	0.053	0.062
	327	18,917	91,546	0.000	0.000
	328	2,319,887	11,908,665	0.792	0.931
	340	40,688	87,993	0.000	0.000
	341	0	0	0.000	0.000
	342	19,188	65,375	0.555	0.652
	343	589	3,417	343.665	578.925
	403	1,600,852	5,771,545	0.345	0.405
	451	3,309,677	12,953,836	0.855	1.005
	452	34,702	137,467	1.628	1.913
	453	45,575	212,456	3.203	3.764
	454	164,836	745,300	0.734	0.863
	460	790,198	3,687,530	0.415	0.488
	482	839,364	2,841,134	0.986	1.159
	510	3,252	39,977	0.020	0.024
	514	446,469	1,612,361	0.339	0.398
	530	504,434	2,697,004	0.489	0.575
	534	0	0	0.000	0.000
	TOTAL#	31,372,249	111,772,746	0.785	0.922

INSURANCE SERVICES OFFICE, INC.

## OHIO

COMMERCIAL INLAND MARINE RELATIVITY ANALYSIS  
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

TYPE OF POLICY	RATING GROUP	(1) 2016 AGGREGATE LOSS COSTS	(2) 2012 - 2016 AGGREGATE LOSS COSTS	(3) FIVE-YEAR EXP RATIO	(4) RELATIVITY
MULTILINE ##	150	720,095	3,333,227	0.795	0.934
3X & 7X	191	603,595	2,704,067	0.774	0.910
	192	202,803	783,492	0.826	0.971
	220	6,439	28,512	1.526	1.793
	221	5,606	27,010	0.258	0.303
	234	12,669,443	52,530,286	1.162	1.365
	235	478,171	2,380,353	2.879	3.383
	240	11,651	60,061	1.983	2.330
	241	5,028	15,371	0.019	0.022
	327	2,942	18,862	0.000	0.000
	328	396	2,751	168.726	198.268
	340	32,828	132,609	0.016	0.019
	341	0	0	0.000	0.000
	342	6,082	30,546	0.000	0.000
	343	2,369	7,996	0.000	0.000
	403	479,869	2,417,275	0.739	0.868
	451	95,342	438,635	0.360	0.423
	452	38,096	206,651	0.535	0.629
	453	34,375	104,958	0.147	0.173
	454	228,162	984,183	0.274	0.322
	460	3,613,811	15,118,089	0.318	0.374
	482	127,496	760,961	0.693	0.814
	510	23,290	121,842	0.000	0.000
	514	63,169	300,866	0.073	0.086
	530	1,129,574	4,779,992	0.414	0.486
	534	0	0	0.000	0.000
	TOTAL#	20,580,632	87,288,595	0.952	1.119

INSURANCE SERVICES OFFICE, INC.

## OHIO

COMMERCIAL INLAND MARINE RELATIVITY ANALYSIS  
SUMMARY OF EXPERIENCE USED IN SIMULTANEOUS REVIEW

	(1)	(2)	(3)	(4)	
	RATING 2016 AGGREGATE	2012 - 2016	FIVE-YEAR		
TYPE OF POLICY	GROUP	LOSS COSTS	AGGREGATE LOSS COSTS	EXP RATIO RELATIVITY	
TOTAL ALL TOPS#	150	1,031,728	5,231,323	0.903	1.061
	191	6,050,087	18,520,121	1.006	1.182
	192	1,064,805	3,544,378	0.665	0.781
	220	11,551	116,415	3.380	3.972
	221	7,097	29,863	0.456	0.536
	234	17,893,598	72,674,358	0.998	1.173
	235	8,917,171	26,787,636	0.875	1.028
	240	939,834	3,745,315	0.672	0.790
	241	20,581	130,110	0.045	0.053
	327	21,859	110,408	0.000	0.000
	328	2,320,283	11,911,416	0.821	0.965
	340	73,516	220,602	0.007	0.008
	341	0	0	0.000	0.000
	342	25,270	95,921	0.421	0.495
	343	2,958	11,413	267.552	314.397
	403	2,080,721	8,188,820	0.436	0.512
	451	3,405,019	13,392,471	0.841	0.988
	452	72,798	344,118	1.056	1.241
	453	79,950	317,414	1.889	2.220
	454	392,998	1,729,483	0.467	0.549
	460	4,404,009	18,805,619	0.335	0.394
	482	966,860	3,602,095	0.947	1.113
	510	26,542	161,819	0.002	0.002
	514	509,638	1,913,227	0.306	0.360
	530	1,634,008	7,476,996	0.437	0.514
	534	0	0	0.000	0.000
	TOTAL#	51,952,881	199,061,341	0.851	1.000

# TOTAL IN COLUMN (3) IS AN AVERAGE USING COLUMN (1) AS WEIGHTS.

## REFLECTS CURRENT IPMF OF 0.910.

INSURANCE SERVICES OFFICE, INC.

OHIO  
OWNERS, LANDLORDS AND TENANTS  
BASIC LIMIT RELATIVE CHANGE ANALYSIS

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TYPE OF POLICY	(1) BAILEY FORMULA RELATIVITY	(2) CREDIBILITY CREDIBILITY	(3) CREDIBILITY WEIGHTED RELATIVITY	(4) BALANCED RELATIVITY	(5) INDICATED CHANGE
10	1.017	0.332	1.006	1.009	
31	0.879	0.161	0.979	0.983	-2.6%
32	1.132	0.179	1.022	1.026	1.7%
33	0.803	0.297	0.937	0.940	-6.8%
34	0.952	0.395	0.981	0.984	-2.5%
35	1.309	0.255	1.071	1.074	6.4%
36	1.186	0.226	1.039	1.043	3.4%
CLASS GROUP					
1	0.947	0.194	0.989	0.987	
2	0.948	0.306	0.984	0.981	
3	0.949	0.179	0.991	0.988	
4	1.130	0.053	1.006	1.004	
5	0.383	0.048	0.955	0.953	
6	1.033	0.095	1.003	1.000	
7	0.974	0.187	0.995	0.992	
8	1.336	0.058	1.017	1.014	
9	0.979	0.207	0.996	0.993	
10	1.115	0.238	1.026	1.023	
11	0.985	0.191	0.997	0.994	
12	1.097	0.401	1.038	1.035	
13	0.577	0.117	0.938	0.935	
16	0.803	0.057	0.988	0.985	
TERRITORY					
501	1.112	0.223	1.024	1.027	
502	1.059	0.114	1.007	1.009	
503	0.889	0.225	0.974	0.977	
504	0.948	0.123	0.993	0.996	
505	0.998	0.257	1.000	1.002	
506	1.031	0.109	1.003	1.006	
507	1.014	0.101	1.001	1.004	
508	1.187	0.197	1.034	1.037	
509	0.967	0.501	0.984	0.986	
510	0.944	0.145	0.992	0.994	

INSURANCE SERVICES OFFICE, INC.

OHIO  
MANUFACTURERS AND CONTRACTORS  
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	0.986	0.331	0.995	0.983	
33	1.441	0.058	1.021	1.009	2.6%
34	0.765	0.116	0.969	0.958	-2.5%
35	-	-	0.995	0.983	0.0%
36	0.855	0.211	0.967	0.956	-2.7%
37	0.776	0.146	0.964	0.952	-3.2%
38	1.158	0.421	1.064	1.051	6.9%
CLASS GROUP					
30	1.063	0.189	1.012	1.010	
31	0.995	0.295	0.999	0.997	
32	1.026	0.385	1.010	1.008	
33	1.139	0.155	1.020	1.019	
34	0.878	0.170	0.978	0.977	
35	1.202	0.055	1.010	1.008	
36	0.867	0.110	0.984	0.983	
37	0.846	0.081	0.987	0.985	
38	0.934	0.166	0.989	0.987	

## INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	TERRITORY ALL CLASS GROUP	(1) CALENDAR A.Y.E. 09/30/19 AGGREGATE LOSS COSTS AT CURRENT LEVEL	(2) CALENDAR A.Y.E. 2015-2019 AGG LOSS COST CURRENT LEVEL	(3) FIVE YEAR EXPERIENCE RATIO	(4) RELATIVITY	(5) NUMBER OF OCCURRENCES	(6) BAL CELL RELATIVITY
10 MONOLINE	01 FOOD&BEV.(RETAIL)	\$197,292	\$1,436,202	1.348		103	
	02 RESTAURANTS	\$1,024,448	\$5,121,689	0.781		387	
	03 STORES	\$218,587	\$1,417,710	1.646		135	
	04 VENDING & RENTAL	\$17,422	\$103,004	0.779		4	
	05 FOOD & BEV. DIST.	\$62,013	\$317,533	0.127		9	
	06 NON-FOOD&BEV.DIST	\$106,127	\$675,321	0.688		36	
	07 CLUBS,AMSMT&SPRTS	\$462,746	\$2,316,996	1.279		143	
	08 HEALTH CARE FACIL	\$21,938	\$96,858	3.313		6	
	09 HOTELS AND MOTELS	\$581,848	\$2,445,380	1.065		286	
	10 SCHLS & CHURCHES	\$339,834	\$1,740,229	0.972		67	
	11 APARTMENTS	\$1,030,358	\$4,155,449	1.021		164	
	12 BUILDINGS&OFFICES	\$1,901,009	\$10,023,682	1.275		563	
	13 MISC. PREMISES	\$1,014,694	\$2,000,393	0.298		86	
	16 GOVT SUBDIVISIONS	\$12,974	\$33,440	0.06		1	
	TOTAL *	\$6,991,290	\$31,883,886	0.989		1,990	
31 MULT MOTEL/HOTEL	09 HOTELS AND MOTELS	\$1,077,333	\$5,589,152	0.876		467	
	TOTAL *	\$1,077,333	\$5,589,152	0.876		467	
32 MULT APARTMENT	11 APARTMENTS	\$2,120,440	\$9,826,189	1.14		494	
	12 BUILDINGS&OFFICES	\$325,123	\$1,520,256	1.293		82	
	TOTAL *	\$2,445,563	\$11,346,445	1.16		576	
33 MULT OFFICE	12 BUILDINGS&OFFICES	\$5,843,492	\$29,510,996	0.882		1,571	
	13 MISC. PREMISES	\$53,558	\$273,495	2.951		22	
	TOTAL *	\$5,897,050	\$29,784,491	0.901		1,593	
34 MULT MERCANTILE	01 FOOD&BEV.(RETAIL)	\$1,273,429	\$6,590,232	0.849		573	
	02 RESTAURANTS	\$3,368,516	\$16,417,070	0.975		1301	
	03 STORES	\$1,082,255	\$5,385,671	0.793		358	
	04 VENDING & RENTAL	\$8,967	\$52,018	0.502		5	
	05 FOOD & BEV. DIST.	\$255,710	\$1,213,713	0.449		32	
	06 NON-FOOD&BEV.DIST	\$725,738	\$3,492,254	1.056		126	
	12 BUILDINGS&OFFICES	\$1,210,808	\$6,358,159	1.027		418	
	13 MISC. PREMISES	\$9	\$27	0		0	
	TOTAL *	\$7,925,432	\$39,509,144	0.928		2,813	

## INSURANCE SERVICES OFFICE, INC.

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

TERRITORY ALL		(1)	(2)	(3)	(4)	(5)	(6)
		CALENDAR A.Y.E. 09/30/19 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
35 MULT INSTITUT.	07 CLUBS,AMSMT&SPRTS	\$65,241	\$363,327	0.504		27	
	08 HEALTH CARE FACIL	\$164,618	\$1,107,148	1.522		55	
	10 SCHLS & CHURCHES	\$2,110,937	\$11,146,285	1.51		949	
	12 BUILDINGS&OFFICES	\$90,005	\$468,771	1.727		79	
	13 MISC. PREMISES	\$18,686	\$87,626	0.16		2	
	16 GOVT SUBDIVISIONS	\$172,057	\$998,139	1.124		58	
	TOTAL *	\$2,621,544	\$14,171,296	1.458		1,170	
36 MULT SERVICES	03 STORES	\$208,438	\$974,676	1.013		81	
	04 VENDING & RENTAL	\$84,660	\$429,954	1.483		42	
	07 CLUBS,AMSMT&SPRTS	\$1,473,084	\$7,375,200	1.11		457	
	08 HEALTH CARE FACIL	\$1,809	\$9,320	0		0	
	09 HOTELS AND MOTELS	\$89,513	\$626,197	0.888		16	
	10 SCHLS & CHURCHES	\$5,765	\$20,143	0.032		1	
	12 BUILDINGS&OFFICES	\$459,915	\$2,037,437	1.096		188	
	13 MISC. PREMISES	\$366,711	\$1,835,720	1.36		137	
	TOTAL *	\$2,689,895	\$13,308,647	1.135		922	
TOTAL ALL TOP	01 FOOD&BEV.(RETAIL)	\$1,470,721	\$8,026,434	0.916		676	
	02 RESTAURANTS	\$4,392,964	\$21,538,759	0.929		1,688	
	03 STORES	\$1,509,280	\$7,778,057	0.947		574	
	04 VENDING & RENTAL	\$111,049	\$584,976	1.293		51	
	05 FOOD & BEV. DIST.	\$317,723	\$1,531,246	0.386		41	
	06 NON-FOOD&BEV.DIST	\$831,865	\$4,167,575	1.009		162	
	07 CLUBS,AMSMT&SPRTS	\$2,001,071	\$10,055,523	1.129		627	
	08 HEALTH CARE FACIL	\$188,365	\$1,213,326	1.716		61	
	09 HOTELS AND MOTELS	\$1,748,694	\$8,660,729	0.94		769	
	10 SCHLS & CHURCHES	\$2,456,536	\$12,906,657	1.432		1,017	
	11 APARTMENTS	\$3,150,798	\$13,981,638	1.101		658	
	12 BUILDINGS&OFFICES	\$9,830,352	\$49,919,301	1.007		2,901	
	13 MISC. PREMISES	\$1,453,658	\$4,197,261	0.662		247	
	16 GOVT SUBDIVISIONS	\$185,031	\$1,031,579	1.05		59	
	TOTAL *	\$29,648,107	\$145,593,061	1.02		9,531	

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

## INSURANCE SERVICES OFFICE, INC.

OHIO  
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. 09/30/19 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	30 SERVICE	\$463,220	\$2,186,090	1.009	0.915	127	0.993
	31 LIGHT CONTRACTING	\$670,372	\$3,625,413	1.097	0.996	443	0.98
	32 MEDIUM CONTRCTING	\$3,766,100	\$19,656,822	1.093	0.992	1,028	0.991
	33 HEAVY CONTRACTING	\$864,742	\$4,458,307	1.513	1.373	103	1.002
	34 DEALER OR DISTRIB	\$350,982	\$2,074,756	0.858	0.779	90	0.96
	35 LGT. MANUFACTURER	\$70,813	\$259,081	0.381	0.346	8	0.992
	36 MED. MANUFACTURER	\$512,601	\$2,433,188	0.805	0.731	38	0.967
	37 HVY. MANUFACTURER	\$337,063	\$1,575,310	1.146	1.04	26	0.969
	38 MISC. OPERATION	\$470,706	\$2,236,592	1.048	0.952	109	0.971
	TOTAL *	\$7,506,599	\$38,505,559	1.099		1,972	
33 MULT OFFICE	31 LIGHT CONTRACTING	\$6,537	\$66,395	0	0	0	1.006
	32 MEDIUM CONTRCTING	\$15,272	\$71,859	0.17	0.154	2	1.017
	33 HEAVY CONTRACTING	\$155,639	\$816,102	1.804	1.638	18	1.028
	38 MISC. OPERATION	\$254,657	\$1,282,854	1.613	1.464	40	0.996
	TOTAL *	\$432,105	\$2,237,210	1.606		60	
34 MULT MERCANTILE	30 SERVICE	\$85,738	\$479,042	1.902	1.727	14	0.967
	32 MEDIUM CONTRCTING	\$249,366	\$1,121,382	0.738	0.67	23	0.966
	34 DEALER OR DISTRIB	\$941,488	\$4,478,108	0.571	0.519	152	0.935
	36 MED. MANUFACTURER	\$1,988	\$2,404	0	0	0	0.941
	38 MISC. OPERATION	\$134,429	\$651,657	1.566	1.421	54	0.945
	TOTAL *	\$1,413,009	\$6,732,593	0.775		243	
35 MULT INSTITUT.	31 LIGHT CONTRACTING	\$18,450	\$113,819	0.132	0.12	2	0.98
	32 MEDIUM CONTRCTING	\$75,826	\$367,262	1.043	0.946	51	0.991
	TOTAL *	\$94,276	\$481,081	0.864		53	



## INSURANCE SERVICES OFFICE, INC.

OHIO  
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. 09/30/19 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
36 MULT SERVICES	30 SERVICE	\$71,139	\$390,027	1.34	1.216	57	0.965
	31 LIGHT CONTRACTING	\$269,833	\$1,848,253	1.463	1.328	152	0.953
	32 MEDIUM CONTRCTING	\$216,774	\$1,171,945	0.361	0.327	25	0.964
	33 HEAVY CONTRACTING	\$109,634	\$442,049	0.374	0.34	11	0.974
	34 DEALER OR DISTRIB	\$788,725	\$3,678,472	1.037	0.941	265	0.933
	36 MED. MANUFACTURER	\$36,942	\$174,150	0.141	0.128	10	0.94
	38 MISC. OPERATION	\$724,640	\$3,763,053	0.741	0.673	283	0.944
	TOTAL *	\$2,217,687	\$11,467,949	0.888		803	
37 MULT INDUST/PROC	31 LIGHT CONTRACTING	\$571	\$2,639	0	0	0	0.949
	32 MEDIUM CONTRCTING	\$202,212	\$1,061,703	0.668	0.606	47	0.96
	33 HEAVY CONTRACTING	\$204,958	\$969,007	0.706	0.641	19	0.97
	34 DEALER OR DISTRIB	\$27,183	\$134,039	1.688	1.532	11	0.93
	35 LGT. MANUFACTURER	\$135,159	\$637,261	1.512	1.373	46	0.96
	36 MED. MANUFACTURER	\$1,641,287	\$8,208,497	0.8	0.727	168	0.936
	37 HVY. MANUFACTURER	\$1,143,594	\$5,240,718	0.657	0.597	92	0.938
	38 MISC. OPERATION	\$22,661	\$102,225	0.211	0.192	3	0.94
	TOTAL *	\$3,377,625	\$16,356,089	0.77		386	
38 MULT CONTRACTORS	30 SERVICE	\$1,033,651	\$5,669,593	1.315	1.194	443	1.061
	31 LIGHT CONTRACTING	\$1,934,658	\$10,435,466	1.207	1.095	965	1.048
	32 MEDIUM CONTRCTING	\$4,641,638	\$22,935,910	1.376	1.249	1494	1.06
	33 HEAVY CONTRACTING	\$924,797	\$5,329,470	1.338	1.214	282	1.071
	38 MISC. OPERATION	\$69,325	\$250,157	0.596	0.541	6	1.037
	TOTAL *	\$8,604,069	\$44,620,596	1.32		3,190	
TOTAL ALL TOP	30 SERVICE	\$1,653,748	\$8,724,752	1.261		641	
	31 LIGHT CONTRACTING	\$2,900,421	\$16,091,985	1.195		1,562	
	32 MEDIUM CONTRCTING	\$9,167,188	\$46,386,883	1.198		2,670	
	33 HEAVY CONTRACTING	\$2,259,770	\$12,014,935	1.333		433	
	34 DEALER OR DISTRIB	\$2,108,378	\$10,365,375	0.808		518	
	35 LGT. MANUFACTURER	\$205,972	\$896,342	1.123		54	
	36 MED. MANUFACTURER	\$2,192,818	\$10,818,239	0.79		216	
	37 HVY. MANUFACTURER	\$1,480,657	\$6,816,028	0.768		118	
	38 MISC. OPERATION	\$1,676,418	\$8,286,538	1.013		495	
	TOTAL *	\$23,645,370	\$120,401,077	1.102		6,707	

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

INSURANCE SERVICES OFFICE, INC.

OHIO  
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	0.881	0.317	0.961	0.956	
34	0.979	0.343	0.993	0.987	3.2%
36	1.029	0.185	1.005	1.000	4.6%
37	1.086	0.477	1.040	1.035	8.3%
CLASS GROUP					
3	0.867	0.447	0.938	0.942	
4	1.109	0.384	1.041	1.044	
5	1.079	0.130	1.010	1.014	
6	0.977	0.310	0.993	0.996	
7	0.998	0.143	1.000	1.003	

NOTE: THE INDICATED CHANGES BY TOP WERE FURTHER ADJUSTED BY THE FOLLOWING  
DIFFERENTIALS: TOP 34: 1.013  
TOP 36: 1.011  
TOP 37: 0.980

## 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. 12/31/2018 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2014 - 2018 AGG LOSS COST CURRENT LEVEL	FIVE YEAR EXPERIENCE RATIO	RELATIVITY	NUMBER OF OCCURRENCES	BAL CELL RELATIVITY
10 MONOLINE	03 MAN,DLR,DSTFD/DRG	8,093,332	39,443,822	0.784	0.712	920	0.900
	04 DLR,DST-NOTFD/DRG	7,050,350	31,300,283	1.139	1.034	465	0.998
	05 MAN.NTFD/DRG(LOW)	1,674,016	6,525,174	0.980	0.890	84	0.969
	06 MAN.NTFD/DRG(MED)	8,719,673	39,390,154	1.006	0.914	462	0.952
	07 MAN.NTFD/DRG(HGH)	2,487,754	10,123,703	0.821	0.745	82	0.959
	TOTAL *	28,025,125	126,783,136	0.957		2,013	
34 MULT MERCANTILE	03 MAN,DLR,DSTFD/DRG	4,331,883	21,396,487	1.047	0.951	564	0.930
	04 DLR,DST-NOTFD/DRG	25,139,034	121,279,202	1.176	1.068	1,794	1.031
	06 MAN.NTFD/DRG(MED)	3,108	19,331	0.000	0.000	-	0.984
	TOTAL *	29,474,025	142,695,020	1.157		2,358	
36 MULT SERVICES	04 DLR,DST-NOTFD/DRG	2,760,971	12,384,922	1.274	1.157	688	1.044
	06 MAN.NTFD/DRG(MED)	42,893	205,196	0.000	0.000	-	0.996
	TOTAL *	2,803,864	12,590,118	1.254		688	
37 MULT INDUST/PROC.	03 MAN,DLR,DSTFD/DRG	13,380,685	63,881,777	1.035	0.940	2,512	0.974
	05 MAN.NTFD/DRG(LOW)	3,488,504	18,393,950	1.322	1.200	254	1.048
	06 MAN.NTFD/DRG(MED)	24,557,849	115,549,330	1.149	1.043	1,462	1.031
	07 MAN.NTFD/DRG(HGH)	5,784,533	29,451,053	1.257	1.141	329	1.038
	TOTAL *	47,211,571	227,276,110	1.143		4,557	
TOTAL ALL TOP	03 MAN,DLR,DSTFD/DRG	25,805,900	124,722,086	0.959		3,996	
	04 DLR,DST-NOTFD/DRG	34,950,355	164,964,407	1.176		2,947	
	05 MAN.NTFD/DRG(LOW)	5,162,520	24,919,124	1.211		338	
	06 MAN.NTFD/DRG(MED)	33,323,523	155,164,011	1.110		1,924	
	07 MAN.NTFD/DRG(HGH)	8,272,287	39,574,756	1.126		411	
	TOTAL *	107,514,585	509,344,384	1.101		9,616	

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

INSURANCE SERVICES OFFICE, INC.

OHIO  
LOCAL PRODUCTS/COMPLETED OPERATIONS  
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	0.982	0.722	0.987	0.985	
34	0.956	0.510	0.977	0.975	-1.0%
36	0.955	0.521	0.976	0.974	-1.1%
37	1.094	0.137	1.012	1.010	2.5%
38	1.018	0.965	1.017	1.015	3.0%
CLASS GROUP					
1	0.924	0.511	0.960	0.958	
2	1.075	0.497	1.037	1.033	
11	1.085	0.347	1.029	1.025	
12	1.008	1.000	1.008	1.004	
13	0.835	0.264	0.954	0.951	

INSURANCE SERVICES OFFICE, INC.

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

STATE	(1) BAILEY FORMULA RELATIVITY	(2) CREDIBILITY	(3) CREDIBILITY WEIGHTED RELATIVITY	(4) BALANCED RELATIVITY
	2.015	0.233	1.177	1.179
	1.234	0.389	1.085	1.086
	1.171	0.453	1.074	1.076
	1.179	0.356	1.060	1.062
	1.074	0.618	1.045	1.046
	1.181	0.253	1.043	1.044
	1.179	0.212	1.036	1.037
	1.273	0.136	1.033	1.035
	1.329	0.112	1.032	1.034
	1.219	0.158	1.032	1.033
	1.091	0.361	1.032	1.033
	1.178	0.187	1.031	1.032
	1.137	0.234	1.030	1.032
	1.121	0.256	1.030	1.031
	1.071	0.429	1.030	1.031
	1.081	0.366	1.029	1.030
	1.110	0.243	1.026	1.027
	1.146	0.182	1.025	1.026
	1.192	0.130	1.023	1.024
OHIO	1.030	0.365	1.011	1.012
	1.035	0.310	1.011	1.012
	1.026	0.391	1.010	1.011
	1.063	0.148	1.009	1.010
	1.020	0.251	1.005	1.006
	1.002	0.453	1.001	1.002
	0.986	0.557	0.992	0.993
	0.980	0.455	0.991	0.992
	0.904	0.095	0.990	0.992
	0.964	0.334	0.988	0.989
	0.936	0.183	0.988	0.989
	0.891	0.134	0.985	0.986
	0.961	0.471	0.982	0.983
	0.913	0.222	0.980	0.981
	0.926	0.285	0.978	0.980
	0.932	0.299	0.979	0.980
	0.935	0.313	0.979	0.980
	0.845	0.164	0.973	0.974
	0.838	0.156	0.973	0.974
	0.934	0.489	0.967	0.968
	0.901	0.378	0.961	0.963
	0.540	0.066	0.960	0.961
	0.798	0.215	0.953	0.954
	0.896	0.451	0.952	0.953
	0.906	0.570	0.945	0.947
	0.858	0.416	0.938	0.939
	0.466	0.087	0.936	0.937
	0.687	0.179	0.935	0.936
	0.780	0.288	0.931	0.932
	0.623	0.154	0.930	0.931
	0.769	0.304	0.923	0.924
	0.849	0.553	0.913	0.914
	0.562	0.170	0.907	0.908

\* Sorted by balanced relative change

## INSURANCE SERVICES OFFICE, INC.

OHIO  
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. 12/31/18 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2014-2018 AGG LOSS COST CURRENT LEVEL	FIVE YEAR EXPERIENCE RATIO	RELATIV.	NUMBER OF OCCURRENCES	BAL CELL RELATIV.
10 MONOLINE	01 RET.STRS-FOOD/DRG	\$65,579	\$259,476	0.637	0.557	17	0.863
	02 RET.STRS-NTFD/DRG	\$62,481	\$257,631	5.567	4.871	27	0.931
	11 COMP. OPS. (LOW)	\$72,979	\$359,918	0.823	0.720	19	0.924
	12 COMP. OPS. (MED)	\$2,240,614	\$10,994,165	0.777	0.680	208	0.905
	13 COMP. OPS. (HGH)	\$228,592	\$1,264,512	0.726	0.635	16	0.856
	TOTAL *	\$2,670,245	\$13,135,702	0.883		287	
34 MULT MERCANTILE	01 RET.STRS-FOOD/DRG	\$385,874	\$1,866,804	0.916	0.802	200	0.854
	02 RET.STRS-NTFD/DRG	\$216,739	\$1,015,219	0.711	0.622	29	0.922
	12 COMP. OPS. (MED)	\$98,776	\$477,567	0.432	0.378	5	0.896
	TOTAL *	\$701,389	\$3,359,590	0.785		234	
36 MULT SERVICES	01 RET.STRS-FOOD/DRG	\$39,225	\$193,060	2.182	1.909	16	0.853
	02 RET.STRS-NTFD/DRG	\$406,083	\$1,924,054	1.195	1.046	129	0.921
	11 COMP. OPS. (LOW)	\$152,114	\$744,632	1.413	1.237	52	0.914
	12 COMP. OPS. (MED)	\$240,189	\$1,091,442	1.059	0.926	42	0.895
	13 COMP. OPS. (HGH)	\$63,623	\$343,283	0.495	0.433	4	0.847
	TOTAL *	\$901,234	\$4,296,471	1.189		243	
37 MULT INDUST/PROC	01 RET.STRS-FOOD/DRG	\$13	\$241	0.000	0.000	0	0.885
	11 COMP. OPS. (LOW)	\$2,220	\$10,430	13.504	11.817	1	0.947
	12 COMP. OPS. (MED)	\$164,726	\$774,333	1.414	1.237	16	0.928
	13 COMP. OPS. (HGH)	\$3,068	\$10,917	0.000	0.000	0	0.878
	TOTAL *	\$170,027	\$795,921	1.546		17	
38 MULT CONTRACTORS	11 COMP. OPS. (LOW)	\$435,944	\$1,974,399	0.978	0.856	45	0.952
	12 COMP. OPS. (MED)	\$7,208,584	\$35,627,565	1.001	0.876	823	0.933
	13 COMP. OPS. (HGH)	\$516,184	\$2,652,390	0.767	0.671	33	0.882
	TOTAL *	\$8,160,712	\$40,254,354	0.985		901	
TOTAL ALL TOP	01 RET.STRS-FOOD/DRG	\$490,691	\$2,319,581	0.980		233	
	02 RET.STRS-NTFD/DRG	\$685,303	\$3,196,904	1.441		185	
	11 COMP. OPS. (LOW)	\$663,257	\$3,089,379	1.103		117	
	12 COMP. OPS. (MED)	\$9,952,889	\$48,965,072	0.953		1,094	
	13 COMP. OPS. (HGH)	\$811,467	\$4,271,102	0.731		53	
	TOTAL *	\$12,603,607	\$61,842,038	0.974		1,682	

\* 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. 12/31/2018 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2014 - 2018 AGG LOSS COST CURRENT LEVEL	FIVE YEAR EXPERIENCE RATIO	RELATIV.	NUMBER OF OCCURRENCES	BAL CELL RELATIV.
10 MONOLINE	01 RET.STRS-FOOD/DRG	2,151,747	9,207,997	0.954		570	
	02 RET.STRS-NTFD/DRG	2,295,068	11,448,808	1.305		473	
	11 COMP. OPS. (LOW)	3,895,100	18,175,165	1.627		651	
	12 COMP. OPS. (MED)	83,174,856	371,797,706	1.129		5,859	
	13 COMP. OPS. (HGH)	7,421,363	33,745,026	0.855		270	
	TOTAL *	98,938,134	444,374,702	1.129		7,823	
34 MULT MERCANTILE	01 RET.STRS-FOOD/DRG	7,378,051	34,825,684	1.019		3,165	
	02 RET.STRS-NTFD/DRG	4,658,506	21,948,409	1.063		619	
	12 COMP. OPS. (MED)	2,026,614	9,719,304	1.280		128	
	TOTAL *	14,063,171	66,493,397	1.071		3,912	
36 MULT SERVICES	01 RET.STRS-FOOD/DRG	731,256	3,413,076	1.191		192	
	02 RET.STRS-NTFD/DRG	11,447,132	45,559,628	1.208		2,628	
	11 COMP. OPS. (LOW)	3,040,380	13,966,259	1.000		463	
	12 COMP. OPS. (MED)	3,965,017	19,728,144	1.158		722	
	13 COMP. OPS. (HGH)	1,090,160	5,593,916	0.594		73	
	TOTAL *	20,273,945	88,261,023	1.134		4,078	
37 MULT INDUST/PROC.	01 RET.STRS-FOOD/DRG	9,836	70,552	0.697		1	
	11 COMP. OPS. (LOW)	114,421	544,767	0.929		18	
	12 COMP. OPS. (MED)	3,292,583	16,179,487	1.258		263	
	13 COMP. OPS. (HGH)	47,464	274,742	0.769		0	
	TOTAL *	3,464,304	17,069,548	1.239		282	
38 MULT CONTRACTORS	11 COMP. OPS. (LOW)	8,340,283	39,424,490	1.146		683	
	12 COMP. OPS. (MED)	145,250,258	693,909,762	1.167		12,596	
	13 COMP. OPS. (HGH)	13,790,618	64,566,546	1.050		709	
	TOTAL *	167,381,159	797,900,798	1.156		13,988	
TOTAL ALL TOP	01 RET.STRS-FOOD/DRG	10,270,890	47,517,309	1.017		3,928	
	02 RET.STRS-NTFD/DRG	18,400,706	78,956,845	1.183		3,720	
	11 COMP. OPS. (LOW)	15,390,184	72,110,681	1.238		1,815	
	12 COMP. OPS. (MED)	237,709,328	1,111,334,403	1.156		19,568	
	13 COMP. OPS. (HGH)	22,349,605	104,180,230	0.963		1,052	
	TOTAL *	304,120,713	1,414,099,468	1.143		30,083	

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

COMMERCIAL PACKAGE POLICY

TABLE OF CONTENTS

SECTION C - REVISED CLM DIVISION NINE

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

OHIO (34)

**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	0.90	0.91	1.00	1.00
Contractors	0.90	0.92	0.88	1.00
Industrial & Processing	0.90	0.76	0.89	1.00
Institutional	0.90	0.83	1.00	1.00
Mercantile	0.90	0.88	0.84	1.00
Motel/Hotel	0.90	0.91	0.96	1.00
Office	0.90	0.86	0.90	1.00
Service	0.90	1.00	0.92	1.00

**Table 1. Package Modification Factors**