

RULES – IMPLEMENTATION

JANUARY 17, 2020

COMMERCIAL MULTIPLE LINE

LI-ML-2020-011

MICHIGAN COMMERCIAL PACKAGE POLICY REVISED PACKAGE MODIFICATION FACTOR REVISION TO BE IMPLEMENTED

KEY MESSAGE

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

BACKGROUND

In circular [LI-ML-2019-034](#), we provided you with information about the Commercial Package Policy modification factor experience review.

ISO ACTION

We are implementing ML-2019-RLA1, which presents a review of Commercial Package Policy modification factors experience. Refer to the attachment(s) for complete details.

IMPORTANT NOTE

Change in Format

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

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

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

EFFECTIVE DATE

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

These changes are applicable to all policies written on or after June 1, 2020.

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 MAY 1, 2020. 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 Designation Number ML-2019-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.

RATING SOFTWARE IMPACT

No new attributes are being introduced with this revision.

POLICYHOLDER NOTIFICATION

If you decide to implement this revision, you should check all applicable laws for the state(s) to which this revision applies, to determine whether or not a specific policyholder notice requirement may apply. Please note that circular [LI-CL-2019-057](#) contains the ISO Guide To Renewals With Changed Conditions For Commercial Lines, which is available only as a guide to assist participating companies in complying with various conditional renewal statutes or regulations, for the major commercial lines of insurance serviced by ISO. The information in the Guide does not necessarily reflect all requirements or exceptions that may apply, and it is not intended as a substitute for your review of all applicable statutes and regulations concerning policyholder notification.

REVISION DISTRIBUTION

We will issue a Notice to Manualholders with an edition date of 6-20 (or the earliest possible subsequent date), along with any new and/or revised manual pages.

REFERENCE(S)

- [LI-CL-2019-057](#) (12/10/2019) Revised Lead Time Requirements Listing
- [LI-ML-2019-034](#) (10/02/2019) Commercial Package Policy Experience Reviewed By Staff

ATTACHMENT(S)

- Filing ML-2019-RLA1
- Excel Workbook

FILES AVAILABLE FOR DOWNLOAD

To download all files associated with this circular, including attachments in the full circular PDF and/or any additional files not included in the PDF, search for the circular number on [ISOnet Circulars](#). Then click the Word/Excel link under the Full Circular column on the Search Results screen.

Please note that in some instances, not all files listed in the Attachment(s) block (if applicable) are included in the PDF.

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DATA QUALITY

Statistical plan data reported to ISO is first processed through a system of rigorous automated data verification procedures so that only valid data would be used for ratemaking. Subsequent to this initial data submission review, additional analyses on the statistical plan data involving an even more customized data review for this line were performed by staff. During these processes, various data records were excluded from the review. The ISO staff responsible for this circular also reviewed the data for reasonableness.

ACKNOWLEDGMENT OF ACTUARIAL QUALIFICATIONS

The American Academy of Actuaries' "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.

CONTACT INFORMATION

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

MICHIGAN
ADVISORY PACKAGE MODIFICATION FACTOR REVIEW
COMMERCIAL PACKAGE POLICY
ML-2019-RLA1
EXECUTIVE SUMMARY

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.
-

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. & Liab. Total</u>
Motel/Hotel	-3.1%	-1.1%	-2.2%
Apartment	-5.6%	-1.0%	-4.4%
Office	-4.2%	0.0%	-2.0%
Mercantile	-2.0%	0.0%	-1.3%
Institutional	-6.3%	-4.3%	-6.0%
Services	-1.0%	-4.0%	-2.0%
Indust./Proc.	-6.5%	+3.6%	-3.2%
Contractors	<u>+1.1%</u>	<u>+5.3%</u>	<u>+4.4%</u>
Statewide	-3.3%	+1.5%	-1.4%

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 06/30/18.
 - Basic Group II: ten fiscal accident years ending 06/30/18.
 - Special Causes of Loss: five fiscal accident years ending 06/30/18.
 - 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 06/30/18.
 - Manufacturers and Contractors: five fiscal accident years ending 06/30/18.
 - Products: three calendar accident years ending 12/31/17.
 - Local Products and Completed Operations: three calendar accident years ending 12/31/17.
-

PRIOR ISO
REVISIONS

The latest revisions in this state are:

<u>Filing</u>	ML-18-RLA1	ML-15-RLA1	ML-13-RLA1
<u>Dates</u>			
Implemented	5/1/2019	6/1/2016	2/1/2014
<u>Changes</u>			
Indicated	-1.8%	+3.7%	+7.4%
Filed	-1.8%	+3.7%	+7.4%
Implemented	-1.8%	+3.7%	+7.4%

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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.

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. Hanover Insurance Company
 2. Travelers Indemnity Company
 3. Cincinnati Insurance Company
 4. Frankenmuth Mutual Insurance Company
 5. Tokio Marine Companies
 6. Hartford Accident & Indemnity Company
 7. Liberty Mutual Insurance Company
 8. Continental Casualty Company
 9. Westfield Insurance Company
 10. Nationwide Mutual Insurance Company
-

SIZE OF ISO
DATA BASE

The market share of ISO participating insurers as measured by Annual Statement Page 15 written premium for the year ending 12/31/18 is:

Commercial Multi Peril (ASLOB 51 & 52). 45.2%.

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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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.

COMMERCIAL PACKAGE POLICY

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COMMERCIAL PACKAGE POLICY METHODOLOGY OVERVIEW

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.

STEP 1: THE RELATIVITY ANALYSES

Each line of insurance develops indicated changes to monoline and multiline aggregate loss costs based on an experience ratio relativity analysis for that coverage. The monoline indication represents the needed change to monoline loss costs. The multiline indication represents the needed change to multiline aggregate loss costs, which is implemented through changes to the PMFs. For this PMF analysis, multiline indications are developed for each line of insurance and Type of Policy. Relativity analyses are explained in Section B.

STEP 2: CALCULATION OF THE PMFs

The procedure described above generates indicated Implicit PMFs (IPMFs) which vary by the various lines of insurance and by type of policy. IPMFs represent what the PMF would be for the CPP risk if only a single coverage were written. For each Type of Policy, IPMFs are weighted by CPP aggregate loss costs to determine the indicated property and liability PMFs. These PMFs may be capped, or rounded to the nearest one percent, and certain component IPMFs appropriately adjusted for this change. These calculations are explained in the remainder of Section A.

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.

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 5

BASIC GROUP II RELATIVITY ANALYSIS

OBJECTIVE

The explanations which follow clarify Exhibit 5, 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 5 (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 5 (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 multistate 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.

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.

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.

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

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^{th} type of policy;

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

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

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

type of policy, j^{th} class group and k^{th} territory;

r_{ijk} is the relative change for the i^{th} type of policy,

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

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

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

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

type of policy, j^{th} class group and k^{th} state;

r_{ijk} is the relative change for the i^{th} type of policy,

j^{th} class group and k^{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

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

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

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

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.

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.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN

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)	0.98	0.95	-3.1%	0.91	0.90	-1.1%	-2.2%
APARTMENT (32)	0.90	0.85	-5.6%	0.98	0.97	-1.0%	-4.4%
OFFICE (33)	0.96	0.92	-4.2%	0.96	0.96	0.0%	-2.0%
MERCANTILE (34)	1.00	0.98	-2.0%	1.00	1.00	0.0%	-1.3%
INSTITUTION(35)	0.95	0.89	-6.3%	0.94	0.90	-4.3%	-6.0%
SERVICES (36)	1.00	0.99	-1.0%	1.00	0.96	-4.0%	-2.0%
IND/PROC (37)	0.93	0.87	-6.5%	0.84	0.87	3.6%	-3.2%
CONTRACTORS(38)	0.95	0.96	1.1%	0.95	1.00	5.3%	4.4%
STATEWIDE			-3.3%			1.5%	-1.4%

INSURANCE SERVICES OFFICE, INC.

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

MOTEL/HOTEL(31) *****	(1) AGGREGATE LOSS <u>COSTS</u>	(2) CURRENT IMPLICIT <u>PMF</u>	(3) NET <u>INDICATION</u>	(4) INDIC. <u>PMF</u>	(5) CAPPED <u>PMF</u>
<u>COVERAGE</u>					
PROPERTY-					
BASIC GRP I	1,096,322	0.913	-4.3%	0.874	0.874
BASIC GRP II	196,263	0.932	6.8%	0.995	0.995
SP CAUSE/LOSS	317,627	1.404	-7.7%	1.296	1.296
* CRIME	1,697	0.908	0.0%	0.908	0.908
* INL. MAR.	782	0.910	7.1%	0.975	0.975
* FIDELITY	7,894	1.000	0.0%	1.000	1.000
<u>TOTAL</u>	<u>1,620,585</u>	<u>0.980</u>	<u>-3.3%</u>	<u>0.948</u>	<u>0.950</u>
LIABILITY-					
OL&T	1,167,805	0.909	-1.4%	0.896	0.896
<u>TOTAL</u>	<u>1,167,805</u>	<u>0.910</u>	<u>-1.5%</u>	<u>0.896</u>	<u>0.900</u>

PROP. & LIAB. TOTAL	2,788,390		-2.5%		

APARTMENT (32) *****	(1) AGGREG- ATE LOSS <u>COSTS</u>	(2) CURRENT IMPLICIT <u>PMF</u>	(3) NET <u>INDICATION</u>	(4) INDIC. <u>PMF</u>	(5) CAPPED <u>PMF</u>
<u>COVERAGE</u>					
PROPERTY-					
BASIC GRP I	5,628,441	0.903	-7.6%	0.834	0.834
BASIC GRP II	1,116,828	0.666	5.3%	0.701	0.701
SP CAUSE/LOSS	2,002,217	1.153	-10.9%	1.027	1.027
* CRIME	739	0.908	0.0%	0.908	0.908
* INL. MAR.	3,372	0.910	7.1%	0.975	0.975
* FIDELITY	9,452	1.000	0.0%	1.000	1.000
<u>TOTAL</u>	<u>8,761,049</u>	<u>0.900</u>	<u>-6.0%</u>	<u>0.846</u>	<u>0.850</u>
LIABILITY-					
OL&T	3,046,205	0.981	-0.8%	0.973	0.973
<u>TOTAL</u>	<u>3,046,205</u>	<u>0.980</u>	<u>-0.7%</u>	<u>0.973</u>	<u>0.970</u>

PROP. & LIAB. TOTAL	11,807,254		-4.6%		

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

INSURANCE SERVICES OFFICE, INC.

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

OFFICE (33) *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE	CURRENT	NET	INDIC.	CAPPED
COVERAGE	<u>LOSS COSTS</u>	<u>IMPLICIT</u>	<u>INDICATION</u>	<u>PMF</u>	<u>PMF</u>
PROPERTY-					
BASIC GRP I	2,451,569	1.038	-3.5%	1.002	1.002
BASIC GRP II	801,314	0.573	5.4%	0.604	0.604
SP CAUSE/LOSS	1,934,086	1.171	-9.7%	1.057	1.057
* CRIME	5,825	0.908	0.0%	0.908	0.908
* INL. MAR.	47,220	0.910	7.1%	0.975	0.975
* FIDELITY	22,125	1.000	0.0%	1.000	1.000
TOTAL	5,262,139	0.960	-4.5%	0.917	0.920
LIABILITY-					
OL&T	4,919,253	0.946	0.0%	0.946	0.946
M&C	772,960	1.009	4.6%	1.055	1.055
TOTAL	5,692,213	0.960	0.0%	0.960	0.960

PROP. & LIAB.	10,954,352		-2.2%		
TOTAL					

MERCANTILE (34) *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE	CURRENT	NET	INDIC.	CAPPED
COVERAGE	<u>LOSS COSTS</u>	<u>IMPLICIT</u>	<u>INDICATION</u>	<u>PMF</u>	<u>PMF</u>
PROPERTY-					
BASIC GRP I	15,092,706	1.104	-6.0%	1.038	1.040
BASIC GRP II	5,399,649	0.899	9.6%	0.985	0.988
SP CAUSE/LOSS	6,729,953	0.913	-4.3%	0.874	0.876
* CRIME	74,201	0.908	0.0%	0.908	0.908
* INL. MAR.	1,026,990	0.910	7.1%	0.975	0.975
* FIDELITY	445,351	1.000	0.0%	1.000	1.000
TOTAL	28,768,850	1.000	-1.9%	0.981	0.980
LIABILITY-					
OL&T	9,370,158	0.980	0.8%	0.988	0.983
M&C	2,051,548	1.294	2.6%	1.328	1.321
LOCAL PRODUCT	761,312	1.099	0.5%	1.104	1.099
* MULTI PRODUCT	2,417,882	0.862	-1.1%	0.853	0.853
TOTAL	14,600,901	1.000	0.4%	1.004	1.000

PROP. & LIAB.	43,369,751		-1.1%		
TOTAL					

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

INSURANCE SERVICES OFFICE, INC.

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

INSTITUTION(35) *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE	CURRENT	NET	INDIC.	CAPPED
COVERAGE	<u>LOSS COSTS</u>	<u>IMPLICIT</u>	<u>INDICATION</u>	<u>PMF</u>	<u>PMF</u>
PROPERTY-					
BASIC GRP I	5,145,625	0.868	-8.0%	0.799	0.799
BASIC GRP II	3,061,786	0.734	5.0%	0.771	0.771
SP CAUSE/LOSS	4,809,564	1.320	-11.6%	1.167	1.167
* CRIME	68,519	0.908	0.0%	0.908	0.908
* INL. MAR.	28,495	0.910	7.1%	0.975	0.975
* FIDELITY	276,777	1.000	0.0%	1.000	1.000
TOTAL	13,390,766	0.950	-6.3%	0.890	0.890
LIABILITY-					
OL&T	2,354,559	0.956	-4.0%	0.918	0.918
M&C	110,804	0.670	5.5%	0.707	0.707
TOTAL	2,465,363	0.940	-3.8%	0.904	0.900

PROP. & LIAB.	15,856,129		-5.9%		
TOTAL					

SERVICES (36) *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE	CURRENT	NET	INDIC.	CAPPED
COVERAGE	<u>LOSS COSTS</u>	<u>IMPLICIT</u>	<u>INDICATION</u>	<u>PMF</u>	<u>PMF</u>
PROPERTY-					
BASIC GRP I	6,064,793	0.792	4.3%	0.826	0.826
BASIC GRP II	4,248,268	1.217	5.0%	1.278	1.278
SP CAUSE/LOSS	4,712,084	1.187	-10.7%	1.060	1.060
* CRIME	31,127	0.908	0.0%	0.908	0.908
* INL. MAR.	36,898	0.910	7.1%	0.975	0.975
* FIDELITY	240,460	1.000	0.0%	1.000	1.000
TOTAL	15,333,630	1.000	-0.8%	0.992	0.990
LIABILITY-					
OL&T	2,710,774	0.866	-11.7%	0.765	0.765
M&C	3,336,574	1.071	2.5%	1.098	1.098
LOCAL PRODUCT	926,722	1.204	2.1%	1.229	1.229
* MULTI PRODUCT	250,390	0.914	0.2%	0.916	0.916
TOTAL	7,224,460	1.000	-3.8%	0.962	0.960

PROP. & LIAB.	22,558,090		-1.8%		
TOTAL					

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

INSURANCE SERVICES OFFICE, INC.

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

IND/PROC (37) *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE	CURRENT	NET	INDIC.	CAPPED
COVERAGE	<u>LOSS COSTS</u>	<u>IMPLICIT</u>	<u>INDICATION</u>	<u>PMF</u>	<u>PMF</u>
PROPERTY-					
BASIC GRP I	10,199,260	1.185	-7.1%	1.101	1.101
BASIC GRP II	2,590,318	0.608	2.2%	0.621	0.621
SP CAUSE/LOSS	4,303,093	0.784	-9.2%	0.712	0.712
* CRIME	10,797	0.908	0.0%	0.908	0.908
* INL. MAR.	10,217	0.910	7.1%	0.975	0.975
* FIDELITY	149,325	1.000	0.0%	1.000	1.000
TOTAL	17,263,010	0.930	-6.0%	0.874	0.870
LIABILITY-					
M&C	3,920,612	0.834	5.9%	0.883	0.883
LOCAL PRODUCT	100,816	0.644	2.1%	0.658	0.658
* MULTI PRODUCT	4,256,922	0.860	0.4%	0.863	0.863
TOTAL	8,278,351	0.840	3.5%	0.869	0.870

PROP. & LIAB.	25,541,361		-2.9%		
TOTAL					

CONTRACTORS(38) *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE	CURRENT	NET	INDIC.	CAPPED
COVERAGE	<u>LOSS COSTS</u>	<u>IMPLICIT</u>	<u>INDICATION</u>	<u>PMF</u>	<u>PMF</u>
PROPERTY-					
BASIC GRP I	2,170,406	0.901	0.6%	0.906	0.937
BASIC GRP II	860,597	0.821	7.6%	0.883	0.913
SP CAUSE/LOSS	1,835,080	1.115	-12.0%	0.981	1.014
* CRIME	5,229	0.908	0.0%	0.908	0.908
* INL. MAR.	13,133	0.910	7.1%	0.975	0.975
* FIDELITY	102,793	1.000	0.0%	1.000	1.000
TOTAL	4,987,238	0.950	-2.4%	0.927	0.960
LIABILITY-					
M&C	11,862,267	0.982	6.1%	1.042	1.034
LOCAL PRODUCT	7,281,405	0.911	5.0%	0.957	0.949
TOTAL	19,143,672	0.950	6.1%	1.008	1.000

PROP. & LIAB.	24,130,910		4.3%		
TOTAL					

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

INSURANCE SERVICES OFFICE, INC.

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

STATEWIDE *****	(1)	(2)	(3)	(4)	(5)
	AGGREGATE	CURRENT	NET	INDIC.	CAPPED
COVERAGE	<u>LOSS COSTS</u>	<u>IMPLICIT</u>	<u>INDICATION</u>	<u>PMF</u>	<u>PMF</u>
PROPERTY-					
BASIC GRP I	47,849,122	0.995	-4.9%	0.946	0.949
BASIC GRP II	18,275,023	0.821	6.1%	0.871	0.873
SP CAUSE/LOSS	26,643,704	1.035	-9.0%	0.942	0.945
* CRIME	198,134	0.908	0.0%	0.908	0.908
* INL. MAR.	1,167,107	0.910	7.1%	0.975	0.975
* FIDELITY	1,254,177	1.000	0.0%	1.000	1.000
<u>TOTAL</u>	<u>95,387,267</u>	<u>0.964</u>	<u>-3.6%</u>	<u>0.929</u>	<u>0.932</u>
LIABILITY-					
OL&T	23,568,754	0.952	-1.6%	0.937	0.935
M&C	22,054,765	0.984	5.1%	1.034	1.030
LOCAL PRODUCT	9,070,256	0.944	4.3%	0.985	0.978
* MULTI PRODUCT	6,925,194	0.863	-0.1%	0.862	0.862
<u>TOTAL</u>	<u>61,618,969</u>	<u>0.951</u>	<u>1.8%</u>	<u>0.968</u>	<u>0.965</u>

PROP. & LIAB.	157,006,236		-1.4%		
TOTAL					

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

INSURANCE SERVICES OFFICE, INC.

MICHIGAN
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)	0.950	0.925	0.930
APARTMENT (32)	0.920	0.877	0.880
OFFICE (33)	0.960	0.939	0.940
MERCANTILE (34)	1.000	0.989	0.990
INSTITUTION(35)	0.950	0.892	0.890
SERVICES (36)	1.000	0.982	0.980
IND/PROC (37)	0.890	0.873	0.870
CONTRACTORS(38)	0.950	0.991	0.990

NOTE: Combined PMFs are provided for informational purposes only.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN

BASIC GROUP I RELATIVITY ANALYSIS

TYPE OF POLICY	(1) LEAST SQUARES FORMULA	(2) CREDIBILITY	(3) WEIGHTED CREDIBILITY RELATIVITY	(4) BALANCED RELATIVITY	(5) INDICATED CHANGE
	RELATIVITY	RELATIVITY	RELATIVITY	RELATIVITY	CHANGE
10	1.296	0.134	1.035	1.048	
31	0.862	0.058	0.991	1.003	-4.3%
32	0.797	0.196	0.957	0.968	-7.6%
33	0.994	0.095	0.999	1.011	-3.5%
34	0.938	0.422	0.973	0.985	-6.0%
35	0.792	0.207	0.953	0.964	-8.0%
36	1.378	0.242	1.081	1.093	4.3%
37	0.900	0.358	0.963	0.974	-7.1%
38	1.539	0.094	1.041	1.054	0.6%
RATING GROUP					
1	0.967	0.284	0.991	0.990	
2	1.062	0.198	1.012	1.012	
3	0.853	0.251	0.961	0.960	
4	1.030	0.618	1.018	1.018	
5	1.141	0.022	1.003	1.002	
6	0.843	0.265	0.956	0.955	
7	0.912	0.083	0.992	0.992	
8	0.835	0.362	0.937	0.936	
9	1.121	0.207	1.024	1.023	
10	0.974	0.136	0.996	0.996	
11	1.208	0.083	1.016	1.015	
13	0.965	0.289	0.990	0.989	
14	1.067	0.214	1.014	1.014	
15	0.874	0.164	0.978	0.978	
17	0.849	0.129	0.979	0.979	
18	0.923	0.080	0.994	0.993	
19	1.098	0.014	1.001	1.001	
20	1.239	0.027	1.006	1.005	
21	1.093	0.437	1.040	1.039	
22	1.379	0.210	1.070	1.069	
TERRITORY					
Detroit	0.911	0.292	0.973	0.969	
Balance of State	1.009	0.808	1.007	1.003	

INSURANCE SERVICES OFFICE, INC.

MICHIGAN

SPECIAL CAUSES OF LOSS RELATIVITY ANALYSIS

TYPE OF POLICY	(1) LEAST SQUARES FORMULA	(2) CREDIBILITY	(3) CREDIBILITY WEIGHTED RELATIVITY	(4) BALANCED RELATIVITY	(5) INDICATED CHANGE
	RELATIVITY				
10	1.682	0.165	1.090	1.093	
31	1.142	0.041	1.005	1.009	-7.7%
32	0.850	0.185	0.970	0.974	-10.9%
33	0.906	0.167	0.984	0.987	-9.7%
34	1.099	0.445	1.043	1.046	-4.3%
35	0.905	0.383	0.962	0.966	-11.6%
36	0.929	0.377	0.973	0.976	-10.7%
37	0.969	0.354	0.989	0.992	-9.2%
38	0.787	0.176	0.959	0.962	-12.0%
CATEGORY					
1	1.007	0.855	1.006	1.004	
2	1.074	0.136	1.010	1.007	
3	0.982	0.189	0.997	0.994	
4	1.052	0.259	1.013	1.011	
5	0.928	0.254	0.981	0.979	
6	0.849	0.134	0.978	0.976	
7	0.806	0.025	0.995	0.992	
8	1.082	0.178	1.014	1.012	
9	0.999	0.205	1.000	0.998	
10	1.078	0.043	1.003	1.001	
11	0.964	0.365	0.987	0.984	
12	0.933	0.292	0.980	0.978	
13	1.003	0.196	1.001	0.998	
14	1.045	0.230	1.010	1.008	

INSURANCE SERVICES OFFICE, INC.

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

ENTIRE STATE		(1) ACCIDENT YEAR ENDING 06/30/18 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	116,639	608,145	0.189	1.340	1.180
	02 OTHER HABITATIONAL	101,964	545,460	2.239	1.465	1.290
	03 RESTAURANTS & BARS	56,311	306,959	1.968	1.614	1.421
	04 OTHER MERCANTILE RS	799,213	4,125,275	1.028	1.389	1.223
	05 PUBLIC BUILDINGS	11,094	52,359	0.304	1.145	1.008
	06 CHURCHES	10,548	49,096	2.343	1.663	1.463
	07 SCHOOLS	28,868	146,663	1.885	1.343	1.182
	08 OFFICES AND BANKS	298,077	1,637,232	2.795	1.690	1.487
	09 REC. FACILITIES	148,263	881,864	2.425	1.623	1.428
	10 HOTELS AND MOTELS	27,972	145,807	0.231	1.351	1.189
	11 HOSPITALS/NURS HOME	128,565	618,530	0.068	1.317	1.159
	13 MOTOR VEHICLE RISKS	188,410	768,963	0.244	1.266	1.114
	14 OTHER NON-MANUF.	356,294	2,428,872	0.601	1.327	1.168
	15 STORAGE	147,937	586,251	5.235	2.029	1.786
	17 FOOD MANUFACTURING	21,219	82,045	2.907	1.542	1.357
	18 WOOD MANUFACTURING	24,495	111,723	0.000	1.317	1.159
	19 WEARING APPAREL	11,577	42,145	0.000	1.317	1.159
	20 CHEM. MANUFACTURING	25,133	56,685	0.000	1.013	0.891
	21 METAL MANUFACTURING	369,292	1,891,827	2.256	1.633	1.438
	22 OTHER MANUFACTURING	81,053	423,034	0.944	1.440	1.268
	TOTAL*	2,952,924	15,508,935	1.517	1.478	1.301
31 MULTILINE MOTEL/HOTEL	10 HOTELS AND MOTELS	1,096,322	6,175,753	0.874	0.915	0.805
	TOTAL*	1,096,322	6,175,753	0.874	0.915	0.805
32 MULTILINE APARTMENT	01 APARTMENTS	3,731,193	15,237,325	0.718	0.851	0.749
	02 OTHER HABITATIONAL	1,897,248	9,189,746	0.958	0.937	0.825
	TOTAL*	5,628,441	24,427,071	0.799	0.880	0.774
33 MULTILINE OFFICE	08 OFFICES AND BANKS	2,451,569	10,450,445	0.902	0.926	0.815
	TOTAL*	2,451,569	10,450,445	0.902	0.926	0.815
34 MULTILINE MERCANTILE	03 RESTAURANTS & BARS	2,471,121	12,418,597	0.942	0.911	0.802
	04 OTHER MERCANTILE RS	9,212,138	45,428,297	1.184	1.062	0.935
	08 OFFICES AND BANKS	633,267	2,653,584	1.197	0.986	0.868
	13 MOTOR VEHICLE RISKS	1,242,195	4,861,934	1.254	1.016	0.894
	14 OTHER NON-MANUF.	356,137	1,822,320	1.281	0.988	0.870
	15 STORAGE	1,177,848	5,696,188	0.404	0.790	0.695
	TOTAL*	15,092,706	72,880,920	1.092	1.008	0.887

INSURANCE SERVICES OFFICE, INC.

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

ENTIRE STATE		(1) ACCIDENT YEAR ENDING 06/30/18 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					
35 MULTILINE INSTITUTIONAL	02 OTHER HABITATIONAL	31,388	127,052	0.000	0.791	0.696
	05 PUBLIC BUILDINGS	175,328	830,496	1.354	1.005	0.885
	06 CHURCHES	2,856,888	14,384,093	0.346	0.726	0.639
	07 SCHOOLS	632,935	3,486,545	0.678	0.846	0.745
	08 OFFICES AND BANKS	376,800	1,735,819	0.029	0.735	0.647
	09 REC. FACILITIES	238,469	1,221,817	0.341	0.813	0.715
	11 HOSPITALS/NURS HOME	566,535	3,013,832	1.696	1.086	0.956
	13 MOTOR VEHICLE RISKS	17,437	86,654	0.000	0.782	0.689
	14 OTHER NON-MANUF.	249,845	1,255,476	0.295	0.817	0.719
	TOTAL*	5,145,625	26,141,784	0.541	0.799	0.704
36 MULTILINE SERVICES	03 RESTAURANTS & BARS	133,186	693,260	0.940	1.313	1.156
	04 OTHER MERCANTILE RS	621,942	3,281,115	1.670	1.493	1.315
	08 OFFICES AND BANKS	545,536	3,092,305	0.240	1.142	1.005
	09 REC. FACILITIES	1,606,507	8,326,512	2.087	1.750	1.541
	13 MOTOR VEHICLE RISKS	1,941,706	10,395,663	1.611	1.537	1.352
	14 OTHER NON-MANUF.	649,844	3,489,264	3.256	1.885	1.659
	15 STORAGE	265,540	1,240,141	5.058	2.196	1.933
	21 METAL MANUFACTURING	84,890	503,335	0.031	1.252	1.102
	22 OTHER MANUFACTURING	215,642	925,317	3.753	1.976	1.740
	TOTAL*	6,064,793	31,946,912	1.986	1.626	1.431
37 MULTILINE INDUST/PROCESS	04 OTHER MERCANTILE RS	770,791	4,211,201	0.379	1.054	0.928
	08 OFFICES AND BANKS	209,539	983,048	0.168	1.130	0.995
	13 MOTOR VEHICLE RISKS	17,037	148,857	0.219	1.193	1.050
	14 OTHER NON-MANUF.	204,843	1,306,370	0.854	1.225	1.078
	15 STORAGE	63,860	310,444	8.562	2.455	2.161
	17 FOOD MANUFACTURING	1,149,340	5,854,115	0.114	0.952	0.838
	18 WOOD MANUFACTURING	677,871	3,358,526	0.110	0.970	0.854
	19 WEARING APPAREL	118,747	543,882	0.000	1.126	0.992
	20 CHEM. MANUFACTURING	217,563	1,063,995	0.752	1.330	1.171
	21 METAL MANUFACTURING	4,952,636	28,694,297	1.051	1.181	1.040
	22 OTHER MANUFACTURING	1,817,033	9,302,953	2.047	1.519	1.338
	TOTAL*	10,199,260	55,777,688	1.014	1.202	1.058

INSURANCE SERVICES OFFICE, INC.

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

ENTIRE STATE		(1) ACCIDENT YEAR ENDING 06/30/18 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 CONTRACTORS	04 OTHER MERCANTILE RS	1,585,574	7,551,917	2.166	1.804	1.588
	08 OFFICES AND BANKS	459,775	2,161,090	1.202	1.375	1.210
	14 OTHER NON-MANUF.	125,057	613,550	0.954	1.323	1.164
	TOTAL*	2,170,406	10,326,557	1.892	1.686	1.484
TOTAL ALL TOPS*	01 APARTMENTS	3,847,832	15,845,470	0.702	0.866	0.762
	02 OTHER HABITATIONAL	2,030,600	9,862,258	1.008	0.961	0.846
	03 RESTAURANTS & BARS	2,660,618	13,418,816	0.963	0.946	0.833
	04 OTHER MERCANTILE RS	12,989,658	64,597,805	1.270	1.193	1.050
	05 PUBLIC BUILDINGS	186,422	882,855	1.291	1.013	0.892
	06 CHURCHES	2,867,436	14,433,189	0.353	0.729	0.642
	07 SCHOOLS	661,803	3,633,208	0.731	0.868	0.764
	08 OFFICES AND BANKS	4,974,563	22,713,523	0.911	1.039	0.914
	09 REC. FACILITIES	1,993,239	10,430,193	1.903	1.629	1.434
	10 HOTELS AND MOTELS	1,124,294	6,321,560	0.858	0.926	0.815
	11 HOSPITALS/NURS HOME	695,100	3,632,362	1.395	1.128	0.993
	13 MOTOR VEHICLE RISKS	3,406,785	16,262,071	1.390	1.326	1.167
	14 OTHER NON-MANUF.	1,942,020	10,915,852	1.624	1.375	1.210
	15 STORAGE	1,655,185	7,833,024	1.897	1.190	1.048
	17 FOOD MANUFACTURING	1,170,559	5,936,160	0.165	0.963	0.847
	18 WOOD MANUFACTURING	702,366	3,470,249	0.106	0.982	0.865
	19 WEARING APPAREL	130,324	586,027	0.000	1.143	1.006
	20 CHEM. MANUFACTURING	242,696	1,120,680	0.674	1.297	1.142
	21 METAL MANUFACTURING	5,406,818	31,089,459	1.117	1.213	1.068
	22 OTHER MANUFACTURING	2,113,728	10,651,304	2.179	1.563	1.376
	TOTAL*	50,802,046	253,636,065	1.140	1.136	1.000

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

INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/18 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) CREDIBILITY WEIGHTED EXPERIENCE RATIO	(5) CREDIBILITY WEIGHTED RELATIVITY
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10 MONOLINE	01 BUILDINGS	975,952	4,927,878	1.680	1.647	1.758
	02 RES. APTS. AND COND	6,325	36,029	0.213	1.038	1.108
	03 OFFICES	80,107	431,430	0.439	0.855	0.912
	04 MERCANTILE - HIGH	165,893	707,784	0.768	0.976	1.042
	05 MERCANTILE - MEDIUM	40,814	206,878	0.460	0.973	1.038
	06 MERCANTILE - LOW	37,493	164,215	0.245	0.920	0.982
	07 MOTELS AND HOTELS	2,519	19,116	0.254	1.068	1.140
	08 INSTITUTIONAL - HIG	12,586	71,085	1.969	1.510	1.612
	09 INSTITUTIONAL - LOW	17,532	95,571	2.129	1.576	1.682
	10 INDUST-PROC - HIGH	8,975	37,351	0.248	1.045	1.115
	11 INDUST-PROC - LOW	134,984	670,966	0.563	0.856	0.914
	12 SERVICE - HIGH	32,465	179,011	0.358	0.951	1.015
	13 SERVICE - LOW	57,358	291,988	1.651	1.472	1.571
	14 CONTRACTORS	23,280	91,469	0.418	1.040	1.110
	TOTAL*	1,596,283	7,930,771	1.308	1.399	1.492
31 MULTILINE MOTEL/HOTEL	01 BUILDINGS	252,891	1,353,150	1.758	1.090	1.163
	07 MOTELS AND HOTELS	64,736	363,001	0.482	0.873	0.932
	TOTAL*	317,627	1,716,151	1.498	1.046	1.116
32 MULTILINE APARTMENT	01 BUILDINGS	1,467,527	6,748,299	0.643	0.811	0.866
	02 RES. APTS. AND COND	534,690	2,320,199	0.660	0.865	0.923
	TOTAL*	2,002,217	9,068,498	0.648	0.825	0.881
33 MULTILINE OFFICE	01 BUILDINGS	1,226,534	5,124,942	0.733	0.859	0.917
	03 OFFICES	704,318	2,856,443	0.668	0.860	0.918
	04 MERCANTILE - HIGH	126	194	0.000	0.835	0.891
	08 INSTITUTIONAL - HIG	1,146	3,857	0.000	0.835	0.891
	11 INDUST-PROC - LOW	-	6	0.000	1.000	1.000
	12 SERVICE - HIGH	1,636	10,122	0.000	0.834	0.890
	14 CONTRACTORS	326	2,485	0.000	0.835	0.891
	TOTAL*	1,934,086	7,998,049	0.708	0.859	0.917

INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/18 AGGREGATE LOSS COSTS	(2) 5 - YEAR AGGREGATE LOSS COSTS	(3) 5 - YEAR EXPERIENCE RATIO	(4) CREDIBILITY WEIGHTED EXPERIENCE RATIO	(5) CREDIBILITY WEIGHTED RELATIVITY
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34 MULTILINE MERCANTILE	01 BUILDINGS	4,307,994	20,662,668	1.105	1.047	1.117
	03 OFFICES	15,471	40,533	0.477	0.883	0.942
	04 MERCANTILE - HIGH	836,871	4,061,448	1.568	1.138	1.215
	05 MERCANTILE - MEDIUM	1,016,990	4,863,912	1.034	0.968	1.033
	06 MERCANTILE - LOW	492,617	2,104,642	0.747	0.888	0.948
	08 INSTITUTIONAL - HIGH	163	530	0.000	0.835	0.891
	10 INDUST-PROC - HIGH	-	2,976	0.000	1.000	1.000
	11 INDUST-PROC - LOW	277	1,219	141.124	15.394	16.429
	12 SERVICE - HIGH	17,164	127,398	0.313	0.862	0.920
	13 SERVICE - LOW	32,309	113,614	0.623	0.897	0.957
	14 CONTRACTORS	10,097	41,726	0.136	0.847	0.904
	TOTAL*	6,729,953	32,020,666	1.124	1.033	1.103
35 MULTILINE INSTITUTIONAL	01 BUILDINGS	3,393,277	18,031,088	0.825	0.864	0.922
	03 OFFICES	3,268	12,092	0.000	0.834	0.890
	08 INSTITUTIONAL - HIGH	595,338	3,043,693	0.922	0.929	0.991
	09 INSTITUTIONAL - LOW	815,213	3,708,868	0.691	0.857	0.915
	12 SERVICE - HIGH	1,424	14,713	0.000	0.834	0.890
	13 SERVICE - LOW	90	454	0.000	0.835	0.891
	14 CONTRACTORS	954	8,661	0.000	0.834	0.890
	TOTAL*	4,809,564	24,819,569	0.813	0.871	0.929
36 MULTILINE SERVICES	01 BUILDINGS	2,830,756	14,564,773	0.907	0.887	0.947
	03 OFFICES	18,174	62,035	0.207	0.797	0.851
	04 MERCANTILE - HIGH	42,466	174,211	0.086	0.779	0.831
	05 MERCANTILE - MEDIUM	5,855	34,065	1.210	0.895	0.955
	06 MERCANTILE - LOW	3,126	14,369	1.205	0.894	0.954
	08 INSTITUTIONAL - HIGH	28,017	135,201	0.000	0.772	0.824
	09 INSTITUTIONAL - LOW	14,370	67,248	0.000	0.776	0.828
	10 INDUST-PROC - HIGH	-	410	0.000	1.000	1.000
	11 INDUST-PROC - LOW	12,367	45,743	0.833	0.858	0.916
	12 SERVICE - HIGH	1,114,911	5,833,680	0.761	0.823	0.878
	13 SERVICE - LOW	618,777	3,231,733	0.952	0.886	0.946
	14 CONTRACTORS	23,265	63,925	0.113	0.788	0.841
	TOTAL*	4,712,084	24,227,393	0.857	0.869	0.927

INSURANCE SERVICES OFFICE, INC.

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

TYPE OF POLICY	CATEGORY	(1) ACCIDENT YEAR ENDING 06/30/18 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	2,548,059	13,234,013	0.972	0.922	0.984
	03 OFFICES	3,492	13,420	0.489	0.826	0.882
	04 MERCANTILE - HIGH	11,575	52,835	0.029	0.780	0.832
	05 MERCANTILE - MEDIUM	271	1,980	0.000	0.780	0.832
	06 MERCANTILE - LOW	-	282	0.000	1.000	1.000
	08 INSTITUTIONAL - HIGH	-	78	0.000	1.000	1.000
	10 INDUST-PROC - HIGH	130,937	640,491	1.851	0.996	1.063
	11 INDUST-PROC - LOW	1,603,160	7,905,750	0.937	0.894	0.954
	12 SERVICE - HIGH	1,281	8,566	1.555	0.926	0.988
	13 SERVICE - LOW	734	2,892	2.951	1.057	1.128
	14 CONTRACTORS	3,584	11,718	0.160	0.795	0.848
	TOTAL*	4,303,093	21,872,025	0.983	0.914	0.975
38 MULTILINE CONTRACTORS	01 BUILDINGS	814,290	3,952,450	0.499	0.750	0.800
	03 OFFICES	21,682	75,554	0.408	0.816	0.871
	04 MERCANTILE - HIGH	54,045	237,101	0.356	0.805	0.859
	05 MERCANTILE - MEDIUM	1,224	4,874	0.000	0.780	0.832
	06 MERCANTILE - LOW	5,858	34,336	0.967	0.871	0.930
	11 INDUST-PROC - LOW	52	284	0.000	0.780	0.832
	12 SERVICE - HIGH	2,215	5,430	0.318	0.810	0.864
	13 SERVICE - LOW	1,179	4,934	0.000	0.780	0.832
	14 CONTRACTORS	934,535	4,256,298	0.610	0.781	0.834
	TOTAL*	1,835,080	8,571,261	0.551	0.769	0.820
TOTAL ALL TOPS*	01 BUILDINGS	17,817,280	88,599,261	0.951	0.956	1.021
	02 RES. APTS. AND COND	541,015	2,356,228	0.655	0.867	0.925
	03 OFFICES	846,512	3,491,507	0.623	0.857	0.915
	04 MERCANTILE - HIGH	1,110,976	5,233,573	1.317	1.080	1.153
	05 MERCANTILE - MEDIUM	1,065,154	5,111,709	1.012	0.967	1.033
	06 MERCANTILE - LOW	539,094	2,317,844	0.717	0.890	0.950
	07 MOTELS AND HOTELS	67,255	382,117	0.473	0.881	0.939
	08 INSTITUTIONAL - HIGH	637,250	3,254,444	0.900	0.933	0.996
	09 INSTITUTIONAL - LOW	847,115	3,871,687	0.709	0.870	0.929
	10 INDUST-PROC - HIGH	139,912	681,228	1.748	0.999	1.066
	11 INDUST-PROC - LOW	1,750,840	8,623,968	0.930	0.893	0.953
	12 SERVICE - HIGH	1,171,096	6,178,920	0.741	0.828	0.883
	13 SERVICE - LOW	710,447	3,645,615	0.994	0.934	0.997
	14 CONTRACTORS	996,041	4,476,282	0.587	0.788	0.841
	TOTAL*	28,239,987	138,224,383	0.920	0.937	1.000

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

INSURANCE SERVICES OFFICE, INC.

MICHIGAN

BASIC GROUP II RELATIVITY ANALYSIS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	ACCIDENT YEAR ENDING 06/30/18 AGGR. LOSS COSTS AT CURRENT IMPLICIT PMF	ACCIDENT YEARS 2009-2018 EXPER. RATIO AT CURRENT PMF	FORMULA RELATIVITY (2)/ 0.986	CREDIBILITY C	CREDIBILITY WEIGHTED RELATIVITY	BALANCED FORMULA RELATIVITY	NORMALIZED FORMULA RELATIVITY	INDICATED CHANGE
	-----	-----	-----	-----	-----	-----	-----	-----
MONOLINE	1,387,520	0.8230	0.8350	0.2970	0.951	0.9510	0.9464	
MULTILINE	18,275,023	0.9980	1.0120	0.7850	1.009	1.0090	1.0041	
	-----	-----	-----	-----	-----	-----	-----	
COVERAGE	19,662,543	0.9860	1.0000			1.0049	1.0000	
MULTILINE TOP								
31 MOTEL/HOTEL	196,263	1.2790	1.2970	0.0390	1.012	1.0160	1.0110	6.8%
32 APARTMENT	1,116,828	0.9700	0.9840	0.1650	0.997	1.0010	0.9961	5.3%
33 OFFICE	801,314	0.9700	0.9840	0.1040	0.998	1.0020	0.9971	5.4%
34 MERCANTILE	5,399,649	1.0620	1.0770	0.4950	1.038	1.0420	1.0369	9.6%
35 INSTITUTIONAL	3,061,786	0.9740	0.9880	0.4250	0.995	0.9990	0.9941	5.0%
36 SERVICES	4,248,268	0.9750	0.9890	0.4770	0.995	0.9990	0.9941	5.0%
37 INDUST/PROCESS	2,590,318	0.8910	0.9040	0.3350	0.968	0.9720	0.9673	2.2%
38 CONTRACTORS	860,597	1.1150	1.1310	0.1460	1.019	1.0230	1.0180	7.6%
	-----	-----	-----	-----	-----	-----	-----	
	18,275,023	0.9980	1.0120		1.0050	1.0090	1.0045	

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

INSURANCE SERVICES OFFICE, INC.

MICHIGAN

COMMERCIAL I.M. RELATIVITY ANALYSIS

(1)	(2)	(3)	(4)	(5)
TOP	BALANCED RELATIVITY	CURRENT IPMF	INDICATED IPMF	SELECTED IPMF
10	1.000	0.850	0.910	0.910
3X & 7X	1.071			

CLASSIFICATION

150	0.922
191	1.085
192	0.77
220	0.771
221	0.736
234	1.226
235	1.069
240	0.77
241	0.695
327	0.738
328	0.913
340	0.629
341	0.738
342	0.733
343	0.748
403	0.63
451	0.928
452	0.761
453	0.794
454	0.7
460	0.485
482	0.876
510	0.646
514	0.612
530	0.627
534	0.738

INSURANCE SERVICES OFFICE, INC.

MICHIGAN

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	1.317
	191	5,446,492	15,816,054	1.032	1.181
	192	862,002	2,760,886	0.627	0.717
	220	5,112	87,903	5.716	6.540
	221	1,491	2,853	1.199	1.372
	234	5,224,155	20,144,072	0.600	0.686
	235	8,439,000	24,407,283	0.761	0.871
	240	928,183	3,685,254	0.656	0.751
	241	15,553	114,739	0.053	0.061
	327	18,917	91,546	0.000	0.000
	328	2,319,887	11,908,665	0.792	0.906
	340	40,688	87,993	0.000	0.000
	341	0	0	0.000	0.000
	342	19,188	65,375	0.555	0.635
	343	589	3,417	343.665	537.374
	403	1,600,852	5,771,545	0.345	0.395
	451	3,309,677	12,953,836	0.855	0.978
	452	34,702	137,467	1.628	1.863
	453	45,575	212,456	3.203	3.665
	454	164,836	745,300	0.734	0.840
	460	790,198	3,687,530	0.415	0.475
	482	839,364	2,841,134	0.986	1.128
	510	3,252	39,977	0.020	0.023
	514	446,469	1,612,361	0.339	0.388
	530	504,434	2,697,004	0.489	0.559
	534	0	0	0.000	0.000
	TOTAL#	31,372,249	111,772,746	0.785	0.898

INSURANCE SERVICES OFFICE, INC.

MICHIGAN

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	672,616	3,113,454	0.851	0.974
3X & 7X	191	563,797	2,525,777	0.829	0.949
	192	189,431	731,833	0.885	1.013
	220	6,015	26,632	1.634	1.870
	221	5,236	25,229	0.276	0.316
	234	11,834,095	49,066,751	1.244	1.423
	235	446,644	2,223,407	3.082	3.526
	240	10,883	56,101	2.123	2.429
	241	4,696	14,357	0.021	0.024
	327	2,748	17,618	0.000	0.000
	328	370	2,570	180.609	206.646
	340	30,664	123,865	0.017	0.019
	341	0	0	0.000	0.000
	342	5,681	28,532	0.000	0.000
	343	2,213	7,469	0.000	0.000
	403	448,230	2,257,894	0.791	0.905
	451	89,055	409,714	0.386	0.442
	452	35,584	193,026	0.573	0.656
	453	32,109	98,037	0.158	0.181
	454	213,119	919,292	0.293	0.335
	460	3,375,538	14,121,292	0.340	0.389
	482	119,090	710,788	0.742	0.849
	510	21,754	113,808	0.000	0.000
	514	59,004	281,029	0.078	0.089
	530	1,055,097	4,464,828	0.443	0.507
	534	0	0	0.000	0.000
	TOTAL#	19,223,669	81,533,303	1.019	1.166

INSURANCE SERVICES OFFICE, INC.

MICHIGAN

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
TOTAL ALL TOPS#	150	984,249	5,011,550	0.946	1.082
	191	6,010,289	18,341,831	1.013	1.159
	192	1,051,433	3,492,719	0.673	0.770
	220	11,127	114,535	3.509	4.015
	221	6,727	28,082	0.481	0.550
	234	17,058,250	69,210,823	1.047	1.198
	235	8,885,644	26,630,690	0.878	1.005
	240	939,066	3,741,355	0.673	0.770
	241	20,249	129,096	0.046	0.053
	327	21,665	109,164	0.000	0.000
	328	2,320,257	11,911,235	0.821	0.939
	340	71,352	211,858	0.007	0.008
	341	0	0	0.000	0.000
	342	24,869	93,907	0.428	0.490
	343	2,802	10,886	282.448	323.167
	403	2,049,082	8,029,439	0.443	0.507
	451	3,398,732	13,363,550	0.843	0.965
	452	70,286	330,493	1.094	1.252
	453	77,684	310,493	1.944	2.224
	454	377,955	1,664,592	0.485	0.555
	460	4,165,736	17,808,822	0.354	0.405
	482	958,454	3,551,922	0.956	1.094
	510	25,006	153,785	0.003	0.003
	514	505,473	1,893,390	0.309	0.354
	530	1,559,531	7,161,832	0.458	0.524
	534	0	0	0.000	0.000
	TOTAL#	50,595,918	193,306,049	0.874	1.000

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

REFLECTS CURRENT IPMF OF 0.850.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN
OWNERS, LANDLORDS AND TENANTS
BASIC LIMIT RELATIVE CHANGE ANALYSIS

	(1)	(2)	(3)	(4)	(5)
TYPE OF	BAILEY		CREDIBILITY		
POLICY	FORMULA		WEIGHTED	BALANCED	INDICATED
	RELATIVITY	CREDIBILITY	RELATIVITY	RELATIVITY	CHANGE
10	1.067	0.264	1.017	1.014	
31	1.034	0.104	1.003	1.000	-1.4%
32	1.075	0.132	1.010	1.006	-0.8%
33	1.084	0.212	1.017	1.014	0.0%
34	1.092	0.288	1.026	1.022	0.8%
35	0.883	0.200	0.976	0.973	-4.0%
36	0.513	0.161	0.898	0.895	-11.7%
CLASS GROUP					
1	0.780	0.159	0.961	0.961	
2	0.950	0.193	0.990	0.990	
3	0.917	0.118	0.990	0.989	
4	4.766	0.024	1.037	1.036	
5	0.572	0.037	0.980	0.980	
6	0.734	0.099	0.970	0.970	
7	1.969	0.153	1.108	1.108	
8	1.021	0.043	1.001	1.000	
9	0.865	0.152	0.978	0.978	
10	1.107	0.194	1.020	1.019	
11	0.864	0.158	0.977	0.977	
12	1.044	0.294	1.013	1.012	
13	1.354	0.073	1.022	1.022	
16	0.354	0.036	0.964	0.964	
TERRITORY					
501	0.910	0.185	0.983	0.982	
503	1.024	0.290	1.007	1.006	
504	1.142	0.237	1.032	1.032	
505	0.948	0.341	0.982	0.982	

INSURANCE SERVICES OFFICE, INC.

MICHIGAN

MANUFACTURERS AND CONTRACTORS

BASIC LIMIT RELATIVE CHANGE ANALYSIS

TYPE OF POLICY	(1)	(2)	(3)	(4)	(5)
	BAILEY FORMULA RELATIVITY	CREDIBILITY CREDIBILITY	CREDIBILITY WEIGHTED RELATIVITY	BALANCED RELATIVITY	INDICATED CHANGE
10	0.857	0.222	0.966	0.964	
33	1.270	0.042	1.010	1.008	4.6%
34	0.928	0.117	0.991	0.989	2.6%
35	2.011	0.029	1.020	1.017	5.5%
36	0.938	0.152	0.990	0.988	2.5%
37	1.211	0.121	1.023	1.021	5.9%
38	1.088	0.303	1.026	1.023	6.1%
CLASS GROUP					
30	1.326	0.128	1.037	1.032	
31	1.209	0.195	1.038	1.033	
32	1.073	0.284	1.020	1.015	
33	0.830	0.106	0.980	0.976	
34	0.950	0.147	0.992	0.988	
35	1.018	0.043	1.001	0.996	
36	0.378	0.083	0.922	0.919	
37	0.601	0.069	0.965	0.961	
38	1.099	0.119	1.011	1.007	

INSURANCE SERVICES OFFICE, INC.

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

TERRITORY ALL		(1)	(2)	(3)	(4)	(5)	(6)
TYPE OF POLICY	CLASS GROUP	CALENDAR A.Y.E. 06/30/18 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	01 FOOD&BEV.(RETAIL)	\$43,962	\$255,672	0.956		19	
	02 RESTAURANTS	\$221,459	\$949,596	1.636		103	
	03 STORES	\$239,275	\$1,170,251	1.202		66	
	04 VENDING & RENTAL	\$6,901	\$50,388	0		0	
	05 FOOD & BEV. DIST.	\$66,959	\$315,266	0.021		1	
	06 NON-FOOD&BEV.DIST	\$261,588	\$944,753	0.239		34	
	07 CLUBS,AMSMT&SPRTS	\$256,224	\$1,426,262	3.58		171	
	08 HEALTH CARE FACIL	\$28,046	\$249,072	0.471		2	
	09 HOTELS AND MOTELS	\$427,404	\$2,190,868	0.974		211	
	10 SCHLS & CHURCHES	\$205,360	\$1,177,061	0.895		49	
	11 APARTMENTS	\$2,236,155	\$7,014,590	0.928		163	
	12 BUILDINGS&OFFICES	\$1,485,184	\$7,585,643	1.112		422	
	13 MISC. PREMISES	\$58,142	\$338,808	0.526		17	
	16 GOVT SUBDIVISIONS	\$362	\$626	0		0	
	TOTAL *	\$5,537,021	\$23,668,856	1.091		1,258	
31 MULT MOTEL/HOTEL	09 HOTELS AND MOTELS	\$734,007	\$3,144,874	0.926		196	
	TOTAL *	\$734,007	\$3,144,874	0.926		196	
32 MULT APARTMENT	11 APARTMENTS	\$1,712,227	\$7,830,729	1.023		286	
	12 BUILDINGS&OFFICES	\$202,421	\$557,481	0.767		30	
	TOTAL *	\$1,914,648	\$8,388,210	0.996		316	
33 MULT OFFICE	12 BUILDINGS&OFFICES	\$3,058,480	\$14,015,692	1.189		801	
	13 MISC. PREMISES	\$33,445	\$128,944	0.205		5	
	TOTAL *	\$3,091,925	\$14,144,636	1.178		806	
34 MULT MERCANTILE	01 FOOD&BEV.(RETAIL)	\$1,378,799	\$5,883,288	0.867		435	
	02 RESTAURANTS	\$2,357,244	\$10,200,374	1.014		570	
	03 STORES	\$665,977	\$2,865,515	0.88		142	
	04 VENDING & RENTAL	\$10,485	\$47,447	17.718		2	
	05 FOOD & BEV. DIST.	\$151,778	\$775,225	0.909		23	
	06 NON-FOOD&BEV.DIST	\$711,912	\$3,305,596	1.048		142	
	12 BUILDINGS&OFFICES	\$612,787	\$3,249,631	1.042		178	
	13 MISC. PREMISES	\$495	\$1,262	0		0	
	TOTAL *	\$5,889,477	\$26,328,338	0.998		1,492	

INSURANCE SERVICES OFFICE, INC.

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

TERRITORY ALL		(1)	(2)	(3)	(4)	(5)	(6)
TYPE OF POLICY	CLASS GROUP	CALENDAR A.Y.E. 06/30/18 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
35 MULT INSTITUT.	07 CLUBS,AMSMT&SPRTS	\$78,079	\$326,230	0.374		25	
	08 HEALTH CARE FACIL	\$253,763	\$1,127,859	1.007		32	
	10 SCHLS & CHURCHES	\$989,686	\$4,885,811	1.074		628	
	12 BUILDINGS&OFFICES	\$25,075	\$74,754	1.496		11	
	13 MISC. PREMISES	\$5,667	\$24,209	0		0	
	16 GOVT SUBDIVISIONS	\$127,654	\$739,350	0.338		23	
	TOTAL *	\$1,479,924	\$7,178,213	0.965		719	
36 MULT SERVICES	03 STORES	\$101,146	\$439,581	1.06		42	
	04 VENDING & RENTAL	\$38,944	\$190,994	0.16		8	
	07 CLUBS,AMSMT&SPRTS	\$985,696	\$4,367,409	0.805		223	
	08 HEALTH CARE FACIL	\$2,889	\$8,905	0		0	
	09 HOTELS AND MOTELS	\$60,206	\$428,996	0.545		8	
	10 SCHLS & CHURCHES	\$9,701	\$61,512	0.067		1	
	12 BUILDINGS&OFFICES	\$281,493	\$1,392,883	1.195		112	
	13 MISC. PREMISES	\$223,743	\$829,065	1.181		75	
	TOTAL *	\$1,703,818	\$7,719,345	0.904		469	
TOTAL ALL TOP	01 FOOD&BEV.(RETAIL)	\$1,422,761	\$6,138,960	0.87		454	
	02 RESTAURANTS	\$2,578,703	\$11,149,970	1.067		673	
	03 STORES	\$1,006,398	\$4,475,347	0.974		250	
	04 VENDING & RENTAL	\$56,330	\$288,829	3.408		10	
	05 FOOD & BEV. DIST.	\$218,737	\$1,090,491	0.637		24	
	06 NON-FOOD&BEV.DIST	\$973,500	\$4,250,349	0.831		176	
	07 CLUBS,AMSMT&SPRTS	\$1,319,999	\$6,119,901	1.318		419	
	08 HEALTH CARE FACIL	\$284,698	\$1,385,836	0.944		34	
	09 HOTELS AND MOTELS	\$1,221,617	\$5,764,738	0.924		415	
	10 SCHLS & CHURCHES	\$1,204,747	\$6,124,384	1.036		678	
	11 APARTMENTS	\$3,948,382	\$14,845,319	0.969		449	
	12 BUILDINGS&OFFICES	\$5,665,440	\$26,876,084	1.14		1,554	
	13 MISC. PREMISES	\$321,492	\$1,322,288	0.938		97	
	16 GOVT SUBDIVISIONS	\$128,016	\$739,976	0.337		23	
	TOTAL *	\$20,350,820	\$90,572,472	1.038		5,256	

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

INSURANCE SERVICES OFFICE, INC.

MICHIGAN
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. 06/30/18 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	30 SERVICE	\$301,834	\$988,385	2.12	2.119	44	0.995
	31 LIGHT CONTRACTING	\$411,540	\$1,666,011	1.008	1.008	129	0.996
	32 MEDIUM CONTRCTING	\$2,951,262	\$13,961,695	0.844	0.843	543	0.979
	33 HEAVY CONTRACTING	\$449,108	\$2,027,968	0.642	0.642	54	0.941
	34 DEALER OR DISTRIB	\$166,063	\$800,291	0.63	0.63	24	0.953
	35 LGT. MANUFACTURER	\$108,226	\$570,233	0.768	0.768	8	0.96
	36 MED. MANUFACTURER	\$531,757	\$2,639,023	0.102	0.102	19	0.886
	37 HVY. MANUFACTURER	\$148,771	\$822,041	0.377	0.377	9	0.927
	38 MISC. OPERATION	\$282,714	\$1,392,975	1.478	1.477	57	0.971
	TOTAL *	\$5,351,275	\$24,868,622	0.85		887	
33 MULT OFFICE	31 LIGHT CONTRACTING	\$11,729	\$62,026	0.529	0.529	4	1.041
	32 MEDIUM CONTRCTING	\$26,885	\$121,733	0	0	0	1.023
	33 HEAVY CONTRACTING	\$134,636	\$630,800	2.533	2.532	11	0.983
	38 MISC. OPERATION	\$312,583	\$1,512,912	0.914	0.913	17	1.014
	TOTAL *	\$485,833	\$2,327,471	1.303		32	
34 MULT MERCANTILE	30 SERVICE	\$42,352	\$213,803	0.082	0.082	4	1.02
	32 MEDIUM CONTRCTING	\$137,869	\$614,285	3.199	3.198	23	1.004
	34 DEALER OR DISTRIB	\$1,022,041	\$5,058,723	0.641	0.641	183	0.977
	38 MISC. OPERATION	\$87,209	\$357,119	0.926	0.925	35	0.996
	TOTAL *	\$1,289,471	\$6,243,930	0.915		245	
35 MULT INSTITUT.	31 LIGHT CONTRACTING	\$19,504	\$115,916	6.108	6.106	7	1.051
	32 MEDIUM CONTRCTING	\$50,140	\$207,323	0.728	0.728	8	1.033
	TOTAL *	\$69,644	\$323,239	2.235		15	
36 MULT SERVICES	30 SERVICE	\$72,594	\$361,325	1.303	1.302	37	1.019
	31 LIGHT CONTRACTING	\$204,276	\$1,373,206	0.35	0.35	32	1.021
	32 MEDIUM CONTRCTING	\$185,886	\$1,026,133	0.303	0.303	18	1.003
	33 HEAVY CONTRACTING	\$61,229	\$386,958	0.956	0.956	7	0.964
	34 DEALER OR DISTRIB	\$793,140	\$3,473,313	1.255	1.255	174	0.976
	36 MED. MANUFACTURER	\$41,105	\$149,224	0.554	0.553	6	0.908
	38 MISC. OPERATION	\$738,925	\$2,823,811	1.003	1.002	140	0.994
	TOTAL *	\$2,097,155	\$9,593,970	0.973		414	

INSURANCE SERVICES OFFICE, INC.

MICHIGAN
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. 06/30/18 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
37 MULT INDUST/PROC	31 LIGHT CONTRACTING	\$657	\$3,245	0.243	0.242	0	1.055
	32 MEDIUM CONTRACTING	\$180,874	\$936,801	0.45	0.45	43	1.037
	33 HEAVY CONTRACTING	\$110,376	\$506,926	1.346	1.345	12	0.996
	34 DEALER OR DISTRIB	\$21,941	\$115,846	0.65	0.649	8	1.009
	35 LGT. MANUFACTURER	\$160,330	\$890,367	1.303	1.302	25	1.017
	36 MED. MANUFACTURER	\$931,877	\$4,188,362	0.576	0.576	99	0.938
	37 HVY. MANUFACTURER	\$1,047,554	\$5,212,935	0.747	0.747	77	0.981
	38 MISC. OPERATION	\$10,635	\$61,972	0.015	0.015	1	1.028
	TOTAL *	\$2,464,244	\$11,916,454	0.719		265	
38 MULT CONTRACTORS	30 SERVICE	\$897,513	\$3,953,007	1.163	1.162	208	1.056
	31 LIGHT CONTRACTING	\$1,571,824	\$6,590,761	1.388	1.388	513	1.057
	32 MEDIUM CONTRACTING	\$3,841,724	\$17,393,114	1.25	1.249	812	1.039
	33 HEAVY CONTRACTING	\$1,135,277	\$4,975,734	0.713	0.713	120	0.999
	38 MISC. OPERATION	\$9,518	\$38,670	5.655	5.653	3	1.03
	TOTAL *	\$7,455,856	\$32,951,286	1.192		1,656	
TOTAL ALL TOF	30 SERVICE	\$1,314,293	\$5,516,520	1.355		293	
	31 LIGHT CONTRACTING	\$2,219,530	\$9,811,165	1.259		685	
	32 MEDIUM CONTRACTING	\$7,374,640	\$34,261,084	1.072		1,447	
	33 HEAVY CONTRACTING	\$1,890,626	\$8,528,386	0.871		204	
	34 DEALER OR DISTRIB	\$2,003,185	\$9,448,173	0.883		389	
	35 LGT. MANUFACTURER	\$268,556	\$1,460,600	1.088		33	
	36 MED. MANUFACTURER	\$1,504,739	\$6,976,609	0.408		124	
	37 HVY. MANUFACTURER	\$1,196,325	\$6,034,976	0.701		86	
	38 MISC. OPERATION	\$1,441,584	\$6,187,459	1.095		253	
	TOTAL *	\$19,213,478	\$88,224,972	1		3,514	

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

INSURANCE SERVICES OFFICE, INC.

MICHIGAN
PRODUCTS
BASIC LIMIT RELATIVE CHANGE ANALYSIS

	(1)	(2)	(3)	(4)	(5)
TYPE OF	BAILEY		CREDIBILITY		
POLICY	FORMULA		WEIGHTED	BALANCED	INDICATED
	RELATIVITY	CREDIBILITY	RELATIVITY	RELATIVITY	CHANGE
10	0.988	0.373	0.996	0.996	
34	1.036	0.372	1.013	1.014	1.8%
36	1.005	0.187	1.001	1.002	0.6%
37	0.988	0.507	0.994	0.994	-0.2%
CLASS					
GROUP					
3	0.924	0.501	0.961	0.965	
4	1.048	0.407	1.019	1.024	
5	1.107	0.133	1.014	1.018	
6	1.007	0.320	1.002	1.006	
7	1.006	0.182	1.001	1.005	

NOTE: THE INDICATED CHANGES BY TOP WERE FURTHER ADJUSTED BY THE FOLLOWING
DIFFERENTIALS: TOP 34: 0.972
TOP 36: 0.996
TOP 37: 1.006

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. 12/31/2017 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2013 - 2017 AGG LOSS COST CURRENT LEVEL	FIVE YEAR EXPERIENCE RATIO	RELATIVITY	NUMBER OF OCCURRENCES	BAL CELL RELATIVITY
10 MONOLINE	03 MAN,DLR,DSTFD/DRG	18,227,491	79,500,211	0.856	0.869	1,461	0.961
	04 DLR,DST-NOTFD/DRG	9,616,743	42,155,667	1.119	1.136	640	1.019
	05 MAN.NTFD/DRG(LOW)	1,605,615	6,748,634	1.039	1.055	84	1.014
	06 MAN.NTFD/DRG(MED)	9,640,686	42,498,903	0.958	0.972	466	1.002
	07 MAN.NTFD/DRG(HGH)	2,568,561	11,286,663	1.018	1.033	129	1.001
	TOTAL *	41,659,096	182,190,078	0.957		2,780	
34 MULT MERCANTILE	03 MAN,DLR,DSTFD/DRG	5,166,155	25,851,441	1.131	1.148	791	0.979
	04 DLR,DST-NOTFD/DRG	29,011,611	140,165,685	1.037	1.052	1,972	1.038
	06 MAN.NTFD/DRG(MED)	7,625	57,567	0.000	0.000	-	1.020
	TOTAL *	34,185,391	166,074,693	1.051		2,763	
36 MULT SERVICES	04 DLR,DST-NOTFD/DRG	3,197,904	14,609,890	1.041	1.057	699	1.025
	06 MAN.NTFD/DRG(MED)	54,898	258,512	0.781	0.793	1	1.008
	TOTAL *	3,252,802	14,868,402	1.037		700	
37 MULT INDUST/PROC.	03 MAN,DLR,DSTFD/DRG	16,474,514	81,117,947	0.888	0.901	2,761	0.960
	05 MAN.NTFD/DRG(LOW)	4,070,679	20,897,437	1.092	1.108	269	1.012
	06 MAN.NTFD/DRG(MED)	28,248,516	131,744,418	0.987	1.002	1,582	1.001
	07 MAN.NTFD/DRG(HGH)	7,346,721	36,933,393	0.965	0.980	537	1.000
	TOTAL *	56,140,430	270,693,195	0.963		5,149	
TOTAL ALL TOF	03 MAN,DLR,DSTFD/DRG	39,868,160	186,469,599	0.905		5,013	
	04 DLR,DST-NOTFD/DRG	41,826,258	196,931,242	1.056		3,311	
	05 MAN.NTFD/DRG(LOW)	5,676,294	27,646,071	1.077		353	
	06 MAN.NTFD/DRG(MED)	37,951,725	174,559,400	0.979		2,049	
	07 MAN.NTFD/DRG(HGH)	9,915,282	48,220,056	0.979		666	
	TOTAL *	135,237,719	633,826,368	0.985		11,392	

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

INSURANCE SERVICES OFFICE, INC.

MICHIGAN

LOCAL PRODUCTS/COMPLETED OPERATIONS

BASIC LIMIT RELATIVE CHANGE ANALYSIS

TYPE OF POLICY	(1)	(2)	(3)	(4)	(5)
	BAILEY FORMULA RELATIVITY	CREDIBILITY CREDIBILITY	CREDIBILITY WEIGHTED RELATIVITY	BALANCED RELATIVITY	INDICATED CHANGE
10	0.966	0.748	0.974	0.972	
34	0.964	0.540	0.980	0.977	0.5%
36	0.992	0.515	0.996	0.992	2.1%
37	0.964	0.137	0.995	0.992	2.1%
38	1.026	0.954	1.025	1.021	5.0%
CLASS GROUP					
1	0.916	0.549	0.953	0.948	
2	1.035	0.493	1.017	1.012	
11	1.102	0.352	1.035	1.029	
12	1.015	1.000	1.015	1.009	
13	0.793	0.264	0.941	0.935	

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

STATE	(1) BAILEY FORMULA	(2)	(3) CREDIBILITY WEIGHTED	(4) BALANCED
	RELATIVITY	CREDIBILITY	RELATIVITY	RELATIVITY
MICHIGAN	1.422	0.386	1.146	1.145
	1.207	0.623	1.124	1.124
	1.428	0.229	1.085	1.085
	1.148	0.427	1.061	1.061
	1.417	0.160	1.057	1.057
	1.441	0.153	1.057	1.057
	1.212	0.263	1.052	1.052
	1.099	0.505	1.049	1.049
	1.138	0.345	1.046	1.046
	1.125	0.368	1.044	1.044
	1.194	0.231	1.042	1.042
	1.131	0.326	1.041	1.041
	1.176	0.239	1.040	1.039
	1.152	0.224	1.032	1.032
	1.067	0.435	1.029	1.029
	1.055	0.453	1.024	1.024
	1.261	0.100	1.023	1.023
	1.092	0.227	1.020	1.020
	1.051	0.369	1.018	1.018
	1.103	0.187	1.019	1.018
	1.093	0.192	1.017	1.017
	1.040	0.307	1.012	1.012
	1.021	0.449	1.010	1.009
	1.029	0.143	1.004	1.004
	1.004	0.494	1.002	1.002
	1.006	0.131	1.001	1.001
	0.999	0.377	1.000	0.999
	0.996	0.097	1.000	0.999
	0.995	0.402	0.998	0.998
	0.978	0.190	0.996	0.996
	0.967	0.458	0.985	0.985
	0.927	0.241	0.982	0.982
	0.941	0.349	0.979	0.979
	0.898	0.260	0.972	0.972
	0.894	0.285	0.969	0.969
	0.696	0.104	0.963	0.963
	0.791	0.160	0.963	0.963
	0.891	0.364	0.959	0.959
	0.761	0.154	0.959	0.959
	0.845	0.288	0.953	0.953
	0.722	0.158	0.950	0.950
	0.769	0.195	0.950	0.950
	0.909	0.547	0.949	0.949
	0.795	0.238	0.947	0.947
	0.513	0.084	0.945	0.945
	0.640	0.136	0.941	0.941
	0.815	0.308	0.939	0.939
	0.848	0.470	0.925	0.925
	0.758	0.321	0.915	0.915
	0.604	0.179	0.914	0.913
	0.818	0.527	0.899	0.899
	0.806	0.575	0.884	0.883

* Sorted by balanced relative change

INSURANCE SERVICES OFFICE, INC.

MICHIGAN
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. 12/31/17 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2013-2017 AGG LOSS COST CURRENT LEVEL	FIVE YEAR EXPERIENCE RATIO	RELATIV.	NUMBER OF OCCURRENCES	BAL CELL RELATIV.
10 MONOLINE	01 RET.STRS-FOOD/DRG	\$26,927	\$75,790	4.202	3.887	16	0.92
	02 RET.STRS-NTFD/DRG	\$52,347	\$152,819	1.198	1.109	10	0.982
	11 COMP. OPS. (LOW)	\$52,037	\$249,543	0.363	0.336	11	0.999
	12 COMP. OPS. (MED)	\$1,253,748	\$5,016,125	0.922	0.853	111	0.98
	13 COMP. OPS. (HGH)	\$133,749	\$769,825	1.217	1.126	6	0.908
	TOTAL *	\$1,518,808	\$6,264,102	0.996		154	
34 MULT MERCANTILE	01 RET.STRS-FOOD/DRG	\$248,571	\$998,455	1.414	1.308	90	0.926
	02 RET.STRS-NTFD/DRG	\$144,290	\$577,667	0.956	0.885	17	0.988
	12 COMP. OPS. (MED)	\$45,683	\$200,341	0.298	0.276	1	0.986
	TOTAL *	\$438,544	\$1,776,463	1.147		108	
36 MULT SERVICES	01 RET.STRS-FOOD/DRG	\$15,619	\$78,804	2.533	2.343	3	0.94
	02 RET.STRS-NTFD/DRG	\$324,151	\$1,334,924	2.029	1.878	102	1.003
	11 COMP. OPS. (LOW)	\$59,837	\$308,876	0.897	0.83	19	1.021
	12 COMP. OPS. (MED)	\$84,944	\$456,650	1.771	1.639	17	1.001
	13 COMP. OPS. (HGH)	\$49,275	\$208,185	1.179	1.091	15	0.928
	TOTAL *	\$533,826	\$2,387,439	1.798		156	
37 MULT INDUST/PROC	01 RET.STRS-FOOD/DI	\$7	\$127	0	0	0	0.94
	11 COMP. OPS. (LOW)	\$2,572	\$13,159	0.963	0.891	1	1.02
	12 COMP. OPS. (MED)	\$55,219	\$251,472	2.524	2.335	10	1
	13 COMP. OPS. (HGH)	\$276	\$922	0	0	0	0.927
	TOTAL *	\$58,074	\$265,680	2.443		11	
38 MULT CONTRACTORS	11 COMP. OPS. (LOW)	\$218,322	\$949,425	1.004	0.929	21	1.05
	12 COMP. OPS. (MED)	\$3,598,598	\$15,231,339	0.888	0.821	300	1.03
	13 COMP. OPS. (HGH)	\$377,438	\$1,599,676	2.049	1.895	32	0.955
	TOTAL *	\$4,194,358	\$17,780,440	0.998		353	
TOTAL ALL TOP	01 RET.STRS-FOOD/DRG	\$291,124	\$1,153,176	1.731		109	
	02 RET.STRS-NTFD/DRG	\$520,788	\$2,065,410	1.649		129	
	11 COMP. OPS. (LOW)	\$332,768	\$1,521,003	0.884		52	
	12 COMP. OPS. (MED)	\$5,038,192	\$21,155,927	0.924		439	
	13 COMP. OPS. (HGH)	\$560,738	\$2,578,608	1.773		53	
	TOTAL *	\$6,743,610	\$28,474,124	1.083		782	

* 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. 12/31/2017 AGGREGATE LOSS COSTS AT CURRENT LEVEL	CALENDAR A.Y.E. 2013 - 2017 AGG LOSS COST CURRENT LEVEL	FIVE YEAR EXPERIENCE RATIO	RELATIV.	NUMBER OF OCCURRENCES	BAL CELL RELATIV.
10 MONOLINE	01 RET.STRS-FOOD/DRG	2,565,927	10,980,064	0.980		762	
	02 RET.STRS-NTFD/DRG	2,610,173	11,610,218	1.215		490	
	11 COMP. OPS. (LOW)	3,985,620	17,948,273	1.339		705	
	12 COMP. OPS. (MED)	81,183,051	360,572,009	1.070		6,178	
	13 COMP. OPS. (HGH)	7,740,701	39,136,832	0.707		280	
	TOTAL *	98,085,472	440,247,396	1.054		8,415	
34 MULT MERCANTILE	01 RET.STRS-FOOD/DRG	7,831,998	36,819,520	0.941		3,576	
	02 RET.STRS-NTFD/DRG	5,162,530	23,225,919	1.001		661	
	12 COMP. OPS. (MED)	2,015,614	9,977,474	1.199		139	
	TOTAL *	15,010,142	70,022,913	0.996		4,376	
36 MULT SERVICES	01 RET.STRS-FOOD/DRG	727,613	3,418,235	1.031		196	
	02 RET.STRS-NTFD/DRG	12,212,353	48,251,774	1.091		2,506	
	11 COMP. OPS. (LOW)	3,092,023	14,000,322	1.112		510	
	12 COMP. OPS. (MED)	4,435,477	20,928,020	0.944		693	
	13 COMP. OPS. (HGH)	989,025	5,060,530	1.199		87	
	TOTAL *	21,456,491	91,658,881	1.066		3,992	
37 MULT INDUST/PROC.	01 RET.STRS-FOOD/DRG	26,825	90,444	2.392		1	
	11 COMP. OPS. (LOW)	114,357	528,705	1.231		19	
	12 COMP. OPS. (MED)	3,455,498	16,903,775	1.021		263	
	13 COMP. OPS. (HGH)	40,479	307,358	0.581		0	
	TOTAL *	3,637,159	17,830,282	1.033		283	
38 MULT CONTRACTORS	11 COMP. OPS. (LOW)	7,992,454	36,921,895	1.158		627	
	12 COMP. OPS. (MED)	139,682,161	659,850,085	1.123		12,364	
	13 COMP. OPS. (HGH)	14,266,724	66,209,562	0.927		683	
	TOTAL *	161,941,339	762,981,542	1.108		13,674	
TOTAL ALL TOP	01 RET.STRS-FOOD/DRG	11,152,363	51,308,263	0.959		4,535	
	02 RET.STRS-NTFD/DRG	19,985,056	83,087,911	1.084		3,657	
	11 COMP. OPS. (LOW)	15,184,454	69,399,195	1.197		1,861	
	12 COMP. OPS. (MED)	230,771,801	1,068,231,363	1.100		19,637	
	13 COMP. OPS. (HGH)	23,036,929	110,714,282	0.864		1,050	
	TOTAL *	300,130,603	1,382,741,014	1.081		30,740	

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

COMMERCIAL PACKAGE POLICY

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SECTION C - REVISED CLM DIVISION NINE

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

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

MICHIGAN (21)

PACKAGE MODIFICATION FACTORS

Package Modification Assignment (PMA)	Premium From CLM Division			
	Two	Three, Four, Five, Eight Property	Four, Six Liability	All Other Divisions
Apartment House	.90	.85	.97	1.00
Contractors	.90	.96	1.00	1.00
Industrial & Processing	.90	.87	.87	1.00
Institutional	.90	.89	.90	1.00
Mercantile	.90	.98	1.00	1.00
Motel/Hotel	.90	.95	.90	1.00
Office	.90	.92	.96	1.00
Service	.90	.99	.96	1.00

Table 1. Package Modification Factors