

LOSS COSTS – IMPLEMENTATION

FEBRUARY 14, 2020

COMMERCIAL AUTOMOBILE

LI-CA-2020-109

## MICHIGAN REVISED COMMERCIAL AUTO ADVISORY PROSPECTIVE LOSS COSTS TO BE IMPLEMENTED; NEW FILING FORMAT

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### KEY MESSAGE

Loss costs representing a 8.0% statewide change to be implemented.

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### BACKGROUND

In circular [LI-CA-2019-280](#), we provided you with information about the Commercial Auto loss cost level experience review.

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### ISO ACTION

We filed CA-2020-BRLA1, which presents a review of Commercial Auto loss cost experience.

Refer to the attached explanatory material for complete details about the filing.

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### IMPORTANT NOTE

#### Change in Format

The filing has been restructured. All explanatory text, for all sections of the filing, appears first; all exhibits are grouped together and appear thereafter, followed by the manual pages. We invite customers to share feedback on this revised format and suggestions for further enhancements by contacting the individuals listed in the Contact Information block.

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### SUPPLEMENTARY INFORMATION

We are including supplementary information for Michigan, which provides additional information on the attached loss cost level experience review.

NOTE: This supplementary information is **not** part of the experience review document and, in states where we are making a filing, is **not** part of the filing.

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### EFFECTIVE DATE

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

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

This effective date applies only to those insurers who have filed their Commercial Auto loss cost adjustments to be automatically applicable to future ISO loss cost revisions.

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## IMPACT ON THE STATISTICAL REPORTING OF LOSS COST MULTIPLIER

For the purpose of reporting your company Loss Cost Multiplier under the CSP, as of September 1, 2020, the multiplier must be based on the relationship between your gross rates and the ISO advisory prospective loss costs contained in this circular.

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## COMPANY ACTION

You must independently determine the final rates you will use. The action, if any, you must take in response to this filing is dependent upon how you filed to have your loss cost adjustments apply to subsequent revisions of ISO loss costs. Any submission you make with respect to this revision must comply with applicable regulatory filing requirements.

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

WE WILL SUBMIT OUR REFERENCE FILING TO THE INSURANCE DEPARTMENT ON JULY 31, 2020. ANY SUBMISSION YOU MAY MAKE WITH THE INSURANCE DEPARTMENT WITH RESPECT TO THIS FILING SHOULD NOT BE SUBMITTED PRIOR TO THIS DATE.

In all correspondence with the Insurance Department on this revision, you should refer to ISO Reference Filing Number CA-2020-BRLA1, NOT this circular number.

CAUTION: This reference filing revises only certain advisory prospective loss costs for Commercial Auto in this state. In determining whether or not to revise your rates, you should consider the application of your loss cost adjustments to any loss costs not included in this revision.

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## RATING SOFTWARE IMPACT

No new attributes are being introduced with this revision.

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## POLICYHOLDER NOTIFICATION

If you decide to implement this revision, you should check all applicable laws for the state(s) to which this revision applies, to determine whether or not a specific policyholder notice requirement may apply. Please note that circular [LI-CL-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.

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## FUTURE ISO ACTION

We will provide a status report for this and other Basic Limits Loss Costs (BRLA1) revisions. Please refer to the Insurance Lines Services web site ([www.verisk.com/ils](http://www.verisk.com/ils)). In addition to other information, this web site contains copies of major multistate filing status reports that are updated approximately every two weeks.

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## REVISION DISTRIBUTION

We will issue a Notice to Manualholders with an edition date of 9-20 (or the earliest possible subsequent date), along with any new and/or revised manual pages.

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## REFERENCE(S)

- [LI-CL-2019-057](#) (12/10/2019) Revised Lead Time Requirements Listing
- [LI-CA-2019-280](#) (12/04/2019) Commercial Auto Experience Level Indications Reviewed By Staff

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## ATTACHMENT(S)

- Filing CA-2020-BRLA1
- Supplementary Information

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## FILES AVAILABLE FOR DOWNLOAD

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

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

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## DATA QUALITY

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

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## ACKNOWLEDGEMENT OF ACTUARIAL QUALIFICATIONS

The American Academy of Actuaries' "Qualifications 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 loss cost review a Statement of Actuarial Opinion; therefore, we are including the following acknowledgment:

I, David Terné, am a Managing Director of Strategic Actuarial Operations for ISO, and I, James Davidson, am an Actuarial Director for Commercial Auto for ISO. We are jointly responsible for the content of this Statement of Actuarial Opinion. We are both members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

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## OPTIONAL CLASS PLAN INFORMATION

For the latest updates on the Optional Class Plan, visit <https://www.verisk.com/insurance/products/new-commercial-auto-class-plan>.

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## CONTACT INFORMATION

If you have any questions concerning:

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

MICHIGAN  
BASIC LIMITS PROSPECTIVE LOSS COST LEVEL – COMMERCIAL AUTOMOBILE  
FILING CA–2020-BRLA1  
EXECUTIVE SUMMARY

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PURPOSE	<p>This document:</p> <ul style="list-style-type: none"><li>• revises the advisory prospective loss costs for the major Commercial Automobile classes. These loss costs represent a 8.0% statewide change from the loss costs currently in effect.</li><li>• provides the analyses used to derive these advisory loss costs.</li></ul>
DEFINITION OF THE ISO ADVISORY PROSPECTIVE LOSS COSTS	<p>Advisory prospective loss costs in this document are the expected value of that portion of a rate that does not include provisions for expenses (other than loss adjustment expenses) or profit, and are based on historical aggregate losses and loss adjustment expenses adjusted through development to their ultimate value and projected through trending to a future point in time. Throughout this document the words “loss cost” are synonymous with the words “prospective loss cost.”</p>
OPTIONAL CLASS PLAN LOSS COSTS	<p>The loss costs contained in this filing CA-2020-BRLA1 are intended for use with the class plan in our standard manual. The prospective loss costs in this filing have also been used as the basis to develop the loss costs for the Optional Class Plan, which are located in companion filing CA-2020-BRLB1.</p>
CHANGE IN FORMAT	<p>In this document, all explanatory material appears first, followed by all exhibits, and then the revised prospective loss costs. Explanatory pages are numbered B-1 through C-25, the exhibits are labeled EXHIBIT A1 through EXHIBIT C16, and the revised prospective loss cost pages are numbered D-1 through D-35.</p>
PRIVATE PASSENGER TYPES SPECIFIED CAUSES OF LOSS	<p>This filing introduces a Loss Cost for Specified Causes of Loss Coverage for Private Passenger Types Vehicles.</p>
PIP COVERAGES	<p>The PIP coverages are not being reviewed this year due to recent changes to Michigan No Fault insurance.</p>
AUTO DEALERS LIABILITY AND PIP COVERAGES	<p>The Auto Dealers Liability and PIP coverages are not being reviewed this year.</p>

REVISED LOSS  
COST CHANGES

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The statewide advisory loss cost level changes are:

<u>Trucks, Tractors &amp; Trailers</u>	<u>Indicated</u>	<u>Filed</u>
Liability		
Single Limit Liability	12.4%	12.4%
Property Protection Insurance	1.9%	N.C.
Physical Damage		
Other than Collision	9.2%	9.2%
Collision	5.1%	5.1%
Total Trucks, Tractors & Trailers	9.3%	9.3%
 <u>Private Passenger Types</u>		
Liability		
Single Limit Liability	7.2%	7.2%
Property Protection Insurance	3.1%	N.C.
Physical Damage		
Other than Collision	7.3%	7.3%
Collision	1.9%	N.C.
Total Private Passenger Types	4.5%	3.5%
 <u>Grand Total</u>	8.3%	8.0%

Loss cost level changes are relative to the current loss costs.

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INDICATED VS.  
FILED

Indicated changes are based on standard ISO methodology, utilizing a 7/1/2020 trend effective date. The filed loss cost level changes are the same as the indicated with the following exceptions: For Trucks, Tractors and Trailers PPI and Private Passenger Types Collision, No Change (N.C.) was selected due to the modest indications. For Private Passenger Types PPI, No Change (N.C.) was selected to better reflect the favorable overall experience ratio.

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PRIOR ISO  
REVISIONS

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The latest selected revisions in this state are:

<u>Filing</u>	CA-2019-BRLA1	CA-2018-BRLA1	CA-2017-BRLA1
Rate Level/ Loss Costs	Loss Costs	Loss Costs	Loss Costs
Effective Date	7/1/2019	7/1/2018	7/1/2017
<u>Changes</u>			
Indicated	8.8%	5.0%	8.1%
Filed	8.2%	4.8%	8.0%
Approved	8.2%	4.8%	8.0%

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HISTORICAL  
SOURCE DATA

The sources of the data underlying this loss cost review are:

- ISO companies reporting voluntary automobile experience under the Commercial Automobile modules of ISO's statistical plans.
  - Accident year data through year ended 12/31/2018 for all coverages.
  - Various external price index data from the Bureau of Labor Statistics.
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ADJUSTMENTS TO  
REPORTED  
EXPERIENCE

Loss Trend

To adjust the loss data to levels expected to prevail during the period when the revised loss costs will be in effect, historical losses have been multiplied by trend factors. These trend factors are based on the changes in claim cost and claim frequency that are expected to arise between the historical experience period and the prospective period during which the revised loss costs are anticipated to be in effect. Historically, frequency trends for Commercial Auto liability have been quite variable, have differed between Trucks, Tractors, and Trailers (TTT) and Private Passenger Types (PPT) liability classes, and have often displayed cyclical patterns. As a result, an exponential curve of the form  $Y=A(B^X)$  does not fit the data well over the long term. To reflect these characteristics and the difficulty in predicting turning points and rates of change, frequency trend is being selected to be 0% for TTT and PPT for both the Bodily Injury and Property Damage coverages.

Claim cost trend data through fourth quarter 2018 and claim frequency trend data through third quarter 2018 were used in selecting the following annual liability trend factors:

ADJUSTMENTS TO REPORTED EXPERIENCE (CONT'D)	<u>Coverage</u>	<u>Annual Trend Factor</u>
	Trucks, Tractors, and Trailers Liability:	
	Bodily Injury	+5.5%
	Property Damage	+4.8%
	Private Passenger Types Liability:	
	Bodily Injury	+5.5%
	Property Damage	+4.8%
	Trucks, Tractors & Trailers OTC	+7.0%
	Trucks, Tractors & Trailers Collision	+4.5%
	Private Passenger Types OTC	+6.5%
	Private Passenger Types Collision	+4.0%

#### OCN Trend

To recognize the trend in the Original Cost New (OCN) relativities for Trucks, Tractors & Trailers and Private Passenger Type's physical damage, aggregate loss costs at current level have been multiplied by trend factors. The selected annual OCN trend factors for Trucks, Tractors & Trailers are +0.9% and +1.5% for OTC and Collision respectively. For Private Passenger Types, the OCN Trend factors are +1.0% and +0.6% for OTC and Collision respectively.

Standard actuarial procedures have been used in calculating the loss costs including adjusting the losses to ultimate settlement level, reflecting all loss adjustment expenses.

#### TEN LARGEST COMPANIES/ GROUPS IN THIS REVIEW

##### LIABILITY (ASLOB 19.3 & 19.4)

1. Cherokee Insurance Company
2. Travelers Indemnity Company
3. Frankenmuth Mutual Insurance Co.
4. Employers Mutual Casualty Company
5. Zurich American Insurance Company
6. Old Republic Insurance Company
7. Hartford Accident & Indemnity Co.
8. American International Group
9. Continental Casualty Company
10. Canal Insurance Company

##### PHYSICAL DAMAGE (ASLOB 21.2)

1. Zurich American Insurance Company
2. Employers Mutual Casualty Company
3. Cincinnati Insurance Company
4. Frankenmuth Mutual Insurance Co.
5. Travelers Indemnity Company
6. Cherokee Insurance Company
7. Motors Insurance Corporation
8. Liberty Mutual Insurance Company
9. Great American Insurance Company
10. Hartford Accident & Indemnity Co.

Insurers are listed in descending order based on the percent of statewide written premium volume from Annual Statement Page 15 for the year ending 12/31/2018 for the Annual Statement Line of Business (ASLOB) indicated.



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MARKET SHARE

The market share of ISO participating insurers used in this review as measured by Annual Statement Page 15 written premium for the year ending 12/31/2018 is:

Liability (ASLOB 19.3 & 19.4)

28.3%

Physical Damage (ASLOB 21.2)

39.0%

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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 loss costs contained herein are appropriate for its use. We have included within this document the information upon which ISO relied in order 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 projections based on the aggregate data.

Some calculations included in this document involve areas of ISO staff judgment. Each company should carefully review and evaluate its own experience in order to determine whether the ISO selected loss costs are appropriate for its use.

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

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MICHIGAN  
COMMERCIAL AUTOMOBILE  
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## OVERVIEW OF ISO ACTUARIAL PROCEDURES – COMMERCIAL AUTOMOBILE

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INTRODUCTION	Commercial Automobile advisory prospective loss costs are determined by evaluating the adequacy of the current ISO loss costs to pay for our best estimate of losses and all loss adjustment expenses that will be incurred in the prospective (or future) period. This evaluation is done separately by coverage for the major classes.
STEP 1: DETERMINATION OF STATEWIDE LOSS COST INDICATION	The first step in this process is the determination of the statewide loss cost indication by major class/coverage. In other words, what percentage changes on average must be made to the current ISO loss costs in order to achieve adequacy for the prospective conditions? The percentage changes are presented on the exhibits labeled "Determination of Statewide Advisory Loss Cost Level Change."
STEP 2: DISTRIBUTION TO TERRITORIES	For all of the liability coverages and for Trucks, Tractors & Trailers and Private Passenger Types Physical Damage, ISO then distributes the filed statewide basic limit loss cost change to the individual territorial loss costs by comparing the relative loss experience by territory to the statewide average.
STEP 3: APPLICATION OF PERCENT CHANGES	The last step is the calculation of the ISO advisory prospective loss costs. This is achieved by applying either the filed statewide or territorial changes to the current ISO loss costs. For liability, the percentage change is applied at the basic limit; for physical damage, it is applied at the base OCN, age and deductible. The resulting Loss Costs are displayed in Section D.

## OVERVIEW OF ISO ACTUARIAL PROCEDURES – COMMERCIAL AUTOMOBILE

### STEP 1 – DETERMINATION OF STATEWIDE ADVISORY LOSS COST LEVEL CHANGE

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OBJECTIVE	<p>The objective of this procedure is to determine the indicated statewide advisory loss cost level change. This procedure answers the question: what percentage changes must be made on average to the current ISO loss costs in order for them to be adequate to cover indemnity losses and all loss adjustment expenses incurred in the prospective period in which the revised loss costs are assumed to be in effect?</p>
DESCRIPTION	<p>This procedure compares the developed and trended incurred losses and loss adjustment expenses with the aggregate loss costs at current ISO loss cost level, which is the aggregate amount that would have been collected if the current ISO loss costs were used during the experience period. This experience ratio (losses and all loss adjustment expenses divided by aggregate loss costs) is calculated for several years and a weighted average is calculated. The weights are determined as a function of the credibility or volume of claim experience. The average experience ratio is then credibility weighted with the expected experience ratio in order to minimize the impact of random variation in the observed losses. This credibility weighted experience ratio is the indicated statewide advisory loss cost level change in decimal form.</p>
EXPERIENCE BASE	<p>The experience used in this review is the latest available as reported under the ISO Commercial Statistical Plan. All coverages are on an accident year basis. For liability, the review is conducted on a \$100,000 basic limits basis - indemnity losses are limited to \$100,000 per occurrence.</p>
AGGREGATE LOSS COSTS (Item 1)	<p>The aggregate loss costs at current ISO loss cost level are the loss-related revenue that would have been collected if the current ISO loss costs were used during the experience period. It is calculated by extending the exposures by the current ISO loss costs. For liability, the \$100,000 basic limit loss costs are used. For Trucks, Tractors, and Trailers and Private Passenger Types Physical Damage, loss costs are on an all deductibles combined basis.</p> <p>Trucks, Tractors &amp; Trailers and Private Passenger Types physical damage aggregate loss costs are placed on the prospective OCN relativity level by the application of OCN trend factors.</p>

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INCURRED  
LOSSES & LAE  
(Item 2)

The incurred losses and loss adjustment expenses are our best estimate of the ultimate payment for indemnity losses and loss adjustment expenses using the claim frequency and severity levels ISO expects to occur during the prospective period for which the revised loss costs will be used.

For the liability coverages, the reported incurred losses and allocated loss adjustment expenses are subject to the following adjustments:

- Incurred indemnity losses are capped at the basic limit;
- Developed to an ultimate settlement basis by the application of loss development factors;
- Loaded for unallocated loss adjustment expenses;
- Placed on the prospective cost/frequency levels by the application of trend factors.

For the physical damage coverages, the reported paid (accident year) losses are subject to the following adjustments:

- Paid Other Than Collision losses are adjusted using an Excess Wind and Water procedure;
- Developed to an ultimate settlement basis by the application of loss development factors;
- Loaded for all loss adjustment expenses;
- Placed on the prospective cost/frequency levels by the application of trend factors.

Refer to Section C for the support for these loss related adjustments.

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EXPERIENCE  
RATIO  
(Item 3)

The experience ratio is the ratio of the incurred losses and loss adjustment expenses to the aggregate loss costs at current ISO loss cost level. It measures the adequacy of the current ISO loss costs for the prospective period.

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YEAR WEIGHTS  
(Item 4)

The number of years of experience used and year weights are determined by the total number of claims in the experience period. To the extent there is adequate credibility, ISO uses fewer years and gives greater weight to the most recent years. Refer to the credibility pages of Section C for the methodology used to arrive at both the number of years used and the year weights.

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EXPECTED  
EXPERIENCE  
RATIO  
(Item 7)

The expected experience ratio is our best prediction of the experience ratio if the most recent data was not available. For this review we have assumed that the current loss costs were adequate when implemented and will be inadequate for the prospective period to the extent of the net trend. It is calculated as the combined trend factor projected for the number of years between the last revision (or review) and this revision.

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CREDIBILITY

Credibility is based upon the number of claims for all years in the experience period. The procedure for assigning credibility is outlined in the credibility pages of Section C.

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CREDIBILITY  
WEIGHTED  
EXPERIENCE  
RATIO

The average experience ratio is credibility weighted with the expected experience ratio. The resulting credibility weighted experience ratio, converted to a percentage, is the indicated change to the current ISO loss costs.

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## OVERVIEW OF ISO ACTUARIAL PROCEDURES – COMMERCIAL AUTOMOBILE

### STEP 2 – DETERMINATION OF TERRITORY RELATIVITIES

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OBJECTIVE	The objective of this procedure is to distribute the statewide loss cost indication by territory. In other words, what percentage changes by territory should be made in order to equitably achieve an adequate statewide prospective loss cost level?
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TRUCKS, TRACTORS & TRAILERS AND PRIVATE PASSENGER TYPES LIABILITY AND PHYSICAL DAMAGE	For Trucks, Tractors & Trailers and Private Passenger Types, this procedure compares the individual territory experience ratios to the statewide average experience ratio. The territory experience ratio is calculated for the latest 5 years and a statewide weighted-average experience ratio for the same period is calculated using the aggregate loss costs (product of earned car years (col 1) and underlying loss cost (col 2)) as weights. The territory experience ratio is then credibility weighted with the statewide average experience ratio to produce a formula experience ratio. The territory formula experience ratio is then compared to the statewide weighted average formula experience ratio to determine the territory index to state. The territory index is then multiplied by the filed loss cost level change in order to produce the indicated change to the individual territories. This change is then applied to the current territory base loss cost.
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EXPLANATORY MEMORANDUM FOR TRUCKS, TRACTORS & TRAILERS AND PRIVATE  
PASSENGER TYPES LIABILITY TERRITORY DEVELOPMENT

COLUMN (1) EARNED CAR YEARS	Number of car-years, or exposures, earned in the latest year. These exposures are used to calculate the weighted averages through the analysis. (For calculating the weighted average of the Experience Ratio in Col (4) and the Formula Experience Ratio in Col (6) the product of [Col(1) x Col(2)] are used as weights).
COLUMN (2) \$100,000 LOSS COST	Average \$100,000 loss cost at current level (earned aggregate loss cost at current level divided by exposures) is based on the latest accident year experience available and reflects the \$100,000 basic limit at the present ISO manual level.
COLUMN (3) 5 YEAR ENDED EXPERIENCE LOSS COST	Loss cost based on the latest 5 years of experience (for purposes of stability). The loss cost is Bodily Injury and Property Damage combined and is trended and developed to an ultimate settlement basis including all loss adjustment expenses.
COLUMN (4) EXPERIENCE RATIO LOSS COST	For each coverage, an experience ratio by territory is derived by dividing the 5 year experience loss cost by the average \$100,000 loss cost at present ISO manual level. [Col. (3) / Col. (2)]
COLUMN (5) CREDIBILITY	The experience ratio thus calculated is assigned a credibility value on the basis of the number of claims underlying the 5 year pure premium (See Section C for credibility standards). The complement of the credibility is assigned to the statewide experience ratio which appears in Col. (4).
COLUMN (6) FORMULA EXPERIENCE RATIO	<p>The formula experience ratio is a credibility weighted average of the territory group experience ratio and statewide experience ratio. The formula is as follows:</p> $[\text{Terr. Group Col. (4)} \times \text{Terr. Group Col. (5)}] \\ + [\text{SW Total Col. (4)} \times (1.0 - \text{Terr. Group Col. (5)})]$



COLUMN (7)  
INDEX TO  
STATE

Territory indices to state are calculated by dividing the territory formula experience ratio by the statewide average formula experience ratio

[Terr. Col (6) / SW Total Col. (6)]

(Statewide Total Col. (6) is the weighted average formula experience ratio using the individual products of [ Col. (1) x Col. (2) ] as weights.)

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COLUMN (8)  
BASE CLASS  
LOSS COST

Present ISO \$100,000 base class loss cost.

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COLUMN (9)  
INDICATED BASE  
LOSS COST

Indicated base class loss cost for a particular territory. It is calculated by applying the product of the statewide loss cost level change and the territory index [Col. (7)] to the present ISO loss cost.

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COLUMN (10)  
REVISED BASE  
LOSS COST

Revised \$100,000 base loss cost.

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COLUMN (11)  
ADVISORY  
LOSS COST  
CHANGE

Percentage change from the present \$100,000 base loss cost to the revised \$100,000 base loss cost.

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EXPLANATORY MEMORANDUM FOR TRUCKS, TRACTORS & TRAILERS AND  
PRIVATE PASSENGER TYPES  
PHYSICAL DAMAGE TERRITORY DEVELOPMENT

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COLUMN (1) EARNED CAR YEARS	Number of car-years, or exposures, earned in the latest year. These exposures are used to calculate the weighted averages through the analysis. (For calculating the weighted average of the Experience Ratio in Col (4) and the Formula Experience Ratio in Col (6) the product of [Col(1) x Col(2)] are used as weights).
COLUMN (2) UNDERLYING LOSS COST	Average loss cost at current level (earned aggregate loss cost at current level divided by exposures) is based on the latest accident year experience available and reflects the present ISO manual loss cost trended to a prospective OCN level by the application of OCN factors.
COLUMN (3) 5 YEAR ENDED EXPERIENCE LOSS COST	Loss cost based on the latest 5 years of experience (for purposes of stability). The loss cost is trended and include all loss adjustment expenses.
COLUMN (4) EXPERIENCE RATIO LOSS COST	For each coverage, an experience ratio by territory is derived by dividing the 5 year experience loss cost by the average loss cost at present ISO manual level. [Col. (3) / Col. (2)]
COLUMN (5) CREDIBILITY	The experience ratio thus calculated is assigned a credibility value on the basis of the number of claims underlying the 5 year pure premium (See Section C for credibility standards). The complement of the credibility is assigned to the statewide experience ratio which appears in Col. (4).
COLUMN (6) FORMULA EXPERIENCE RATIO	<p>The formula experience ratio is a credibility weighted average of the territory group experience ratio and statewide experience ratio. The formula is as follows:</p> $\begin{aligned} &[\text{Terr. Group Col. (4)} \times \text{Terr. Group Col. (5)}] \\ &+ [\text{SW Total Col. (4)} \times (1.0 - \text{Terr. Group Col. (5)})] \end{aligned}$

---

COLUMN (7)  
INDEX TO  
STATE

Territory indices to state are calculated by dividing the territory formula experience ratio by the statewide average formula experience ratio

$$[\text{Terr. Col (6)} / \text{SW Total Col. (6)}]$$

(Statewide Total Col. (6) is the weighted average formula experience ratio using the individual products of [ Col. (1) x Col. (2) ] as weights.)

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COLUMN (8)  
BASE CLASS  
LOSS COST

Present ISO base class loss cost.

---

COLUMN (9)  
INDICATED BASE  
LOSS COST

Indicated base class loss cost for a particular territory. It is calculated by applying the product of the statewide loss cost level change and the territory index [Col. (7)] to the present ISO loss cost.

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COLUMN (10)  
REVISED BASE  
LOSS COST

Revised base loss cost.

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COLUMN (11)  
ADVISORY  
LOSS COST  
CHANGE

Percentage change:  
[Col. (10) / Col. (8)]

---

## LOSS ADJUSTMENT EXPENSE FACTORS

---

OBJECTIVE	The reported indemnity losses must be loaded for any loss adjustment expenses (LAE) that are not reported in statistical detail to ISO.
LIABILITY COVERAGES	For the liability coverages, allocated loss adjustment expenses are reported in detail to ISO under the Commercial Statistical Plan. Unallocated loss adjustment expenses must be loaded into the losses. A factor representing the ratio of the sum of the incurred indemnity losses plus all LAE to the sum of the incurred indemnity losses plus allocated LAE was selected based on multistate financial data from a Special Call Submission for available writers.
PHYSICAL DAMAGE COVERAGES	For the physical damage coverages, accident year paid indemnity losses are reported. All loss adjustment expenses must be loaded into the reported losses. A factor representing the ratio of incurred losses plus all LAE to incurred losses was selected based on multistate financial data from the Insurance Expense Exhibits for agency and direct writers.

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## AVERAGE ANNUAL CHANGE IN LOSSES (LOSS TREND)

OBJECTIVE	The application of the average annual change in losses to historical data recognizes that advisory loss costs are being made for use in a future period based on historical experience. Due to economic and social factors, claim cost and frequency levels continue to change from those underlying the historical data.
DETERMINATION OF HISTORICAL AVERAGE CLAIM COST TREND	To determine the historical average claim cost trend, ISO makes use of the Least Squares Method fitted to the reported time series data; specifically, an exponential curve represented by the equation $Y=A(B^X)$ is fitted to the paid claim cost data. The parameters A and B are calculated by regressing Y, which is the applicable claim cost on X, which is the unit of time. The resulting fitted curve allows the determination of a historical average trend for the data under review.
LIABILITY LOSS TREND	The historical average annual change in claim costs for both Bodily Injury and Property Damage coverages are measured in this document using a credibility-weighted mix of multistate and statewide data. Prospective average annual changes for claim frequency have been selected based on the historical multistate data, as well as other relevant factors. Combining the state credibility-weighted claim cost trends with the selected claim frequency trends results in the selected Bodily Injury and Property Damage pure premium trend used to adjust the losses to a prospective level.
TREND CREDIBILITY FOR LIABILITY CLAIM SEVERITY	<p>Trend credibility is based on a full credibility standard of 975,000 claims for BI and 390,000 claims for PD. These standards were developed using a Bayesian analysis. Partial credibility is determined by the following formula:</p> $A = C/(C+K)$ <p>where C equals the number of claims for the latest year ended point and K equals 25,000 for bodily injury and 10,000 for property damage. The resulting table of partial credibilities is shown in this section.</p>

LIABILITY:  
FREQUENCY  
TREND

---

The data underlying the claim frequency trend selections is shown on the attached claim frequency exhibits. The exhibits include quarterly points for Multistate incurred frequency trend separately for Trucks, Tractors, and Trailers and Private Passenger Types. As can be seen from these exhibits (and corresponding graphs), frequency for both bodily injury and property damage has generally changed from year to year in an unpredictable manner.

Historically, frequency trends for Commercial Auto liability have been quite variable, have differed between Trucks, Tractors, and Trailers (TTT) and Private Passenger Types (PPT) liability classes, and have often displayed cyclical patterns. As a result, an exponential curve of the form  $Y=A(B^X)$  does not fit the data well over the long term. To reflect these characteristics and the difficulty in predicting turning points and rates of change, frequency trend is being selected to be 0% for TTT and PPT for both the Bodily Injury and Property Damage coverages.

---

PHYSICAL  
DAMAGE:  
LOSS TREND

Data Selections

- In our Physical Damage Trend review, we try to include as much data as possible for each deductible level that we analyze. With this goal in mind, for a given deductible level, we include all losses written at or below that deductible level. For example, consider an event causing \$1,500 of damage on a policy written with a \$250 deductible. This would be reported as a \$1,250 loss. In order to include as much data as possible in our review, we would generate 3 different records for this loss, one at each deductible that we analyze:

At \$250 deductible: \$1,250 loss

At \$500 deductible: \$1,000 loss

At \$1,000 deductible: \$500 loss

Each of these deductible levels is analyzed independently of the other levels, so that there are no instances of double-counting loss records.

- Wind and Water losses are removed from our Other Than Collision trend reviews due to the high variability of these types of losses from year to year.

Data Adjustments

In our Physical Damage trend review, we employ two adjustments to the data with the objective of diminishing distortions in the trend that we do not wish to measure. Our goal is to only measure inflationary effects.

1) All losses are divided by the appropriate class plan and age factors that correspond to that record in order to diminish the effect that variations in these factors from one year to the next have on the trend calculation.

PHYSICAL  
DAMAGE:  
LOSS TREND  
(CONT'D)

For example, consider 12 Truck exposures reported with Age Code 1 (current model year, age factor of 1.00). Each exposure experiences a loss of \$500. The average severity of the losses for these 12 exposures is \$500.

Now consider these 12 exposures 5 years in the future. The exposures are now reported with Age Code A (6th preceding model year, age factor of 0.80). Assume that there is 10% inflation per year on all severities. Also assume that each of these 12 exposures experience the same amount of damage as they did 5 years ago. The average severity of the losses for these 12 exposures is now \$644 (taking into account both inflation and the older age of the vehicles).

If we analyze the severity trend without dividing each loss by its corresponding age factor, we get an annual trend of  $(\$644/\$500)^{1/5} - 1 = 5.2\%$

If we first divide each loss by its corresponding age factor, we get an annual trend of  $((\$644/0.80) / (\$500/1.00))^{1/5} - 1 = 10.0\%$

The first calculated severity is not equal to the assumed inflation because the calculation includes the decrease in average severity caused by aging of the vehicles. By dividing each loss record by its corresponding class plan and age factors, we remove distortions on the severity trend caused by the change in the distribution of classes and ages from one year to the next.

2) All Other Than Collision losses are adjusted to correct for the distortion on trend results created by a change in the distribution of types of loss from one year to the next. The Other Than Collision severity is a weighted-average of the severities for each type of loss (glass, fire, theft, etc.). Since each type of loss has a different severity (for example, glass losses have a much smaller severity than other types of loss), then variations in the distribution of types of loss may lead to changes in the severity that we do not want to measure (if one year 5% of losses are glass losses, and the next year 30% of losses are glass losses, we would expect the average severity of all Other Than Collision losses to decrease). To correct this, we calculate the proportion of losses for each type of loss averaged over all years in the experience period.

Consider the following example, where an adjustment is NOT made to the data. Assume 10% annual inflation for all losses:

	Year 1		Year 2	
Type of Loss	Glass	Fire	Glass	Fire
Claims	10	3	15	5
Severity of Each Loss	\$50	\$1,000	\$55	\$1,100
Total Losses	\$500	\$3,000	\$825	\$5,500

Average severity of losses in Year 1 is  $(\$500 + \$3,000) / 13 \text{ claims} = \$269$

Average severity of losses in Year 2 is  $(\$825 + \$5,500) / 20 \text{ claims} = \$316.25$

Average Severity trend =  $(\$316.25/\$269) - 1 = 17.6\%$

PHYSICAL  
DAMAGE:  
LOSS TREND  
(CONT'D)

Now consider the same scenario, where an adjustment IS made to the data:

	Year 1		Year 2	
Type of Loss	Glass	Fire	Glass	Fire
Claims	10	3	15	5
Percentage of Total Claims	10/13 = 77%	3/13 = 23%	15/20 = 75%	5/20 = 25%

Average Percentage of Claims for Glass losses:  $(77\% + 75\%) / 2 = 76\%$

Average Percentage of Claims for Fire losses:  $(23\% + 25\%) / 2 = 24\%$

The number of claims for each type of loss for each year is replaced by these averages:

	Year 1		Year 2	
Type of Loss	Glass	Fire	Glass	Fire
Claims	76% x 13 = 9.88	24% x 13 = 3.12	76% x 20 = 15.2	24% x 20 = 4.8
Severity of Each Loss	\$50	\$1,000	\$55	\$1,100
Total Losses	\$494	\$3,120	\$836	\$5,280

Average severity of losses in Year 1 is  $(\$494 + \$3,120) / 13 \text{ claims} = \$278$

Average severity of losses in Year 2 is  $(\$836 + \$5,280) / 20 \text{ claims} = \$305.80$

Average Severity trend =  $(\$305.80 / \$278) - 1 = 10.0\%$

Note that the total number of claims each year remains unchanged from the total before the adjustment is made.

Year 1 claims =  $9.88 + 3.12 = 13 \text{ claims}$

Year 2 claims =  $15.2 + 4.8 = 20 \text{ claims}$

Although new claims totals by type of loss are used in the calculation, the impact of the adjustment is to change only the loss totals, so frequency figures are not changed. The result is equivalent to a re-weighting of the severities so that each type of loss has a consistent weight from year to year.

By keeping each type of loss' proportion of total claims constant from year to year, we remove distortions in the trend caused by changes in the distribution of types of loss.



PHYSICAL  
DAMAGE:  
LOSS TREND  
(CONT'D)

For the OTC coverages, there is a change to how glass losses are handled when shifting from one deductible to another. ISO collects a coverage code indicating if the deductible is waived for glass losses or not ("full glass" and "non-full glass", respectively). However some insurers waive deductibles on glass losses even when the policy isn't a "full glass" coverage policy. Recently we began to also collect a Type of Loss code indicating if a deductible has been waived for the particular claim. In situations where a claim is reported with a coverage code and Type of Loss code that aren't consistent on how a glass loss was handled, we previously used the coverage code to determine how we interpreted the loss amount. Now this scenario is handled based on the information in the new Type of Loss code.

The trend selections for physical damage are based on the data in the attached exhibits. Each exhibit includes the distribution of losses, by deductible, for the most recent year. We analyze frequency trend and severity trend separately, using data at the \$250, \$500, and \$1,000 deductibles for OTC, and at the \$500, \$1,000, and \$2,000 deductibles for Collision.

Historically, claim frequency (like liability claim frequency) had been variable from year to year, often cyclical. As a result, an exponential curve of the form  $Y=A(B^x)$  did not fit the frequency data well. In the interest of long-term stability, we have selected 0.0% trend factors for frequency.

Based on this multistate experience and on the continued positive trends in the Consumer Price Index for Bodywork, ISO has selected the following annual trends:

	Trucks, Tractors & Trailers <u>Pure Premium</u>	Private Passenger Types <u>Pure Premium</u>
OTC:	+7.0%	+6.5%
COLL:	+4.5%	+4.0%

---

COMMERCIAL AUTOMOBILE PHYSICAL DAMAGE  
SUPPLEMENTARY EXHIBIT

Quarterly Values <u>Ending</u>	Consumer Price Index for Bodywork	
	<u>Actual</u>	<u>Exponential Fit</u>
12/31/2015	2.831	2.823
03/31/2016	2.847	2.843
06/30/2016	2.866	2.862
09/30/2016	2.877	2.882
12/31/2016	2.913	2.901
03/31/2017	2.925	2.921
06/30/2017	2.942	2.941
09/30/2017	2.945	2.962
12/31/2017	2.966	2.982
03/31/2018	2.999	3.002
06/30/2018	3.016	3.023
09/30/2018	3.033	3.044
12/31/2018	3.061	3.065
03/31/2019	3.074	3.086
06/30/2019	3.118	3.107
09/30/2019	3.158	3.128
		Average
		Annual
		<u>Change</u>
16 Point Fit	<u>R-Squared</u>	
12 Point Fit		
	0.9857	2.8%
	0.9724	2.9%

## PHYSICAL DAMAGE OCN TREND

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### OBJECTIVE

In Physical Damage for Trucks, Tractors & Trailers and Private Passenger Types, as new, higher-valued commercial automobiles are introduced, there is an increase in revenue due to the original cost new component of the rating procedure. In order to reflect the revenue impact of the higher-valued vehicles during the prospective period, ISO uses an OCN trend procedure. The effect of this procedure is to reduce the indicated loss costs for Trucks, Tractors & Trailers and Private Passenger Types physical damage coverages.

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### DESCRIPTION OF ORIGINAL COST NEW DATA

The average original cost new (OCN) relativities for Comprehensive and Collision are displayed on the following exhibits. The data is displayed by coverage. To determine the historical average trend for OCN, ISO makes use of the Least Squares Method to fit a curve to the reported time series data. Specifically, an exponential curve represented by the equation

$$Y = A(B^X)$$

is fitted to the average OCN relativities. Based on the results of these curves, ISO has selected annual OCN trends of 0.9% and 1.5% for Trucks, Tractors & Trailers OTC and Collision coverages respectively. This trend is necessary to reflect the additional revenue generated by the shift in the OCN distribution as new, higher-priced automobiles are introduced.

For Private Passenger Types, OCN trends of 1.0% and 0.6% were selected for the OTC and Collision coverages respectively.

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## LOSS DEVELOPMENT FOR LIABILITY

OBJECTIVE	<p>The application of loss development recognizes the important concept that some of the losses for a particular accident year have not been finally determined at the time the experience is compiled.</p>
DESCRIPTION OF EXPERIENCE PERIOD DATA	<p>For Trucks, Tractors &amp; Trailers and Private Passenger Types Liability, the incurred losses and allocated loss adjustment expenses underlying the statewide loss cost level indications are on an accident year basis and were evaluated as of March 31, 2019. In other words, accident year ended December 31, 2018 includes all losses and allocated loss adjustment expenses paid through March 31, 2019 on accidents occurring from January 1, 2018 to December 31, 2018 and all losses and allocated loss adjustment expenses outstanding on these accidents as of March 31, 2019, 15 months after the inception of the accident year. Similarly, the incurred losses and allocated loss adjustment expenses for accident year ended December 31, 2017 include all loss and loss adjustment expenses paid through March 31, 2019 on accidents occurring from January 1, 2017 to December 31, 2017 and all losses and allocated loss adjustment expenses outstanding on these accidents as of March 31, 2019, 27 months after the inception of the accident year. The immature experience reported as of 15 or as of 27 months must be adjusted to a mature or ultimate settlement basis through the use of a loss development factor.</p>
DESCRIPTION OF LOSS DEVELOPMENT METHODOLOGY	<p>For Bodily Injury Coverage, states are divided into two multistate groups. One group (No-Fault) consists of states with a no-fault law that has a tort threshold. The other group (Tort) contains the remaining states. The applicable multistate group for this state is used in this document. Losses are developed up to 123 months and are based on \$100,000 CSL data. Three-year averages for Trucks, Tractors &amp; Trailers and Private Passenger Types are calculated for each link ratio based on a "best three of five" approach. Specifically, for the latest five years, the highest and lowest ratios were removed from the calculation and the three year average was calculated using the three remaining factors. Beyond 123 months the loss development is assumed to be unity.</p> <p>For Property Damage Coverage, one multistate group is used. Losses are developed up to 111 months and \$100,000 CSL data is used. Three-year averages for Trucks, Tractors &amp; Trailers and Private Passenger Types are calculated for each link ratio based on a "best three of five" years approach. Specifically, for the latest five years, the highest and lowest ratios were removed from the calculation and the three year average was calculated using the three remaining factors. Development beyond 111 months is assumed to be unity.</p>

STATE  
CREDIBILITY  
WEIGHTED  
FACTORS

---

For Trucks, Tractors & Trailers and Private Passenger Types, statewide loss development factors are credibility weighted with multistate factors. A Bayesian credibility study was done on state 15 to 27 months and 27 to 39 months loss development factors. The study concluded that there is significant statewide variation for bodily injury through 39 months and for property damage through 27 months. For these link ratios, statewide credibility is determined by the formula  $Z = L/(L+K)$ , where Z is the credibility, and L is the 3-year total losses for the particular state (at the earliest of the two evaluations). The complement of credibility is assigned to multistate loss development factors. K is a constant that varies by coverage as follows:

Trucks, Tractors & Trailers

	<u>15 to 27</u>	<u>27 to 39</u>
Bodily Injury (tort)	\$ 2,500,000	\$ 11,000,000
Bodily Injury (no-fault)	900,000	3,000,000
Property Damage	1,500,000	-

Private Passenger Types

	<u>15 to 27</u>	<u>27 to 39</u>
Bodily Injury (tort)	\$ 1,500,000	\$ 4,000,000
Bodily Injury (no-fault)	700,000	1,700,000
Property Damage	600,000	-

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TRUCKS,  
TRACTORS &  
TRAILERS AND  
PRIVATE  
PASSENGER  
TYPES

For Trucks, Tractors & Trailers and Private Passenger Types, Bodily Injury loss development factors to ultimate are calculated by accumulating the statewide credibility-weighted 15 to 27 month factor and 27 to 39 month factor, and the multistate average 39 to ultimate factor.

For the property damage coverage, loss development factors to ultimate are calculated by accumulating the statewide credibility-weighted 15-27 month factor and the multistate average 27 to ultimate factor.

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## LOSS DEVELOPMENT FOR PHYSICAL DAMAGE

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OBJECTIVE	The application of loss development recognizes the important concept that some of the losses for a particular accident year have not been finally determined at the time the experience is compiled.
DESCRIPTION OF EXPERIENCE PERIOD DATA	For Physical Damage, paid losses underlying the statewide loss cost level indications are on an accident year basis and were evaluated as of March 31, 2019. In other words, accident year ended December 31, 2018 includes all losses paid through March 31, 2019 on accidents occurring from January 1, 2018 to December 31, 2018. Similarly, the paid losses for accident year ended December 31, 2017 include all losses paid through March 31, 2019 on accidents occurring from January 1, 2017 to December 31, 2017. The immature paid loss experience reported as of 15 or as of 27 months must be adjusted to a mature or ultimate settlement basis through the use of a loss development factor.
DESCRIPTION OF LOSS DEVELOPMENT METHODOLOGY	<p>For Collision and Other Than Collision coverages, one multistate group is used. Losses are developed to an ultimate settlement basis. Three-year averages are calculated for each age-to-age link ratio. These link ratios are accumulated to develop losses to 123 months. Development beyond 123 months is assumed to be 1.000.</p> <p>For the Trucks, Tractors &amp; Trailers and Private Passenger Types Collision coverages, the losses in Michigan seem to develop differently than the multistate factors would indicate. Therefore, Michigan factors are being employed for the 15 to 27 months and 27 to 39 months link ratios.</p>

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## CREDIBILITY PROCEDURE FOR EXPERIENCE LOSS RATIO

OBJECTIVE	<p>The extent to which the state experience is reflected in the development of the prospective loss costs is determined by the credibility of the data for that state. Specifically, ISO credibility procedures are based upon the volume of claims for each coverage separately.</p>
METHODOLOGY	<p>The standards for full credibility were determined from a credibility study using various size of loss distributions for liability, other than collision and collision respectively. Separate standards by coverage/major class for full credibility were calculated using the Mayerson, Jones and Bowers expansion formula.</p>
CREDIBILITY FOR EXPERIENCE LOSS RATIO	<p>The assignment of credibility to the experience loss ratio is based on the total number of claims for the years used. For liability, the claims are based on BI and PD claims combined. For physical damage, credibility is determined separately for OTC and Collision. Partial credibility (Z), as used for the experience loss ratio, is determined using the square root rule as follows:</p> $Z = \sqrt{\frac{\text{Claims}}{X}}$ <p>Where X equals the full credibility standard, by line and coverage, as shown on the following pages of this section.</p>
YEAR WEIGHTS	<p>The weights assigned to the loss ratio by year are based on the credibility of the average number of claims for the years of experience used. A maximum of five years of experience may be used. This procedure is described in detail in the flow chart on the following page. The claim standard used to determine the year weights is based on the credibility standard for each coverage. The schedules of the number of claims required for the year weight assignments are shown on the following pages.</p>

COMMERCIAL AUTOMOBILE LIABILITY  
FLOWCHART TO DETERMINE  
YEAR WEIGHTS AND  
EXPERIENCE PERIOD CREDIBILITY

Step 1: Determine Number of Years to be used and Year Weights

1. Add latest 2 years of claims and divide by 2 to determine the 2 year average.
2. If 2 year Avg. claims  $\geq$  11,500,  
Then use 2 years of experience and assign 70/30 weights.
3. Add latest 3 years of claims and divide by 3 to determine the 3 year average.
4. If 3 year Avg. claims  $\geq$  1,380,  
Then use 3 years of experience and assign 50/30/20 weights.
5. If 3 year Avg. claims  $<$  1,380,  
Then use 5 years of experience and assign 30/25/20/15/10 weights.

Step 2: Determine the Experience Period Credibility

Calculate partial credibility based on the total number of claims for the number of years used in the review as determined from Step 1.



COMMERCIAL AUTOMOBILE PHYSICAL DAMAGE  
FLOWCHART TO DETERMINE  
YEAR WEIGHTS AND  
EXPERIENCE PERIOD CREDIBILITY

Step 1: Determine Number of Years to be used and Year Weights

1. Add latest 2 years of claims and divide by 2 to determine the 2 year average.
2. If 2 year Avg. claims  $\geq$  Full Standard,  
Then use 2 years of experience and assign 70/30 weights.
3. Add latest 3 years of claims and divide by 3 to determine the 3 year average.
4. If 3 year Avg. claims  $\geq$  Intermediate Threshold,  
Then use 3 years of experience and assign 50/30/20 weights.
5. If 3 year Avg. claims  $<$  Intermediate Threshold,  
Then use 5 years of experience and assign 30/25/20/15/10 weights.

Step 2: Determine the Experience Period Credibility

Calculate partial credibility based on the total number of claims for the number of years used in the review as determined from Step 1.

<u>Coverage</u>	<u>Intermediate Threshold</u>	<u>Full Standard</u>
Trucks, Tractors & Trailers OTC	1,350	11,000
Trucks, Tractors & Trailers Collision	550	4,500
Private Passenger Types OTC	1,050	8,500
Private Passenger Types Collision	450	3,500

Tables For Use With Trend Data

Bodily Injury				Property Damage			
<u>Number of Claims</u>			<u>Cred.</u>	<u>Number of Claims</u>			<u>Cred.</u>
0	-	641	0.00	0	-	256	0.00
642	-	2027	0.05	257	-	810	0.05
2028	-	3571	0.10	811	-	1428	0.10
3572	-	5303	0.15	1429	-	2121	0.15
5304	-	7258	0.20	2122	-	2903	0.20
7259	-	9482	0.25	2904	-	3793	0.25
9483	-	12037	0.30	3794	-	4814	0.30
12038	-	14999	0.35	4815	-	5999	0.35
15000	-	18478	0.40	6000	-	7391	0.40
18479	-	22619	0.45	7392	-	9047	0.45
22620	-	27631	0.50	9048	-	11052	0.50
27632	-	33823	0.55	11053	-	13529	0.55
33824	-	41666	0.60	13530	-	16666	0.60
41667	-	51923	0.65	16667	-	20769	0.65
51924	-	65909	0.70	20770	-	26363	0.70
65910	-	86111	0.75	26364	-	34444	0.75
86112	-	117857	0.80	34445	-	47142	0.80
117858	-	174999	0.85	47143	-	69999	0.85
175000	-	308333	0.90	70000	-	123333	0.90
308334	-	974999	0.95	123334	-	389999	0.95
975000	-	and over	1.00	390000	-	and over	1.00

K = 25,000

K = 10,000

$$\text{CREDIBILITY FORMULA} = (\# \text{ CLAIMS}) / (\# \text{ CLAIMS} + K)$$

ALL LIABILITY COVERAGES  
CREDIBILITY TABLE  
NUMBER OF CLAIMS

<u>Credibility</u>			
0.00*	0	-	28
0.05	29	-	114
0.10	115	-	258
0.15	259	-	459
0.20	460	-	718
0.25	719	-	1,034
0.30	1035	-	1,408
0.35	1,409	-	1,839
0.40	1,840	-	2,328
0.45	2,329	-	2,874
0.50	2,875	-	3,478
0.55	3,479	-	4,139
0.60	4,140	-	4,858
0.65	4,859	-	5,634
0.70	5,635	-	6,468
0.75	6,469	-	7,359
0.80	7,360	-	8,308
0.85	8,309	-	9,314
0.90	9,315	-	10,378
0.95	10,379	-	11,499
1.00		>	11,499

The credibility for the loss cost level ratio is determined by the total number of claims for the total number of years of experience used in the review.

\*The credibility underlying the calculation of the statewide indication is subject to a minimum of 5% given that there is at least one claim in the experience period.

PHYSICAL DAMAGE  
CREDIBILITY TABLES  
NUMBER OF CLAIMS

OTHER THAN COLLISION

<u>Cred</u>	<u>Trucks, Tractors &amp; Trailers</u>			<u>Private Passenger Types</u>		
0.00*	0	-	27	0	-	21
0.05	28	-	109	22	-	84
0.10	110	-	247	85	-	191
0.15	248	-	439	192	-	339
0.20	440	-	687	340	-	531
0.25	688	-	989	532	-	764
0.30	990	-	1,347	765	-	1,041
0.35	1,348	-	1,759	1,042	-	1,359
0.40	1,760	-	2,227	1,360	-	1,721
0.45	2,228	-	2,749	1,722	-	2,124
0.50	2,750	-	3,327	2,125	-	2,571
0.55	3,328	-	3,959	2,572	-	3,059
0.60	3,960	-	4,647	3,060	-	3,591
0.65	4,648	-	5,389	3,592	-	4,164
0.70	5,390	-	6,187	4,165	-	4,781
0.75	6,188	-	7,039	4,782	-	5,439
0.80	7,040	-	7,947	5,440	-	6,141
0.85	7,948	-	8,909	6,142	-	6,884
0.90	8,910	-	9,927	6,885	-	7,671
0.95	9,928	-	10,999	7,672	-	8,499
1.00		>	10,999		>	8,499

COLLISION

<u>Cred</u>	<u>Trucks, Tractors &amp; Trailers</u>			<u>Private Passenger Types</u>		
0.00*	0	-	11	0	-	8
0.05	12	-	44	9	-	34
0.10	45	-	101	35	-	78
0.15	102	-	179	79	-	139
0.20	180	-	281	140	-	218
0.25	282	-	404	219	-	314
0.30	405	-	551	315	-	428
0.35	552	-	719	429	-	559
0.40	720	-	911	560	-	708
0.45	912	-	1,124	709	-	874
0.50	1,125	-	1,361	875	-	1,058
0.55	1,362	-	1,619	1,059	-	1,259
0.60	1,620	-	1,901	1,260	-	1,478
0.65	1,902	-	2,204	1,479	-	1,714
0.70	2,205	-	2,531	1,715	-	1,968
0.75	2,532	-	2,879	1,969	-	2,239
0.80	2,880	-	3,251	2,240	-	2,528
0.85	3,252	-	3,644	2,529	-	2,834
0.90	3,645	-	4,061	2,835	-	3,158
0.95	4,062	-	4,499	3,159	-	3,499
1.00		>	4,499		>	3,499

The credibility for loss cost level ratio is determined by the total number of claims for the total number of years of experience used in the review.

\*The credibility underlying the calculation of the statewide indication is subject to a minimum of 5% given that there is at least one claim in the experience period.

MICHIGAN  
CLAIMS PER TERRITORY  
LIABILITY AND PPI

Territory	Trucks, Tractors & Trailers Incurred Claims 12/31/2018		Private Passenger Types Incurred Claims 12/31/2018	
	Combined BI and PD	PPI	Combined BI and PD	PPI
111	156	30	32	3
112	192	28	42	6
113	86	10	36	2
117	271	121	47	12
118	68	31	16	3
119	97	39	12	3
123	271	69	44	8
124	552	208	143	22
125	56	46	3	1
126	187	85	44	8
128	852	261	145	41
130	178	20	77	6
131	13	5	3	1
132	263	39	95	11
133	563	118	227	13
134	142	31	83	6
135	55	18	11	1
SW Total	4,002	1,159	1,060	147

Claims for Trend

BI  
588

PD  
2,266

MICHIGAN  
CLAIMS PER TERRITORY  
PHYSICAL DAMAGE

Territory	Trucks, Tractors & Trailers Paid Claims 5 Years Ending 12/31/2018		Private Passenger Types Paid Claims 5 Years Ending 12/31/2018	
	OTC	Coll	OTC	Coll
111	166	324	114	211
112	321	534	197	401
113	86	168	37	134
117	815	1,058	449	580
118	198	300	124	161
119	357	435	163	152
123	516	691	354	366
124	1,703	2,150	837	1,151
125	437	376	131	78
126	1,053	1,090	464	333
128	2,972	3,342	1,482	1,453
130	283	485	237	403
131	84	108	51	39
132	442	812	376	864
133	909	1,724	796	1,582
134	243	485	319	531
135	101	190	36	70
SW Total	10,686	14,272	6,167	8,509

## WIND AND WATER PROCEDURE OTHER THAN COLLISION

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### OBJECTIVE

Other Than Collision losses which result from the perils of Wind and Water are relatively infrequent and do not affect each year similarly. While catastrophic incidents are rare, their impact on loss cost indications can be significant. The occurrence of a weather related catastrophe can result in a large positive indication, followed by an indicated decrease when the catastrophe leaves the experience period in subsequent reviews. This ultimately leads to loss cost instability.

In order to address this ratemaking problem, the Wind and Water procedure removes the Wind and Water losses that actually occur in a given year and replaces them with an expected Wind and Water provision, based on the state's long term history of Wind and Water losses. Due to the lower credibility of catastrophic loss experience, a longer experience period or a larger body of data is necessary to compensate.

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### DESCRIPTION OF WIND AND WATER ADJUSTMENT PROCEDURE

The Wind and Water procedure begins by comparing Wind and Water losses to non-Wind and Water losses for each year in the long term review period. Wind and Water losses have been separately identified as losses reported under the Commercial Statistical Plan (CSP) using Type of Loss (TOL) codes 06 and 07. A ratio of Wind and Water to non-Wind and Water losses is calculated for each year.

The long term 'normal' Wind and Water to non-Wind and Water ratio is determined by calculating the average of the Wind and Water to non-Wind and Water ratios for all years for which data is currently available.

The variation from the long term normal Wind and Water to non-Wind and Water ratio is then determined by calculating the difference between the normal ratio and the Wind and Water ratio for each year.

The loss adjustment required in order to bring each year of experience to a normal Wind and Water level is determined by applying the variation factor (column (5)) to the reported non-Wind and Water losses (column (3)).

The major steps of the procedure are shown in the Exhibits on the following pages.

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## INSURANCE SERVICES OFFICE, INC.

WIND AND WATER PROCEDURE  
OTHER THAN COLLISION  
MICHIGAN

## TRUCKS, TRACTORS, AND TRAILERS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			(2) - (1)	(1) / (3)	AVG (4) - (4)	(3) x (5)	(2) + (6)
YEAR ENDING	OTC WIND & WATER LOSSES	OTC TOTAL LOSSES	TOTAL - WIND&WATER LOSSES	WIND & WATER / NON (W&W)	VARIATION FROM AVG. WIND RATIO	WIND & WATER ADJUSTMENT	ADJ OTC TOTAL LOSSES
1987	30,448	3,005,164	2,974,716	0.010	0.037	110,064	3,115,228
1988	41,047	2,930,056	2,889,009	0.014	0.033	95,337	3,025,393
1989	39,163	3,044,617	3,005,454	0.013	0.034	102,185	3,146,802
1990	98,945	3,253,619	3,154,674	0.031	0.016	50,475	3,304,094
1991	88,562	3,513,706	3,425,144	0.026	0.021	71,928	3,585,634
1992	63,302	3,585,431	3,522,129	0.018	0.029	102,142	3,687,573
1993	63,176	4,560,412	4,497,236	0.014	0.033	148,409	4,708,821
1994	100,092	5,804,631	5,704,539	0.018	0.029	165,432	5,970,063
1995	84,805	6,549,209	6,464,404	0.013	0.034	219,790	6,768,999
1996	301,793	7,866,522	7,564,729	0.040	0.007	52,953	7,919,475
1997	373,910	10,181,477	9,807,567	0.038	0.009	88,268	10,269,745
1998	897,963	11,498,197	10,600,234	0.085	-0.038	-402,809	11,095,388
1999	363,309	10,914,870	10,551,561	0.034	0.013	137,170	11,052,040
2000	624,321	10,230,309	9,605,988	0.065	-0.018	-172,908	10,057,401
2001	289,307	7,918,634	7,629,327	0.038	0.009	68,664	7,987,298
2002	153,922	5,508,321	5,354,399	0.029	0.018	96,379	5,604,700
2003	164,012	5,153,367	4,989,355	0.033	0.014	69,851	5,223,218
2004	96,189	3,245,415	3,149,226	0.031	0.016	50,388	3,295,803
2005	97,098	3,309,828	3,212,730	0.030	0.017	54,616	3,364,444
2006	59,465	2,967,082	2,907,617	0.020	0.027	78,506	3,045,588
2007	102,362	3,663,519	3,561,157	0.029	0.018	64,101	3,727,620
2008	159,691	3,425,159	3,265,468	0.049	-0.002	-6,531	3,418,628
2009	129,836	3,758,250	3,628,414	0.036	0.011	39,913	3,798,163
2010	226,235	3,679,679	3,453,444	0.066	-0.019	-65,615	3,614,064
2011	249,353	4,455,963	4,206,610	0.059	-0.012	-50,479	4,405,484
2012	633,622	4,902,246	4,268,624	0.148	-0.101	-431,131	4,471,115
2013	251,949	4,741,126	4,489,177	0.056	-0.009	-40,403	4,700,723
2014	1,020,132	5,986,778	4,966,646	0.205	-0.158	-784,730	5,202,048
2015	397,857	5,046,385	4,648,528	0.086	-0.039	-181,293	4,865,092
2016	246,718	4,641,942	4,395,224	0.056	-0.009	-39,557	4,602,385
2017	226,376	5,052,086	4,825,710	0.047	0	0	5,052,086
2018	335,801	6,449,612	6,113,811	0.055	-0.008	-48,910	6,400,702

(8) NORMAL WIND TO NON W&amp;W RATIO= AVG. (4) 0.047



## INSURANCE SERVICES OFFICE, INC.

WIND AND WATER PROCEDURE  
OTHER THAN COLLISION  
MICHIGAN

## PRIVATE PASSENGER TYPES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			(2) - (1)	(1) / (3)	AVG (4) - (4)	(3) x (5)	(2) + (6)
YEAR ENDING	OTC WIND & WATER LOSSES	OTC TOTAL LOSSES	TOTAL - WIND&WATER LOSSES	WIND & WATER / NON (W&W)	VARIATION FROM AVG. WIND RATIO	WIND & WATER ADJUSTMENT	ADJ OTC TOTAL LOSSES
1987	29,029	3,954,020	3,924,991	0.007	0.063	247,274	4,201,294
1988	27,398	3,211,402	3,184,004	0.009	0.061	194,224	3,405,626
1989	48,211	2,870,481	2,822,270	0.017	0.053	149,580	3,020,061
1990	37,409	2,487,218	2,449,809	0.015	0.055	134,739	2,621,957
1991	153,351	2,675,534	2,522,183	0.061	0.009	22,700	2,698,234
1992	46,440	2,450,336	2,403,896	0.019	0.051	122,599	2,572,935
1993	51,751	2,974,959	2,923,208	0.018	0.052	152,007	3,126,966
1994	80,895	3,761,642	3,680,747	0.022	0.048	176,676	3,938,318
1995	116,937	3,823,538	3,706,601	0.032	0.038	140,851	3,964,389
1996	207,639	4,078,006	3,870,367	0.054	0.016	61,926	4,139,932
1997	229,120	5,382,448	5,153,328	0.044	0.026	133,987	5,516,435
1998	453,044	5,779,804	5,326,760	0.085	-0.015	-79,901	5,699,903
1999	108,853	4,363,174	4,254,321	0.026	0.044	187,190	4,550,364
2000	544,828	4,354,349	3,809,521	0.143	-0.073	-278,095	4,076,254
2001	149,412	2,919,631	2,770,219	0.054	0.016	44,324	2,963,955
2002	65,321	2,394,653	2,329,332	0.028	0.042	97,832	2,492,485
2003	59,514	1,942,788	1,883,274	0.032	0.038	71,564	2,014,352
2004	110,817	1,889,903	1,779,086	0.062	0.008	14,233	1,904,136
2005	111,383	1,496,870	1,385,487	0.080	-0.010	-13,855	1,483,015
2006	58,153	1,353,470	1,295,317	0.045	0.025	32,383	1,385,853
2007	70,718	1,496,319	1,425,601	0.050	0.020	28,512	1,524,831
2008	92,769	1,639,380	1,546,611	0.060	0.010	15,466	1,654,846
2009	96,065	1,952,405	1,856,340	0.052	0.018	33,414	1,985,819
2010	155,629	2,032,211	1,876,582	0.083	-0.013	-24,396	2,007,815
2011	164,620	2,141,584	1,976,964	0.083	-0.013	-25,701	2,115,883
2012	293,623	2,043,097	1,749,474	0.168	-0.098	-171,448	1,871,649
2013	196,886	2,553,825	2,356,939	0.084	-0.014	-32,997	2,520,828
2014	1,042,116	3,209,380	2,167,264	0.481	-0.411	-890,746	2,318,634
2015	163,766	2,364,488	2,200,722	0.074	-0.004	-8,803	2,355,685
2016	227,150	2,066,597	1,839,447	0.123	-0.053	-97,491	1,969,106
2017	172,303	2,390,634	2,218,331	0.078	-0.008	-17,747	2,372,887
2018	101,986	2,150,552	2,048,566	0.05	0.02	40,971	2,191,523

(8) NORMAL WIND TO NON W&amp;W RATIO= AVG. (4) 0.070

## EXPLANATORY MEMORANDUM FOR WIND AND WATER PROCEDURE

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COLUMN (1) OTC WIND AND WATER LOSSES	Dollar amount of Other Than Collision losses resulting from the perils of Wind and Water (Type of Loss Codes 06 & 07).
COLUMN (2) OTC TOTAL LOSSES	Dollar amount of Other Than Collision losses resulting from all perils.
COLUMN (3) OTC LOSSES OTHER THAN WIND AND WATER	Dollar amount of Other Than Collision losses resulting from all perils other than Wind and Water. $\text{Column (2)} - \text{Column (1)}$ .
COLUMN (4) WIND AND WATER TO NON-WIND AND WATER RATIO	Ratio of Wind and Water losses to Non-Wind and Water losses. $\text{Column (1)} \div \text{Column (3)}$
COLUMN (5) VARIATION FROM AVERAGE WIND RATIO	Variation from the long term average Wind and Water to non-Wind and Water ratio. $\text{Avg (4)} - \text{Column (4)}$ .
COLUMN (6) WIND AND WATER ADJUSTMENT	Wind and Water loss adjustment to bring experience to average Wind and Water level. $\text{Column (3)} * \text{Column (5)}$ .
COLUMN (7) ADJUSTED OTC TOTAL LOSSES	$\text{Column (2)} + \text{Column (6)}$ .

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## TERRITORIAL WIND AND WATER PROCEDURE OTHER THAN COLLISION

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### OBJECTIVE

The statewide Wind and Water procedure removes the actual Wind and Water losses that occur in a given year and replaces them with an expected Wind and Water provision. The territorial excess Wind and Water procedure distributes the statewide expected Wind and Water loss provision to the individual territories in proportion to each territory's long-term Wind and Water loss experience.

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### DESCRIPTION OF TERRITORIAL WIND AND WATER PROCEDURE

The first step is to calculate long term Wind and Water to non-Wind and Water ratios by territory. The earliest year of historical Wind and Water experience available for Commercial Auto is 1987. As a new year becomes available, it is added to the procedure. For each year, the territorial ratios are calculated as Wind and Water losses divided by non-Wind and Water losses. An average is then taken of all the ratios for each territory to get the long term Wind and Water to non-Wind and Water ratio.

One potential problem with the average ratios is that a high Wind and Water ratio for one year can distort the average ratio for that territory. To mitigate the effect of unusually large ratios, the ratios are capped at 10 times the statewide median of the Wind and Water ratios before calculating the average. (The statewide median ratio is subject to a minimum value of 0.05.)

The territorial capped average Wind and Water ratios are multiplied by the latest 5 years non-Wind and Water losses for each territory to get the territorial expected Wind and Water losses. The territorial expected Wind and Water losses are divided by the statewide total expected Wind and Water losses to get the territorial expected Wind and Water distribution.

The statewide wind provision is calculated for each year from the statewide procedure by subtracting the non-Wind and Water losses from the total adjusted losses. The individual territorial Wind and Water provisions are then calculated by distributing the statewide wind provision to the territories based on the expected Wind and Water distribution.

Territorial adjusted total losses = territorial Wind and Water provision + territorial non-Wind and Water losses

Because the actual Wind and Water losses are replaced with an expected Wind and Water provision, the number of Wind and Water claims must be adjusted. The territorial Wind and Water provision is divided by the territory's average Wind and Water claim cost to produce the adjusted number of Wind and Water claims. The adjusted Wind and Water claims are added to the non-Wind and Water claims, resulting in the total adjusted claims.

A sample of the territory Wind and Water procedure is shown on the following page.

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## METHODOLOGY FOR CALCULATING 'WIND &amp; WATER PROVISIONS' BY TERRITORY

In order to develop 'Wind and Water Provisions' by territory, the statewide provision is distributed using each territory's 'expected' wind and water losses. This procedure is illustrated in the following example:

Territory	(1) Long-Term Capped* Ratio of Wind & Water to Non-Wind & Water Losses	(2) Non-Wind & Water Losses for Latest Five Years	(3) 'Expected' Wind & Water Losses for Latest Five Years (1) x (2)	(4) 'Expected' Wind & Water Distribution (3) / Total (3)
A	.250	500,000	125,000	.500
B	.750	100,000	75,000	.300
C	.200	250,000	50,000	.200

Territory	(5) Statewide Wind Provision for Year 20XX **	(6) Territory Wind Provision for Year 20XX (4) x (5)	(7) Non-Wind & Water Losses for Year 20XX	(8) Adjusted Total Losses for Year 20XX (6) + (7)
A		50,000	150,000	200,000
B		30,000	50,000	80,000
C		20,000	80,000	100,000
	100,000			

Territory	(9) Non-Wind & Water Claims for Year 20XX	(10) Five-Year Average Wind & Water Claim Cost	(11) Adjusted Wind & Water Claims for Year 20XX (6) / (10)	(12) Total Adjusted Claims for Year 20XX (9) + (11)
A	200	500	100	300
B	100	400	75	175
C	150	400	50	200

\* Average of yearly capped ratios of wind & water to non-wind & water losses, based on territory experience capped at 10 times the statewide median wind & water to non-wind & water ratio. The statewide median ratio is subject to a minimum value of 0.05.

\*\* The Statewide Wind Provision for year 20XX = Total Adjusted Losses for Year 20XX - Non-Wind & Water Losses for Year 20XX

## INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

SUMMARY OF PROSPECTIVE LOSS COST LEVEL CHANGES  
STATEWIDE LOSS COST LEVEL CHANGES (A)

Coverages	Aggregate Loss Cost at Current Level (B)	Loss Cost Changes (C)
<b>TRUCKS, TRACTORS &amp; TRAILERS (D)</b>		
Liability		
Single Limit Liability	\$ 33,599,331	12.4%
Property Protection Insurance	1,363,786	N.C.
Combined	34,963,117	11.9%
Physical Damage		
Other Than Collision	7,967,595	9.2%
Collision	21,628,416	5.1%
Combined	29,596,011	6.2%
Total Trucks, Tractors & Trailers	64,559,128	9.3%
<b>PRIVATE PASSENGER TYPES</b>		
Liability		
Single Limit Liability	5,843,722	7.2%
Property Protection Insurance	86,724	N.C.
Combined	5,930,446	7.1%
Physical Damage		
Other Than Collision	2,779,483	7.3%
Collision	9,091,357	N.C.
Combined	11,870,840	1.7%
Total Private Passenger Types	17,801,286	3.5%
<b>GRAND TOTAL ALL COVERAGES</b>	82,360,414	8.0%
TOTAL LIABILITY	40,893,563	11.2%
TOTAL PHYSICAL DAMAGE	41,466,851	4.9%

(A) An implementation date of 07/01/2020 is assumed for purposes of trending.

(B) Accident Year ending 12/31/2018 Aggregate Loss Cost at Current Level for all coverages. The Liability loss costs are on a Total Limits basis.

(C) Loss Cost changes are calculated on a \$100,000 CSL Basic Limits basis for Liability and on an all deductibles combined basis for Physical Damage.

(D) For Liability and Physical Damage, classes related to Trucks, Tractors & Trailers, such as the Public Automobile classes, are impacted by the Trucks, Tractors & Trailers loss cost level changes.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR TRUCKS, TRACTORS, AND TRAILERS POLICY COVERAGES  
INTRASTATE

Territory	\$100,000 CSL	
Code	Liability	PPI (a)
111	14.8%	
112	12.9%	
113	15.8%	
117	11.3%	
118	11.2%	
119	11.6%	
123	20.6%	
124	9.5%	
125	9.1%	
126	9.8%	
128	14.4%	
130	12.5%	
131	12.2%	
132	11.8%	
133	10.9%	
134	11.9%	
135	13.5%	

(a) For Trucks, Tractors, and Trailers PPI, No Change (N.C.) was selected due to the modest indication.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR TRUCKS, TRACTORS, AND TRAILERS POLICY COVERAGES

Territory Code	Physical Damage		Specified Causes of Loss
	Comprehensive	Collision	
111	9.4%	6.4%	9.3%
112	11.6%	4.9%	11.8%
113	10.3%	7.6%	9.8%
117	13.5%	6.4%	14.3%
118	5.7%	7.5%	6.0%
119	7.7%	-0.4%	8.1%
123	10.0%	7.1%	10.1%
124	7.9%	1.8%	7.5%
125	8.3%	4.1%	8.9%
126	7.1%	2.6%	6.7%
128	10.2%	6.0%	10.3%
130	10.2%	6.7%	10.0%
131	11.4%	1.7%	12.7%
132	10.3%	5.9%	9.8%
133	6.8%	7.9%	6.1%
134	7.0%	3.7%	7.6%
135	9.0%	10.5%	8.9%

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY

FOR TRUCKS, TRACTORS, AND TRAILERS POLICY COVERAGES  
INTRASTATE

Territory Code	Liability \$100,000 CSL	PPI	Physical Damage		Specified Causes of Loss (c)
			Comprehensive (a)	Collision (b)	
111	294	20	163	316	129
112	201	22	144	299	114
113	271	21	171	369	135
117	168	22	101	299	80
118	189	23	111	229	88
119	163	18	84	259	67
123	164	19	110	302	87
124	196	16	109	290	86
125	132	12	170	256	135
126	123	14	120	240	95
128	127	17	108	264	86
130	171	10	97	256	77
131	147	14	78	243	62
132	237	17	128	303	101
133	254	16	110	313	87
134	216	16	107	310	85
135	235	19	109	358	86

(a) Comprehensive base loss cost is the \$15,001-20,000 OCN, age 1, \$500 deductible loss cost.

(b) Collision base loss cost is the \$15,001-20,000 OCN, age 1, \$500 deductible loss cost.

(c) The loss costs for Specified Causes of Loss have been calculated by a relativity of 0.792 to the Trucks, Tractors, and Trailers Comprehensive base loss costs.



INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR TRUCKS, TRACTORS, AND TRAILERS POLICY COVERAGES  
INTERSTATE

Territory	\$100,000 CSL	
Code	Liability	PPI (a)
111	14.8%	
112	12.9%	
113	15.8%	
117	11.3%	
118	11.2%	
119	11.6%	
123	20.6%	
124	9.5%	
125	9.1%	
126	9.8%	
128	14.4%	
130	12.5%	
131	12.2%	
132	11.8%	
133	10.9%	
134	11.9%	
135	13.5%	

(a) For Trucks, Tractors, and Trailers PPI, No Change (N.C.) was selected due to the modest indication.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY

FOR TRUCKS, TRACTORS, AND TRAILERS POLICY COVERAGES  
INTERSTATE

Territory Code	Liability \$100,000 CSL (a)	PPI (b)
111	588	10
112	402	11
113	542	11
117	336	11
118	378	12
119	326	9
123	328	10
124	392	8
125	264	6
126	246	7
128	254	9
130	342	5
131	294	7
132	474	9
133	508	8
134	432	8
135	470	10

(a) The loss costs for Liability have been calculated by a relativity of 2.00 to the Trucks, Tractors & Trailers Intrastate Liability loss costs.

(b) The loss costs for PPI have been calculated by a relativity of 0.50 to the Trucks, Tractors & Trailers Intrastate PPI loss costs.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR PRIVATE PASSENGER TYPES POLICY COVERAGES

Territory Code	\$100,000 CSL Liability	PPI (a)
111	7.6%	
112	8.0%	
113	12.0%	
117	4.5%	
118	7.6%	
119	7.5%	
123	7.5%	
124	4.0%	
125	7.2%	
126	16.5%	
128	6.0%	
130	7.9%	
131	7.5%	
132	9.9%	
133	7.1%	
134	7.0%	
135	7.6%	

(a) For Private Passenger Types PPI, No Change (N.C.) was selected to better reflect the favorable overall experience ratio.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR PRIVATE PASSENGER TYPES POLICY COVERAGES

Territory Code	Comprehensive	Physical Damage Collision (a)	Specified Causes of Loss (b)
111	4.5%		
112	4.8%		
113	3.5%		
117	3.2%		
118	6.2%		
119	3.5%		
123	8.0%		
124	9.2%		
125	8.8%		
126	10.0%		
128	12.4%		
130	9.4%		
131	9.6%		
132	7.3%		
133	3.8%		
134	2.9%		
135	4.9%		

- (a) For Private Passenger Types Collision, No Change (N.C.) was selected due to the modest indication.
- (b) This filing introduces a loss cost for Specified Causes of Loss coverage for Private Passenger Types vehicles, so there is no loss cost level change to list.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY

FOR PRIVATE PASSENGER TYPES POLICY COVERAGES

Territory Code	Liability \$100,000 CSL	PPI	Physical Damage		Specified Causes of Loss (c)
			Comprehensive (a)	Collision (b)	
111	268	7	184	572	146
112	190	3	131	634	104
113	261	5	146	739	116
117	117	6	97	492	77
118	170	5	86	486	68
119	173	9	89	425	70
123	114	5	108	409	86
124	131	3	95	479	75
125	178	3	174	365	138
126	120	3	154	407	122
128	124	4	109	404	86
130	178	3	93	464	74
131	158	3	80	297	63
132	189	5	103	628	82
133	226	9	83	563	66
134	169	5	72	415	57
135	155	3	85	564	67

(a) Comprehensive base loss cost is the \$15,001-20,000 OCN, age 1, \$500 deductible loss cost.

(b) Collision base loss cost is the \$15,001-20,000 OCN, age 1, \$500 deductible loss cost.

(c) The loss costs for Specified Causes of Loss have been calculated by a relativity of 0.792 to the Private Passenger Types Comprehensive base loss costs.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR VAN POOLS POLICY COVERAGES  
INTRASTATE

Territory	\$100,000 CSL	
Code	Liability	PPI (a)
111	14.8%	
112	13.1%	
113	16.0%	
117	11.0%	
118	11.4%	
119	11.9%	
123	20.6%	
124	9.3%	
125	8.8%	
126	10.1%	
128	14.4%	
130	12.7%	
131	12.2%	
132	11.9%	
133	10.8%	
134	11.7%	
135	13.5%	

(a) For Trucks, Tractors, and Trailers PPI, No Change (N.C.) was selected due to the modest indication.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR VAN POOLS POLICY COVERAGES

Territory Code	Physical Damage		Specified Causes of Loss
	Comprehensive	Collision	
111	9.2%	6.4%	10.0%
112	11.4%	5.0%	11.5%
113	10.1%	7.6%	10.4%
117	13.2%	6.4%	15.5%
118	5.6%	7.4%	5.9%
119	7.5%	-0.3%	7.9%
123	9.8%	7.3%	9.9%
124	7.8%	1.7%	7.3%
125	8.1%	4.2%	9.5%
126	7.0%	2.7%	6.6%
128	10.0%	6.0%	10.0%
130	10.0%	6.6%	11.3%
131	12.7%	1.6%	12.5%
132	11.0%	6.1%	9.6%
133	6.7%	8.2%	6.0%
134	6.9%	3.7%	7.4%
135	8.8%	10.7%	8.6%

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY

FOR VAN POOLS POLICY COVERAGES  
INTRASTATE

Territory	Liability	Physical Damage			Specified Causes
Code	\$100,000 CSL (a)	PPI (b)	Comprehensive (c)	Collision (d)	of Loss (e)
111	441	18	166	401	132
112	302	20	147	380	116
113	407	19	174	469	138
117	252	20	103	380	82
118	284	21	113	291	90
119	245	17	86	329	68
123	246	17	112	384	89
124	294	15	111	368	88
125	198	11	173	325	138
126	185	13	122	305	97
128	191	16	110	335	88
130	257	9	99	325	79
131	221	13	80	309	63
132	356	16	131	385	103
133	381	15	112	398	89
134	324	15	109	394	87
135	353	17	111	455	88

- (a) The loss costs for Van Pools have been calculated by a relativity of 1.50 to the Trucks, Tractors, and Trailers CSL Liability loss costs.
- (b) The loss costs for PPI have been calculated by a relativity of 0.92 to the Trucks, Tractors, and Trailers PPI loss costs.
- (c) Comprehensive base loss cost is the \$15,001-20,000 OCN, age 1, \$500 deductible loss cost and has been calculated by a relativity of 1.02 to the Trucks, Tractors, and Trailers loss cost.
- (d) Collision base loss cost is the \$15,001-20,000 OCN, age 1, \$500 deductible loss cost, and has been calculated by a relativity of 1.27 to the Trucks, Tractors, and Trailers loss cost.
- (e) The loss costs for Specified Causes of Loss have been calculated by a relativity of 1.02 to the Trucks, Tractors, and Trailers Comprehensive base loss costs.



INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR VAN POOLS POLICY COVERAGES  
INTERSTATE

Territory	\$100,000 CSL	
Code	Liability	PPI (a)
111	14.8%	
112	13.1%	
113	16.0%	
117	11.0%	
118	11.4%	
119	11.9%	
123	20.6%	
124	9.3%	
125	8.8%	
126	10.1%	
128	14.4%	
130	12.7%	
131	12.2%	
132	11.9%	
133	10.8%	
134	11.7%	
135	13.5%	

(a) For Trucks, Tractors, and Trailers PPI, No Change (N.C.) was selected due to the modest indication.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY

FOR VAN POOLS POLICY COVERAGES  
INTERSTATE

Territory Code	Liability \$100,000 CSL (a)	PPI (b)
111	882	9
112	604	10
113	814	10
117	504	10
118	568	11
119	490	8
123	492	9
124	588	7
125	396	6
126	370	6
128	382	8
130	514	5
131	442	6
132	712	8
133	762	7
134	648	7
135	706	9

(a) The loss costs for Liability have been calculated by a relativity of 2.00 to the Van Pools Intrastate Liability loss costs.

(b) The loss costs for PPI have been calculated by a relativity of 0.92 to the Trucks, Tractors & Trailers Intrastate PPI loss costs.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR TAXIS AND LIMOUSINES POLICY COVERAGES  
INTRASTATE

Territory	\$100,000 CSL	
Code	Liability	PPI (a)
111	14.9%	
112	12.9%	
113	15.8%	
117	11.3%	
118	11.2%	
119	11.7%	
123	20.6%	
124	9.5%	
125	9.1%	
126	9.9%	
128	14.4%	
130	12.5%	
131	12.2%	
132	11.8%	
133	10.9%	
134	11.9%	
135	13.6%	

(a) For Trucks, Tractors, and Trailers PPI, No Change (N.C.) was selected due to the modest indication.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR TAXIS AND LIMOUSINES POLICY COVERAGES

Territory Code	Physical Damage		Specified Causes of Loss
	Comprehensive	Collision	
111	9.2%	6.4%	10.0%
112	11.4%	5.0%	11.5%
113	10.1%	7.6%	10.4%
117	13.2%	6.4%	15.5%
118	5.6%	7.4%	5.9%
119	7.5%	-0.3%	7.9%
123	9.8%	7.3%	9.9%
124	7.8%	1.7%	7.3%
125	8.1%	4.2%	9.5%
126	7.0%	2.7%	6.6%
128	10.0%	6.0%	10.0%
130	10.0%	6.6%	11.3%
131	12.7%	1.6%	12.5%
132	11.0%	6.1%	9.6%
133	6.7%	8.2%	6.0%
134	6.9%	3.7%	7.4%
135	8.8%	10.7%	8.6%

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY

FOR TAXIS AND LIMOUSINES POLICY COVERAGES  
INTRASTATE

Territory Code	Liability	Physical Damage			Specified Causes
	\$100,000 CSL (a)	PPI (b)	Comprehensive (c)	Collision (d)	of Loss (e)
111	1823	55	166	401	132
112	1246	60	147	380	116
113	1680	58	174	469	138
117	1042	60	103	380	82
118	1172	63	113	291	90
119	1011	49	86	329	68
123	1017	52	112	384	89
124	1215	44	111	368	88
125	818	33	173	325	138
126	763	38	122	305	97
128	787	47	110	335	88
130	1060	27	99	325	79
131	911	38	80	309	63
132	1469	47	131	385	103
133	1575	44	112	398	89
134	1339	44	109	394	87
135	1457	52	111	455	88

- (a) The loss costs for Taxis and Limousines have been calculated by a relativity of 6.20 to the Trucks, Tractors, and Trailers CSL Liability loss costs.
- (b) The loss costs for PPI have been calculated by a relativity of 2.74 to the Trucks, Tractors, and Trailers PPI loss costs.
- (c) Comprehensive base loss cost is the \$15,001-20,000 OCN, age 1, \$500 deductible loss cost and has been calculated by a relativity of 1.02 to the Trucks, Tractors, and Trailers loss cost.
- (d) Collision base loss cost is the \$15,001-20,000 OCN, age 1, \$500 deductible loss cost, and has been calculated by a relativity of 1.27 to the Trucks, Tractors, and Trailers loss cost.
- (e) The loss costs for Specified Causes of Loss have been calculated by a relativity of 1.02 to the Trucks, Tractors, and Trailers Comprehensive base loss costs.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR SCHOOL AND CHURCH BUSES POLICY COVERAGES  
INTRASTATE

Territory	\$100,000 CSL	
Code	Liability	PPI (a)
111	14.9%	
112	13.3%	
113	15.5%	
117	10.8%	
118	10.6%	
119	12.5%	
123	20.0%	
124	10.2%	
125	9.0%	
126	9.7%	
128	14.8%	
130	11.9%	
131	12.5%	
132	11.1%	
133	11.1%	
134	12.3%	
135	13.2%	

(a) For Trucks, Tractors, and Trailers PPI, No Change (N.C.) was selected due to the modest indication.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR SCHOOL AND CHURCH BUSES POLICY COVERAGES

Territory Code	Physical Damage		Specified Causes of Loss
	Comprehensive	Collision	
111	9.6%	6.2%	8.4%
112	12.2%	4.9%	12.7%
113	10.1%	7.6%	10.5%
117	14.5%	6.0%	14.3%
118	5.4%	8.0%	6.9%
119	7.3%	-0.6%	9.3%
123	10.0%	7.1%	10.9%
124	7.0%	2.2%	7.1%
125	8.2%	3.8%	9.2%
126	7.7%	2.6%	8.1%
128	10.1%	6.2%	9.1%
130	9.7%	6.4%	10.2%
131	12.2%	1.9%	10.3%
132	11.1%	5.9%	10.9%
133	6.9%	7.4%	7.0%
134	7.1%	4.1%	9.1%
135	8.6%	10.4%	9.1%

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY

FOR SCHOOL AND CHURCH BUSES POLICY COVERAGES  
INTRASTATE

Territory	Liability	Physical Damage			Specified Causes
Code	\$100,000 CSL (a)	PPI (b)	Comprehensive (c)	Collision (d)	of Loss (e)
111	162	12	114	205	90
112	111	13	101	194	80
113	149	13	120	240	95
117	92	13	71	194	56
118	104	14	78	149	62
119	90	11	59	168	47
123	90	11	77	196	61
124	108	10	76	189	60
125	73	7	119	166	95
126	68	8	84	156	67
128	70	10	76	172	60
130	94	6	68	166	54
131	81	8	55	158	43
132	130	10	90	197	71
133	140	10	77	203	61
134	119	10	75	202	60
135	129	11	76	233	60

- (a) The loss costs for School and Church Buses have been calculated by a relativity of 0.55 to the Trucks, Tractors, and Trailers CSL Liability loss costs.
- (b) The loss costs for PPI have been calculated by a relativity of 0.60 to the Trucks, Tractors, and Trailers PPI loss costs.
- (c) Comprehensive base loss cost is the \$15,001-20,000 OCN, age 1, \$500 deductible loss cost and has been calculated by a relativity of 0.70 to the Trucks, Tractors, and Trailers loss cost.
- (d) Collision base loss cost is the \$15,001-20,000 OCN, age 1, \$500 deductible loss cost, and has been calculated by a relativity of 0.65 to the Trucks, Tractors, and Trailers loss cost.
- (e) The loss costs for Specified Causes of Loss have been calculated by a relativity of 0.70 to the Trucks, Tractors, and Trailers Comprehensive base loss costs.



INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR SCHOOL AND CHURCH BUSES POLICY COVERAGES  
INTERSTATE

Territory	\$100,000 CSL	
Code	Liability	PPI (a)
111	14.9%	
112	13.3%	
113	15.5%	
117	10.8%	
118	10.6%	
119	12.5%	
123	20.0%	
124	10.2%	
125	9.0%	
126	9.7%	
128	14.8%	
130	11.9%	
131	12.5%	
132	11.1%	
133	11.1%	
134	12.3%	
135	13.2%	

(a) For Trucks, Tractors, and Trailers PPI, No Change (N.C.) was selected due to the modest indication.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY

FOR SCHOOL AND CHURCH BUSES POLICY COVERAGES  
INTERSTATE

Territory Code	Liability \$100,000 CSL (a)	PPI (b)
111	324	6
112	222	7
113	298	7
117	184	7
118	208	7
119	180	6
123	180	6
124	216	5
125	146	4
126	136	4
128	140	5
130	188	3
131	162	4
132	260	5
133	280	5
134	238	5
135	258	6

(a) The loss costs for Liability have been calculated by a relativity of 2.00 to the School and Church Buses Intrastate Liability loss costs.

(b) The loss costs for PPI have been calculated by a relativity of 0.50 to the School and Church Buses Intrastate PPI loss costs.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR ALL OTHER BUSES POLICY COVERAGES  
INTRASTATE

Territory	\$100,000 CSL	
Code	Liability	PPI (a)
111	14.8%	
112	13.0%	
113	15.9%	
117	11.1%	
118	11.1%	
119	11.5%	
123	20.5%	
124	9.6%	
125	9.1%	
126	9.6%	
128	14.5%	
130	12.5%	
131	12.2%	
132	11.8%	
133	10.9%	
134	12.0%	
135	13.5%	

(a) For Trucks, Tractors, and Trailers PPI, No Change (N.C.) was selected due to the modest indication.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR ALL OTHER BUSES POLICY COVERAGES

Territory Code	Physical Damage		Specified Causes of Loss
	Comprehensive	Collision	
111	9.6%	6.2%	8.4%
112	12.2%	4.9%	12.7%
113	10.1%	7.6%	10.5%
117	14.5%	6.0%	14.3%
118	5.4%	8.0%	6.9%
119	7.3%	-0.6%	9.3%
123	10.0%	7.1%	10.9%
124	7.0%	2.2%	7.1%
125	8.2%	3.8%	9.2%
126	7.7%	2.6%	8.1%
128	10.1%	6.2%	9.1%
130	9.7%	6.4%	10.2%
131	12.2%	1.9%	10.3%
132	11.1%	5.9%	10.9%
133	6.9%	7.4%	7.0%
134	7.1%	4.1%	9.1%
135	8.6%	10.4%	9.1%

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY

FOR ALL OTHER BUSES POLICY COVERAGES  
INTRASTATE

Territory	Liability	Physical Damage			Specified Causes
Code	\$100,000 CSL (a)	PPI (b)	Comprehensive (c)	Collision (d)	of Loss (e)
111	1117	41	114	205	90
112	764	45	101	194	80
113	1030	43	120	240	95
117	638	45	71	194	56
118	718	47	78	149	62
119	619	37	59	168	47
123	623	39	77	196	61
124	745	33	76	189	60
125	502	24	119	166	95
126	467	29	84	156	67
128	483	35	76	172	60
130	650	20	68	166	54
131	559	29	55	158	43
132	901	35	90	197	71
133	965	33	77	203	61
134	821	33	75	202	60
135	893	39	76	233	60

- (a) The loss costs for All Other Buses have been calculated by a relativity of 3.80 to the Trucks, Tractors, and Trailers CSL Liability loss costs.
- (b) The loss costs for PPI have been calculated by a relativity of 2.04 to the Trucks, Tractors, and Trailers PPI loss costs.
- (c) Comprehensive base loss cost is the \$15,001-20,000 OCN, age 1, \$500 deductible loss cost and has been calculated by a relativity of 0.70 to the Trucks, Tractors, and Trailers loss cost.
- (d) Collision base loss cost is the \$15,001-20,000 OCN, age 1, \$500 deductible loss cost, and has been calculated by a relativity of 0.65 to the Trucks, Tractors, and Trailers loss cost.
- (e) The loss costs for Specified Causes of Loss have been calculated by a relativity of 0.70 to the Trucks, Tractors, and Trailers Comprehensive base loss costs.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
TERRITORY LOSS COST LEVEL CHANGES

FOR ALL OTHER BUSES POLICY COVERAGES  
INTERSTATE

Territory	\$100,000 CSL	
Code	Liability	PPI (a)
111	14.8%	
112	13.0%	
113	15.9%	
117	11.1%	
118	11.1%	
119	11.5%	
123	20.5%	
124	9.6%	
125	9.1%	
126	9.6%	
128	14.5%	
130	12.5%	
131	12.2%	
132	11.8%	
133	10.9%	
134	12.0%	
135	13.5%	

(a) For Trucks, Tractors, and Trailers PPI, No Change (N.C.) was selected due to the modest indication.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE

REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY

FOR ALL OTHER BUSES POLICY COVERAGES  
INTERSTATE

Territory Code	Liability \$100,000 CSL (a)	PPI (b)
111	2234	21
112	1528	23
113	2060	22
117	1276	23
118	1436	24
119	1238	19
123	1246	20
124	1490	17
125	1004	12
126	934	15
128	966	18
130	1300	10
131	1118	15
132	1802	18
133	1930	17
134	1642	17
135	1786	20

(a) The loss costs for Liability have been calculated by a relativity of 2.00 to the All Other Buses Intrastate Liability loss costs.

(b) The loss costs for PPI have been calculated by a relativity of 0.50 to the All Other Buses Intrastate PPI loss costs.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
 AUTOMOBILE LIABILITY INSURANCE - TRUCKS, TRACTORS, AND TRAILERS (A)  
 DETERMINATION OF STATEWIDE ADVISORY LOSS COST LEVEL CHANGES  
 SINGLE LIMIT LIABILITY COVERAGE

	(1)	(2)	(3)	(4)	(5)
ACCIDENT YEAR ENDING	AGGREGATE LOSS COST AT CURRENT LEVEL (B)	\$100,000 INCURRED LOSSES (C)	EXPERIENCE RATIO (2) / (1)	ACCIDENT YEAR WEIGHTS	NUMBER OF INCURRED CLAIMS
12/31/14	\$12,106,865	\$12,185,904	1.007	10%	809
12/31/15	\$12,657,543	\$15,077,509	1.191	15%	718
12/31/16	\$13,387,736	\$16,325,307	1.219	20%	840
12/31/17	\$13,987,847	\$16,637,873	1.189	25%	827
12/31/18	\$14,743,015	\$17,685,516	1.200	30%	808
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).				1.181
(7)	EXPECTED EXPERIENCE RATIO (D).				1.054
(8)	CREDIBILITY (E).				0.55
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000- (8)) ).				1.124
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).				12.4%
(11)	FILED CHANGE.				12.4%
(A)	TRUCK, TRACTOR, AND TRAILER EXPERIENCE IS FOR VEHICLES WRITTEN IN ACCORDANCE WITH RULE 23 OF THE COMMERCIAL LINES MANUAL, DIVISION 1, AUTOMOBILE.				
(B)	THE AGGREGATE LOSS COST AT CURRENT LEVEL IS CALCULATED BY EXTENDING EXPOSURES BY THE CURRENT LOSS COSTS FROM THE LAST REVISION.				
(C)	LOSSES INCLUDE ALL LOSS ADJUSTMENT EXPENSES FOR BODILY INJURY AND PROPERTY DAMAGE LIABILITY. SEE FOLLOWING PAGE.				
(D)	EXPECTED EXPERIENCE RATIO IS EQUAL TO THE COMBINED TREND FACTOR SHOWN ON THE FOLLOWING PAGE, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/20 WHICH IS ASSUMED FOR THE PURPOSES OF TRENDING, SUBJECT TO A MAXIMUM OF THE N-VALUE CORRESPONDING TO THE LATEST YEAR SHOWN ON THE FOLLOWING PAGE, FOOTNOTE B. IN THIS REVISION, THE PERIOD M IS 1.00 YEAR(S).				
(E)	CREDIBILITY IS BASED ON A 5 YEAR TOTAL OF CLAIMS FOR B.I. AND P.D. SHOWN IN COLUMN (5). THE STANDARD FOR FULL CREDIBILITY IS 11,500 CLAIMS (SEE CREDIBILITY TABLES IN SECTION C).				



INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
TRUCKS, TRACTORS, AND TRAILERS  
AUTOMOBILE LIABILITY INSURANCE  
DETERMINATION OF SINGLE LIMIT LOSSES

	ACC. YEAR ENDING	BODILY INJURY	PROPERTY DAMAGE	COMBINED
(1) INCURRED LOSSES AND ALLOCATED LOSS ADJUSTMENT EXPENSES	12/31/14 12/31/15 12/31/16 12/31/17 12/31/18	\$6,012,401 \$8,116,466 \$8,719,996 \$8,130,190 \$5,657,048	\$1,766,518 \$1,889,491 \$2,180,821 \$1,969,764 \$2,124,517	
(2) DEVELOPED LOSSES AND ALL LOSS ADJUSTMENT EXPENSES (A)	12/31/14 12/31/15 12/31/16 12/31/17 12/31/18	\$6,521,501 \$8,934,606 \$10,161,411 \$11,292,021 \$12,594,427	\$1,943,170 \$2,080,519 \$2,408,499 \$2,194,908 \$2,519,252	
(3) SELECTED ANNUAL LOSS TREND (SEE TREND EXHIBIT IN SECTION C)		5.5%	4.8%	5.4%
(4) TRENDED LOSSES AND ALL LOSS ADJUSTMENT EXPENSES (B)	12/31/14 12/31/15 12/31/16 12/31/17 12/31/18	\$9,488,784 \$12,320,822 \$13,280,964 \$13,990,814 \$14,785,857	\$2,697,120 \$2,756,688 \$3,044,343 \$2,647,059 \$2,899,659	\$12,185,904 \$15,077,509 \$16,325,307 \$16,637,873 \$17,685,516
(A) INCURRED LOSSES AND ALLOCATED LOSS ADJUSTMENT EXPENSES ARE ADJUSTED BY THE FOLLOWING FACTORS:				
1 - UNALLOCATED LOSS ADJUSTMENT FACTORS:		B.I. 1.075	P.D. 1.100	
2 - LOSS DEVELOPMENT FACTORS:				
	YEAR ENDING	B.I.	P.D.	
	12/31/14	1.009	1.000	
	12/31/15	1.024	1.001	
	12/31/16	1.084	1.004	
	12/31/17	1.292	1.013	
	12/31/18	2.071	1.078	
(B) TRENDED LOSSES ARE EQUAL TO (2) * ( (1.0 + (3)) ** N ), WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/20 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.				

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD
12/31/14	7/1/14	7.000
12/31/15	7/1/15	6.000
12/31/16	7/1/16	5.000
12/31/17	7/1/17	4.000
12/31/18	7/1/18	3.000

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
 AUTOMOBILE LIABILITY INSURANCE - TRUCKS, TRACTORS, AND TRAILERS (A)  
 DETERMINATION OF STATEWIDE ADVISORY LOSS COST LEVEL CHANGES  
 PROPERTY PROTECTION INSURANCE

ACCIDENT YEAR ENDING	(1) AGGREGATE LOSS COST AT CURRENT LEVEL (B)	(2) INCURRED LOSSES (C)	(3) EXPERIENCE RATIO (2) / (1)	(4) ACCIDENT YEAR WEIGHTS	(5) NUMBER OF INCURRED CLAIMS
12/31/14	\$1,110,600	\$1,657,647	1.493	10%	269
12/31/15	\$1,163,094	\$1,231,860	1.059	15%	244
12/31/16	\$1,233,325	\$1,196,170	0.970	20%	210
12/31/17	\$1,287,751	\$1,101,099	0.855	25%	236
12/31/18	\$1,363,786	\$1,073,851	0.787	30%	200
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).				0.952
(7)	EXPECTED EXPERIENCE RATIO (D).				1.048
(8)	CREDIBILITY (E).				0.30
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000 - (8)) ).				1.019
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).				1.9%
(11)	FILED CHANGE.				N.C.
(A)	TRUCK, TRACTOR, AND TRAILER EXPERIENCE IS FOR VEHICLES WRITTEN IN ACCORDANCE WITH RULE 23 OF THE COMMERCIAL LINES MANUAL, DIVISION 1, AUTOMOBILE, ELIGIBLE FOR FIRST PARTY COVERAGE.				
(B)	THE AGGREGATE LOSS COST AT CURRENT LEVEL IS CALCULATED BY EXTENDING EXPOSURES BY THE CURRENT LOSS COSTS FROM THE LAST REVISION.				
(C)	LOSSES INCLUDE ALL LOSS ADJUSTMENT EXPENSES FOR PROPERTY PROTECTION. SEE FOLLOWING PAGE.				
(D)	EXPECTED EXPERIENCE RATIO IS EQUAL TO THE TREND FACTOR SHOWN ON THE FOLLOWING PAGE, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/20 WHICH IS ASSUMED FOR THE PURPOSES OF TRENDING, SUBJECT TO A MAXIMUM OF THE N-VALUE CORRESPONDING TO THE LATEST YEAR SHOWN ON THE FOLLOWING PAGE, FOOTNOTE B. IN THIS REVISION, THE PERIOD M IS 1.00 YEAR(S).				
(E)	CREDIBILITY IS BASED ON A 5 YEAR TOTAL OF CLAIMS FOR PPI SHOWN IN COLUMN (5). THE STANDARD FOR FULL CREDIBILITY IS 11,500 CLAIMS (SEE CREDIBILITY TABLES IN SECTION C).				

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
TRUCKS, TRACTORS, AND TRAILERS  
AUTOMOBILE LIABILITY INSURANCE  
DETERMINATION OF PROPERTY PROTECTION LOSSES

	ACC. YEAR ENDING	PPI
(1) INCURRED LOSSES AND	12/31/14	\$1,085,700
ALLOCATED LOSS	12/31/15	\$844,343
ADJUSTMENT EXPENSES	12/31/16	\$856,879
	12/31/17	\$819,364
	12/31/18	\$786,787
 (2) DEVELOPED LOSSES AND	12/31/14	\$1,194,270
ALL LOSS ADJUSTMENT	12/31/15	\$929,706
EXPENSES (A)	12/31/16	\$946,337
	12/31/17	\$913,017
	12/31/18	\$932,972
 (3) SELECTED ANNUAL LOSS		
TREND (SEE TREND		4.8%
EXHIBIT IN SECTION C)		
 (4) TRENDING LOSSES AND	12/31/14	\$1,657,647
ALL LOSS ADJUSTMENT	12/31/15	\$1,231,860
EXPENSES (B)	12/31/16	\$1,196,170
	12/31/17	\$1,101,099
	12/31/18	\$1,073,851

(A) INCURRED LOSSES AND ALLOCATED LOSS ADJUSTMENT EXPENSES ARE ADJUSTED  
BY THE FOLLOWING FACTORS:

- 1 - UNALLOCATED LOSS ADJUSTMENT FACTORS: 1.100  
2 - LOSS DEVELOPMENT FACTORS:

YEAR ENDING	PPI
12/31/14	1.000
12/31/15	1.001
12/31/16	1.004
12/31/17	1.013
12/31/18	1.078

(B) TRENDING LOSSES ARE EQUAL TO (2) \* ( (1.0 + (3)) \*\* N), WHERE N IS EQUAL TO  
THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE  
YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/20  
WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD
12/31/14	7/1/14	7.000
12/31/15	7/1/15	6.000
12/31/16	7/1/16	5.000
12/31/17	7/1/17	4.000
12/31/18	7/1/18	3.000

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
AUTOMOBILE PHYSICAL DAMAGE INSURANCE - TRUCKS, TRACTORS AND TRAILERS (A)  
DETERMINATION OF STATEWIDE ADVISORY LOSS COST LEVEL CHANGES

		(1)	(2)	(3)	(4)	(5)
COVERAGE	ACCIDENT YEAR	AGGREGATE		EXPERIENCE		NUMBER OF
O.T.C	ENDING	LOSS COST AT	INCURRED	RATIO (2) /	ACCIDENT	PAID
		CURRENT	LOSSES (C)	(1)	YEAR WEIGHTS	CLAIMS
	12/31/16	\$6,961,285	\$7,303,870	1.049	20%	1,852
	12/31/17	\$6,916,373	\$7,499,279	1.084	30%	1,937
	12/31/18	\$7,967,595	\$9,081,676	1.140	50%	2,330
COLL.	12/31/16	\$23,157,305	\$23,081,952	0.997	20%	2,899
	12/31/17	\$21,800,519	\$22,062,234	1.012	30%	2,743
	12/31/18	\$21,628,416	\$23,698,432	1.096	50%	2,752

		O.T.C.	COLLISION
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).	1.105	1.051
(7)	EXPECTED EXPERIENCE RATIO (D).	1.060	1.030
(8)	CREDIBILITY (E).	0.70	1.00
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000- (8)) ).	1.092	1.051
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).	9.2%	5.1%
(11)	FILED CHANGE.	9.2%	5.1%
(A)	TRUCK, TRACTOR AND TRAILER EXPERIENCE IS FOR VEHICLES WRITTEN IN ACCORDANCE WITH RULE 23 OF THE COMMERCIAL LINES MANUAL, DIVISION 1, AUTOMOBILE.		
(B)	THE AGGREGATE LOSS COST AT CURRENT LEVEL IS CALCULATED BY EXTENDING EXPOSURES BY THE CURRENT LOSS COSTS AND ADJUSTING TO A PROSPECTIVE OCN LEVEL BY THE APPLICATION OF OCN TREND FACTORS. (SEE SUBSEQUENT PAGE).		
(C)	LOSSES INCLUDE ALL LOSS ADJUSTMENT EXPENSES FOR O.T.C. AND COLL. SEE FOLLOWING PAGE.		
(D)	EXPECTED EXPERIENCE RATIO IS EQUAL TO THE LOSS TREND FACTOR DIVIDED BY THE OCN TREND FACTOR, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/20 WHICH IS ASSUMED FOR THE PURPOSES OF TRENDING, SUBJECT TO A MAXIMUM OF THE N-VALUE CORRESPONDING TO THE LATEST YEAR SHOWN ON THE FOLLOWING PAGE, FOOTNOTE B. IN THIS REVISION, THE PERIOD M IS 1.00 YEAR(S).		
(E)	CREDIBILITY IS BASED ON A 3 YEAR TOTAL OF CLAIMS FOR O.T.C. AND A 3 YEAR TOTAL OF CLAIMS FOR COLLISION SHOWN IN COLUMN (5). THE STANDARDS FOR FULL CREDIBILITY ARE 11,000 CLAIMS FOR O.T.C. AND 4,500 CLAIMS FOR COLLISION (SEE CREDIBILITY TABLES IN SECTION C).		

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
TRUCKS, TRACTORS AND TRAILERS  
AUTOMOBILE PHYSICAL DAMAGE INSURANCE  
DETERMINATION OF PHYSICAL DAMAGE LOSSES

	ACC. YEAR ENDING	O.T.C	COLLISION
(1) PAID LOSSES	12/31/16	\$4,602,384	\$16,410,075
	12/31/17	\$5,052,085	\$16,381,932
	12/31/18	\$6,400,702	\$18,252,655
(2) DEVELOPED LOSSES AND	12/31/16	\$5,205,895	\$18,524,841
ALL LOSS ADJUSTMENT	12/31/17	\$5,720,274	\$18,493,072
EXPENSES (A)	12/31/18	\$7,413,613	\$20,769,879
(3) SELECTED ANNUAL LOSS TREND (SEE TREND EXHIBIT IN SECTION C)		7.0%	4.5%
(4) TRENDED LOSSES AND	12/31/16	\$7,303,870	\$23,081,952
ALL LOSS ADJUSTMENT	12/31/17	\$7,499,279	\$22,062,234
EXPENSES (B)	12/31/18	\$9,081,676	\$23,698,432

## (A) PAID LOSSES ARE ADJUSTED BY THE FOLLOWING:

## 1 - LOSS ADJUSTMENT EXPENSE FACTORS:

	O.T.C	COLL.
	1.130	1.130

## 2 - LOSS DEVELOPMENT FACTORS:

YEAR ENDING	O.T.C.	COLL.
12/31/16	1.001	0.999
12/31/17	1.002	0.999
12/31/18	1.025	1.007

(B) TRENDED LOSSES ARE EQUAL TO (2) \* ((1.0 + (3)) \*\* N), WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/20 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING BOTH OTC AND COLLISION.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD OTC	PROJECTION PERIOD COLL
12/31/16	7/1/16	5.000	5.000
12/31/17	7/1/17	4.000	4.000
12/31/18	7/1/18	3.000	3.000

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
TRUCKS, TRACTORS AND TRAILERS  
AUTOMOBILE PHYSICAL DAMAGE INSURANCE  
DETERMINATION OF PHYSICAL DAMAGE TRENDED  
AGGREGATE LOSS COSTS

	ACC. YEAR ENDING	O.T.C	COLLISION
(1) AGGREGATE LOSS COSTS	12/31/16	\$6,655,148	\$21,501,676
AT CURRENT LEVEL	12/31/17	\$6,676,036	\$20,547,143
	12/31/18	\$7,758,126	\$20,677,262
(2) SELECTED ANNUAL OCN			
TREND (SEE TREND		0.9%	1.5%
EXHIBIT IN SECTION C)			
(3) TRENDED AGGREGATE	12/31/16	\$6,961,285	\$23,157,305
LOSS COSTS AT	12/31/17	\$6,916,373	\$21,800,519
CURRENT LEVEL (A)	12/31/18	\$7,967,595	\$21,628,416

(A) TRENDED AGGREGATE LOSS COSTS ARE EQUAL TO (1) \* ((1.0 + (2)) \*\* N),  
WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF  
WRITING TO SIX MONTHS BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF  
07/01/20 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING BOTH OTC  
AND COLLISION.

YEAR ENDING	AVERAGE DATE OF WRITING	PROJECTION PERIOD OTC	PROJECTION PERIOD COLL
12/31/16	1/1/16	5.000	5.000
12/31/17	1/1/17	4.000	4.000
12/31/18	1/1/18	3.000	3.000

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
 AUTOMOBILE LIABILITY INSURANCE - PRIVATE PASSENGER TYPES (A)  
 DETERMINATION OF STATEWIDE ADVISORY LOSS COST LEVEL CHANGES  
 SINGLE LIMIT LIABILITY COVERAGE

	(1)	(2)	(3)	(4)	(5)
ACCIDENT YEAR ENDING	AGGREGATE LOSS COST AT CURRENT LEVEL (B)	\$100,000 INCURRED LOSSES (C)	EXPERIENCE RATIO (2) / (1)	ACCIDENT YEAR WEIGHTS	NUMBER OF INCURRED CLAIMS
12/31/14	\$2,611,149	\$3,858,797	1.478	10%	266
12/31/15	\$2,562,058	\$2,571,834	1.004	15%	211
12/31/16	\$2,611,221	\$3,708,585	1.420	20%	221
12/31/17	\$2,618,160	\$2,956,706	1.129	25%	198
12/31/18	\$2,668,366	\$2,220,898	0.832	30%	164
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).				1.115
(7)	EXPECTED EXPERIENCE RATIO (D).				1.053
(8)	CREDIBILITY (E).				0.30
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000 - (8)) ).				1.072
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).				7.2%
(11)	FILED CHANGE.				7.2%
(A)	PRIVATE PASSENGER TYPE EXPERIENCE IS FOR VEHICLES WRITTEN IN ACCORDANCE WITH RULE 31 OF THE COMMERCIAL LINES MANUAL, DIVISION 1, AUTOMOBILE.				
(B)	THE AGGREGATE LOSS COST AT CURRENT LEVEL IS CALCULATED BY EXTENDING EXPOSURES BY THE CURRENT LOSS COSTS FROM THE LAST REVISION.				
(C)	LOSSES INCLUDE ALL LOSS ADJUSTMENT EXPENSES FOR BODILY INJURY AND PROPERTY DAMAGE LIABILITY. SEE FOLLOWING PAGE.				
(D)	EXPECTED EXPERIENCE RATIO IS EQUAL TO THE COMBINED TREND FACTOR SHOWN ON THE FOLLOWING PAGE, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/20 WHICH IS ASSUMED FOR THE PURPOSES OF TRENDING, SUBJECT TO A MAXIMUM OF THE N-VALUE CORRESPONDING TO THE LATEST YEAR SHOWN ON THE FOLLOWING PAGE, FOOTNOTE B. IN THIS REVISION, THE PERIOD M IS 1.00 YEAR(S).				
(E)	CREDIBILITY IS BASED ON A 5 YEAR TOTAL OF CLAIMS FOR B.I. AND P.D. SHOWN IN COLUMN (5). THE STANDARD FOR FULL CREDIBILITY IS 11,500 CLAIMS (SEE CREDIBILITY TABLES IN SECTION C).				

## INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
PRIVATE PASSENGER TYPES  
AUTOMOBILE LIABILITY INSURANCE  
DETERMINATION OF SINGLE LIMIT LOSSES

	ACC. YEAR ENDING	BODILY INJURY	PROPERTY DAMAGE	COMBINED
(1) INCURRED LOSSES AND	12/31/14	\$2,073,513	\$396,403	
ALLOCATED LOSS	12/31/15	\$1,308,495	\$401,338	
ADJUSTMENT EXPENSES	12/31/16	\$2,054,211	\$419,565	
	12/31/17	\$1,480,104	\$340,394	
	12/31/18	\$630,072	\$476,942	
(2) DEVELOPED LOSSES AND	12/31/14	\$2,235,714	\$436,479	
ALL LOSS ADJUSTMENT	12/31/15	\$1,440,391	\$441,913	
EXPENSES (A)	12/31/16	\$2,389,356	\$463,368	
	12/31/17	\$2,017,530	\$378,927	
	12/31/18	\$1,333,658	\$569,230	
(3) SELECTED ANNUAL LOSS				
TREND (SEE TREND		5.5%	4.8%	5.3%
EXHIBIT IN SECTION C)				
(4) TRENDING LOSSES AND	12/31/14	\$3,252,964	\$605,833	\$3,858,797
ALL LOSS ADJUSTMENT	12/31/15	\$1,986,299	\$585,535	\$2,571,834
EXPENSES (B)	12/31/16	\$3,122,888	\$585,697	\$3,708,585
	12/31/17	\$2,499,720	\$456,986	\$2,956,706
	12/31/18	\$1,565,714	\$655,184	\$2,220,898
(A) INCURRED LOSSES AND ALLOCATED LOSS ADJUSTMENT EXPENSES ARE ADJUSTED				
BY THE FOLLOWING FACTORS:				
1 - UNALLOCATED LOSS ADJUSTMENT FACTORS:		B.I. 1.075	P.D. 1.100	
2 - LOSS DEVELOPMENT FACTORS:				
	YEAR ENDING	B.I.	P.D.	
	12/31/14	1.003	1.001	
	12/31/15	1.024	1.001	
	12/31/16	1.082	1.004	
	12/31/17	1.268	1.012	
	12/31/18	1.969	1.085	

(B) TRENDING LOSSES ARE EQUAL TO (2) \* ( (1.0 + (3)) \*\* N), WHERE N IS EQUAL TO  
THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE  
YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/20  
WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD
12/31/14	7/1/14	7.000
12/31/15	7/1/15	6.000
12/31/16	7/1/16	5.000
12/31/17	7/1/17	4.000
12/31/18	7/1/18	3.000



INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
 AUTOMOBILE LIABILITY INSURANCE - PRIVATE PASSENGER TYPES (A)  
 DETERMINATION OF STATEWIDE ADVISORY LOSS COST LEVEL CHANGES  
 PROPERTY PROTECTION INSURANCE

(1)	(2)	(3)	(4)	(5)
ACCIDENT YEAR ENDING	AGGREGATE LOSS COST AT CURRENT LEVEL (B)	INCURRED LOSSES (C)	EXPERIENCE RATIO (2) / (1)	ACCIDENT YEAR WEIGHTS
12/31/14	\$86,110	\$106,304	1.235	10%
12/31/15	\$85,060	\$119,776	1.408	15%
12/31/16	\$86,412	\$81,984	0.949	20%
12/31/17	\$86,656	\$82,518	0.952	25%
12/31/18	\$86,724	\$32,577	0.376	30%
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).			0.876
(7)	EXPECTED EXPERIENCE RATIO (D).			1.048
(8)	CREDIBILITY (E).			0.10
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000- (8)) ).			1.031
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).			3.1%
(11)	FILED CHANGE.			N.C.
(A)	PRIVATE PASSENGER TYPE EXPERIENCE IS FOR VEHICLES WRITTEN IN ACCORDANCE WITH RULE 31 OF THE COMMERCIAL LINES MANUAL, DIVISION 1, AUTOMOBILE, ELIGIBLE FOR FIRST PARTY COVERAGE.			
(B)	THE AGGREGATE LOSS COST AT CURRENT LEVEL IS CALCULATED BY EXTENDING EXPOSURES BY THE CURRENT LOSS COSTS FROM THE LAST REVISION.			
(C)	LOSSES INCLUDE ALL LOSS ADJUSTMENT EXPENSES FOR PROPERTY PROTECTION. SEE FOLLOWING PAGE.			
(D)	EXPECTED EXPERIENCE RATIO IS EQUAL TO THE TREND FACTOR SHOWN ON THE FOLLOWING PAGE, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/20 WHICH IS ASSUMED FOR THE PURPOSES OF TRENDING, SUBJECT TO A MAXIMUM OF THE N-VALUE CORRESPONDING TO THE LATEST YEAR SHOWN ON THE FOLLOWING PAGE, FOOTNOTE B. IN THIS REVISION, THE PERIOD M IS 1.00 YEAR(S).			
(E)	CREDIBILITY IS BASED ON A 5 YEAR TOTAL OF CLAIMS FOR PPI SHOWN IN COLUMN (5). THE STANDARD FOR FULL CREDIBILITY IS 11,500 CLAIMS (SEE CREDIBILITY TABLES IN SECTION C).			

## INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
PRIVATE PASSENGER TYPES  
AUTOMOBILE LIABILITY INSURANCE  
DETERMINATION OF PROPERTY PROTECTION LOSSES

	ACC. YEAR ENDING	PPI
(1) INCURRED LOSSES AND	12/31/14	\$69,556
ALLOCATED LOSS	12/31/15	\$82,097
ADJUSTMENT EXPENSES	12/31/16	\$58,730
	12/31/17	\$61,465
	12/31/18	\$23,714
 (2) DEVELOPED LOSSES AND	12/31/14	\$76,588
ALL LOSS ADJUSTMENT	12/31/15	\$90,397
EXPENSES (A)	12/31/16	\$64,861
	12/31/17	\$68,423
	12/31/18	\$28,303
 (3) SELECTED ANNUAL LOSS		
TREND (SEE TREND		4.8%
EXHIBIT IN SECTION C)		
 (4) TRENDED LOSSES AND	12/31/14	\$106,304
ALL LOSS ADJUSTMENT	12/31/15	\$119,776
EXPENSES (B)	12/31/16	\$81,984
	12/31/17	\$82,518
	12/31/18	\$32,577

(A) INCURRED LOSSES AND ALLOCATED LOSS ADJUSTMENT EXPENSES ARE ADJUSTED  
BY THE FOLLOWING FACTORS:

- 1 - UNALLOCATED LOSS ADJUSTMENT FACTORS: 1.100  
2 - LOSS DEVELOPMENT FACTORS:

YEAR ENDING	PPI
12/31/14	1.001
12/31/15	1.001
12/31/16	1.004
12/31/17	1.012
12/31/18	1.085

(B) TRENDED LOSSES ARE EQUAL TO (2) \* ( (1.0 + (3)) \*\* N), WHERE N IS EQUAL TO  
THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE  
YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/20  
WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD
12/31/14	7/1/14	7.000
12/31/15	7/1/15	6.000
12/31/16	7/1/16	5.000
12/31/17	7/1/17	4.000
12/31/18	7/1/18	3.000

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
 AUTOMOBILE PHYSICAL DAMAGE INSURANCE - PRIVATE PASSENGER TYPES (A)  
 DETERMINATION OF STATEWIDE ADVISORY LOSS COST LEVEL CHANGES

COVERAGE	ACCIDENT YEAR	(1)	(2)	(3)	(4)	(5)
O.T.C	ENDING	AGGREGATE LOSS COST AT CURRENT LEVEL (B)	INCURRED LOSSES (C)	EXPERIENCE RATIO (2) / (1)	ACCIDENT YEAR WEIGHTS	NUMBER OF PAID CLAIMS
	12/31/16	\$3,182,345	\$3,048,370	0.958	20%	1,194
	12/31/17	\$2,965,022	\$3,451,679	1.164	30%	1,112
	12/31/18	\$2,779,483	\$3,024,426	1.088	50%	1,118
COLL.	12/31/16	\$11,158,103	\$12,776,631	1.145	20%	1,857
	12/31/17	\$9,934,948	\$9,197,942	0.926	30%	1,413
	12/31/18	\$9,091,357	\$9,300,599	1.023	50%	1,355

		O.T.C.	COLLISION
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).	1.085	1.019
(7)	EXPECTED EXPERIENCE RATIO (D).	1.054	1.034
(8)	CREDIBILITY (E).	0.60	1.00
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000- (8)) ).	1.073	1.019
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).	7.3%	1.9%
(11)	FILED CHANGE.	7.3%	N.C.
(A)	PRIVATE PASSENGER TYPE EXPERIENCE IS FOR VEHICLES WRITTEN IN ACCORDANCE WITH RULE 31 OF THE COMMERCIAL LINES MANUAL, DIVISION 1, AUTOMOBILE.		
(B)	THE AGGREGATE LOSS COST AT CURRENT LEVEL IS CALCULATED BY EXTENDING EXPOSURES BY THE CURRENT LOSS COSTS AND ADJUSTING TO A PROSPECTIVE OCN LEVEL BY THE APPLICATION OF OCN TREND FACTORS. (SEE SUBSEQUENT PAGE).		
(C)	LOSSES INCLUDE ALL LOSS ADJUSTMENT EXPENSES FOR O.T.C. AND COLL. SEE FOLLOWING PAGE.		
(D)	EXPECTED EXPERIENCE RATIO IS EQUAL TO THE LOSS TREND FACTOR DIVIDED BY THE OCN TREND FACTOR, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/20 WHICH IS ASSUMED FOR THE PURPOSES OF TRENDING, SUBJECT TO A MAXIMUM OF THE N-VALUE CORRESPONDING TO THE LATEST YEAR SHOWN ON THE FOLLOWING PAGE, FOOTNOTE B. IN THIS REVISION, THE PERIOD M IS 1.00 YEAR(S).		
(E)	CREDIBILITY IS BASED ON A 3 YEAR TOTAL OF CLAIMS FOR O.T.C. AND A 3 YEAR TOTAL OF CLAIMS FOR COLLISION SHOWN IN COLUMN (5). THE STANDARDS FOR FULL CREDIBILITY ARE 8,500 CLAIMS FOR O.T.C. AND 3,500 CLAIMS FOR COLLISION (SEE CREDIBILITY TABLES IN SECTION C).		

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
PRIVATE PASSENGER TYPES  
AUTOMOBILE PHYSICAL DAMAGE INSURANCE  
DETERMINATION OF PHYSICAL DAMAGE LOSSES

	ACC. YEAR ENDING	O.T.C	COLLISION
(1) PAID LOSSES	12/31/16	\$1,969,104	\$9,299,976
	12/31/17	\$2,372,886	\$6,964,034
	12/31/18	\$2,191,525	\$7,330,767
(2) DEVELOPED LOSSES AND	12/31/16	\$2,225,088	\$10,498,464
ALL LOSS ADJUSTMENT	12/31/17	\$2,684,043	\$7,861,489
EXPENSES (A)	12/31/18	\$2,503,664	\$8,267,199
(3) SELECTED ANNUAL LOSS TREND (SEE TREND EXHIBIT IN SECTION C)		6.5%	4.0%
(4) TRENDED LOSSES AND	12/31/16	\$3,048,370	\$12,776,631
ALL LOSS ADJUSTMENT	12/31/17	\$3,451,679	\$9,197,942
EXPENSES (B)	12/31/18	\$3,024,426	\$9,300,599

## (A) PAID LOSSES ARE ADJUSTED BY THE FOLLOWING:

## 1 - LOSS ADJUSTMENT EXPENSE FACTORS:

	O.T.C	COLL.
	1.130	1.130

## 2 - LOSS DEVELOPMENT FACTORS:

YEAR ENDING	O.T.C.	COLL.
12/31/16	1.000	0.999
12/31/17	1.001	0.999
12/31/18	1.011	0.998

(B) TRENDED LOSSES ARE EQUAL TO (2) \* ((1.0 + (3)) \*\* N), WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/20 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING BOTH OTC AND COLLISION.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD OTC	PROJECTION PERIOD COLL
12/31/16	7/1/16	5.000	5.000
12/31/17	7/1/17	4.000	4.000
12/31/18	7/1/18	3.000	3.000

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
PRIVATE PASSENGER TYPES  
AUTOMOBILE PHYSICAL DAMAGE INSURANCE  
DETERMINATION OF PHYSICAL DAMAGE TRENDED  
AGGREGATE LOSS COSTS

	ACC. YEAR ENDING	O.T.C	COLLISION
(1) AGGREGATE LOSS COSTS	12/31/16	\$3,027,921	\$10,833,110
AT CURRENT LEVEL	12/31/17	\$2,848,244	\$9,702,098
	12/31/18	\$2,698,527	\$8,930,606
(2) SELECTED ANNUAL OCN			
TREND (SEE TREND		1.0%	0.6%
EXHIBIT IN SECTION C)			
(3) TRENDED AGGREGATE	12/31/16	\$3,182,345	\$11,158,103
LOSS COSTS AT	12/31/17	\$2,965,022	\$9,934,948
CURRENT LEVEL (A)	12/31/18	\$2,779,483	\$9,091,357

(A) TRENDED AGGREGATE LOSS COSTS ARE EQUAL TO (1) \* ((1.0 + (2)) \*\* N),  
WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF  
WRITING TO SIX MONTHS BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF  
07/01/20 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING BOTH OTC  
AND COLLISION.

YEAR ENDING	AVERAGE DATE OF WRITING	PROJECTION PERIOD OTC	PROJECTION PERIOD COLL
12/31/16	1/1/16	5.000	5.000
12/31/17	1/1/17	4.000	4.000
12/31/18	1/1/18	3.000	3.000

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE  
SINGLE LIMIT LIABILITY  
INTRASTATE  
DETERMINATION OF LOSS COST LEVEL CHANGES BY TERRITORY  
TRUCKS, TRACTORS, AND TRAILERS (TTT)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
T	EARNED CAR	\$100000	EXPER LOSS					BASE	BASE	BASE	
E	YRS YR	UND	COST 5 YRS				INDEX	CLASS	CLASS	CLASS	ADV
R	ENDED	LOSS	END	EXPER		FORM	(6) TO	LOSS	LOSS	LOSS	LOSS
R	12/31/2018	COST	12/31/2018	RATIO	CRED	RATIO	STATE	COST	COST	COST	COST
								PRES	IND*	REV	CHG**
111	1909	353.31	513.04	1.452	0.10	1.210	1.021	256	294	294	14.8%
112	3116	225.14	278.56	1.237	0.10	1.188	1.003	178	201	201	12.9%
113	743	293.34	556.64	1.898	0.05	1.219	1.029	234	271	271	15.8%
117	5298	153.80	169.34	1.101	0.15	1.171	0.988	151	168	168	11.3%
118	1702	203.99	192.14	0.942	0.05	1.171	0.988	170	189	189	11.2%
119	2554	166.30	175.31	1.054	0.05	1.177	0.993	146	163	163	11.6%
123	5126	152.84	273.24	1.788	0.15	1.274	1.075	136	164	164	20.6%
124	13685	196.95	206.86	1.050	0.20	1.156	0.976	179	196	196	9.5%
125	2289	149.00	80.28	0.539	0.05	1.151	0.971	121	132	132	9.1%
126	6823	132.66	127.90	0.964	0.10	1.161	0.980	112	123	123	9.8%
128	20972	123.65	159.74	1.292	0.25	1.210	1.021	111	127	127	14.4%
130	2764	195.07	236.38	1.212	0.10	1.186	1.001	152	171	171	12.5%
131	582	158.27	71.20	0.450	0.00	1.183	0.998	131	147	147	12.2%
132	3398	249.82	289.27	1.158	0.15	1.179	0.995	212	237	237	11.8%
133	7379	265.58	296.08	1.115	0.20	1.169	0.986	229	254	254	10.9%
134	2702	216.66	249.45	1.151	0.10	1.180	0.996	193	216	216	11.9%
135	846	258.76	385.70	1.491	0.05	1.198	1.011	207	235	235	13.5%
SW	81888	180.04	212.90	1.183		1.185					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 12.4 PERCENT.

\*\* PERCENTAGE CHANGE IN LOSS COST IS (COL 10/COL 8)

## INSURANCE SERVICES OFFICE

MICHIGAN  
 COMMERCIAL AUTOMOBILE INSURANCE  
 PROPERTY PROTECTION INSURANCE  
 INTRASTATE  
 DETERMINATION OF LOSS COST LEVEL CHANGES BY TERRITORY  
 TRUCKS, TRACTORS, AND TRAILERS (TTT)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
T	EARNED CAR	P.P.I.	EXPER LOSS					BASE	BASE
E	YRS YR	UND	COST 5 YRS				INDEX	CLASS	CLASS
R	ENDED	LOSS	END	EXPER		FORM	(6) TO	LOSS	LOSS
R	12/31/2018	COST	12/31/2018	RATIO	CRED	RATIO	STATE	COST	COST
								PRES	IND*
111	1909	23.80	14.08	0.592	0.05	1.013	0.977	20	20
112	3116	24.12	10.47	0.434	0.00	1.035	0.998	22	22
113	743	22.83	10.69	0.468	0.00	1.035	0.998	21	21
117	5298	19.46	23.58	1.212	0.10	1.053	1.015	22	23
118	1702	24.00	74.18	3.091	0.05	1.138	1.097	23	26
119	2554	17.56	11.82	0.673	0.05	1.017	0.981	18	18
123	5126	18.34	14.71	0.802	0.05	1.023	0.986	19	19
124	13685	15.00	23.59	1.573	0.10	1.089	1.050	16	17
125	2289	12.32	18.11	1.470	0.05	1.057	1.019	12	12
126	6823	14.02	11.50	0.820	0.05	1.024	0.987	14	14
128	20972	16.22	13.99	0.863	0.15	1.009	0.973	17	17
130	2764	11.68	6.69	0.573	0.00	1.035	0.998	10	10
131	582	14.29	4.81	0.337	0.00	1.035	0.998	14	14
132	3398	17.16	13.46	0.784	0.05	1.022	0.986	17	17
133	7379	15.81	16.22	1.026	0.10	1.034	0.997	16	16
134	2702	15.33	8.92	0.582	0.05	1.012	0.976	16	16
135	846	20.43	49.12	2.404	0.00	1.035	0.998	19	19
SW	81888	16.66	17.25	1.035		1.037			

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 1.9 PERCENT.

DUE TO THE MODEST INDICATION, WE WILL NOT BE FILING THESE  
 INDICATED LOSS COSTS. THE LOSS COSTS IN COLUMN (8) REMAIN IN EFFECT.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE  
SINGLE LIMIT LIABILITY

DETERMINATION OF LOSS COST LEVEL CHANGES BY TERRITORY  
PRIVATE PASSENGER TYPES

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
T	EARNED CAR	\$100000	EXPER LOSS					BASE	BASE	BASE	
E	YRS YR	UND	COST 5 YRS				INDEX	CLASS	CLASS	CLASS	ADV
R	ENDED	LOSS	END	EXPER		FORM	(6) TO	LOSS	LOSS	LOSS	LOSS
R	12/31/2018	COST	12/31/2018	RATIO	CRED	RATIO	STATE	COST	COST	COST	COST
								PRES	IND*	REV	CHG**
111	468	273.77	312.50	1.141	0.05	1.161	1.003	249	268	268	7.6%
112	815	204.95	266.28	1.299	0.05	1.169	1.009	176	190	190	8.0%
113	332	252.26	551.78	2.187	0.05	1.213	1.047	233	261	261	12.0%
117	996	112.69	66.73	0.592	0.05	1.134	0.979	112	117	117	4.5%
118	254	158.56	324.00	2.043	0.00	1.162	1.003	158	170	170	7.6%
119	327	160.84	75.58	0.470	0.00	1.162	1.003	161	173	173	7.5%
123	979	106.53	119.54	1.122	0.05	1.160	1.002	106	114	114	7.5%
124	2501	127.22	92.44	0.727	0.10	1.119	0.966	126	131	131	4.0%
125	242	165.44	3.60	0.022	0.00	1.162	1.003	166	178	178	7.2%
126	751	103.35	310.74	3.007	0.05	1.254	1.083	103	120	120	16.5%
128	3258	117.51	119.08	1.013	0.10	1.147	0.991	117	124	124	6.0%
130	1013	165.72	205.29	1.239	0.05	1.166	1.007	165	178	178	7.9%
131	68	148.03	14.03	0.095	0.00	1.162	1.003	147	158	158	7.5%
132	1173	176.17	297.65	1.690	0.05	1.188	1.026	172	189	189	9.9%
133	2603	215.67	233.63	1.083	0.10	1.154	0.997	211	226	226	7.1%
134	1151	159.43	171.05	1.073	0.05	1.158	1.000	158	169	169	7.0%
135	217	147.02	214.48	1.459	0.00	1.162	1.003	144	155	155	7.6%
SW	17148	155.61	180.78	1.162		1.158					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 7.2 PERCENT.

\*\* PERCENTAGE CHANGE IN LOSS COST IS (COL 10/COL 8)



## INSURANCE SERVICES OFFICE

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE  
PROPERTY PROTECTION INSURANCE

DETERMINATION OF LOSS COST LEVEL CHANGES BY TERRITORY  
PRIVATE PASSENGER TYPES (PPT)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
T	EARNED CAR	P.P.I.	EXPER LOSS					BASE	BASE
E	YRS YR	UND	COST 5 YRS				INDEX	CLASS	CLASS
R	ENDED	LOSS	END	EXPER		FORM	(6) TO	LOSS	LOSS
R	12/31/2018	COST	12/31/2018	RATIO	CRED	RATIO	STATE	COST	COST
								PRES	IND*
111	468	7.70	1.88	0.244	0.00	0.974	0.991	7	7
112	815	3.49	4.05	1.160	0.00	0.974	0.991	3	3
113	332	5.41	8.53	1.577	0.00	0.974	0.991	5	5
117	996	6.04	4.81	0.796	0.00	0.974	0.991	6	6
118	254	5.02	2.66	0.530	0.00	0.974	0.991	5	5
119	327	8.99	5.99	0.666	0.00	0.974	0.991	9	9
123	979	5.03	6.02	1.197	0.00	0.974	0.991	5	5
124	2501	3.03	5.21	1.719	0.00	0.974	0.991	3	3
125	242	2.99	2.39	0.799	0.00	0.974	0.991	3	3
126	751	3.01	3.90	1.296	0.00	0.974	0.991	3	3
128	3258	4.02	8.76	2.179	0.05	1.034	1.052	4	4
130	1013	3.01	1.38	0.458	0.00	0.974	0.991	3	3
131	68	3.01	9.27	3.080	0.00	0.974	0.991	3	3
132	1173	5.12	3.26	0.637	0.00	0.974	0.991	5	5
133	2603	9.20	4.10	0.446	0.00	0.974	0.991	9	9
134	1151	5.05	1.94	0.384	0.00	0.974	0.991	5	5
135	217	3.06	1.49	0.487	0.00	0.974	0.991	3	3
SW	17148	5.06	4.93	0.974		0.983			

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 3.1 PERCENT.

TO BETTER REFLECT THE FAVORABLE OVERALL EXPERIENCE RATIO, WE  
WILL NOT BE FILING THESE INDICATED LOSS COSTS. THE LOSS COSTS IN  
COLUMN (8) REMAIN IN EFFECT.

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE  
PHYSICAL DAMAGE - COMPREHENSIVE

DETERMINATION OF LOSS COST LEVEL CHANGES BY TERRITORY  
TRUCKS, TRACTORS, AND TRAILERS (TTT)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
T	EARNED CAR		EXPER LOSS					BASE	BASE	BASE	ADV
E	YRS YR	UND	COST 5 YRS				INDEX	CLASS	CLASS	CLASS	LOSS
R	ENDED	LOSS	END	EXPER		FORM	(6) TO	LOSS	LOSS	LOSS	COST
R	12/31/2018	COST	12/31/2018	RATIO	CRED	RATIO	STATE	PRES	IND*	REV	CHG**
111	1806	119.12	135.02	1.133	0.10	1.127	0.999	149	163	163	9.4%
112	3852	97.38	124.63	1.280	0.15	1.149	1.019	129	144	144	11.6%
113	827	127.55	169.52	1.329	0.05	1.136	1.007	155	171	171	10.3%
117	7113	67.04	87.48	1.305	0.25	1.171	1.038	89	101	101	13.5%
118	2214	77.10	59.90	0.777	0.10	1.091	0.967	105	111	111	5.7%
119	3450	55.17	57.62	1.044	0.15	1.114	0.988	78	84	84	7.7%
123	4845	73.69	86.86	1.179	0.20	1.137	1.008	100	110	110	10.0%
124	15780	74.50	81.13	1.089	0.35	1.113	0.987	101	109	109	7.9%
125	3024	115.31	125.00	1.084	0.15	1.120	0.993	157	170	170	8.3%
126	9269	83.33	88.84	1.066	0.30	1.108	0.982	112	120	120	7.1%
128	27901	69.91	80.78	1.155	0.50	1.141	1.012	98	108	108	10.2%
130	3822	66.86	79.54	1.190	0.15	1.136	1.007	88	97	97	10.2%
131	773	49.28	74.21	1.506	0.05	1.145	1.015	70	78	78	11.4%
132	4507	90.92	109.85	1.208	0.20	1.142	1.012	116	128	128	10.3%
133	9834	80.85	85.05	1.052	0.25	1.108	0.982	103	110	110	6.8%
134	3279	78.98	70.59	0.894	0.10	1.103	0.978	100	107	107	7.0%
135	955	75.54	76.72	1.016	0.05	1.121	0.994	100	109	109	9.0%
SW	103251	77.17	86.89	1.126		1.128					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 9.2 PERCENT.

\*\* PERCENTAGE CHANGE IN LOSS COST IS (COL 10/COL 8)

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE  
PHYSICAL DAMAGE - COLLISION

DETERMINATION OF LOSS COST LEVEL CHANGES BY TERRITORY  
TRUCKS, TRACTORS, AND TRAILERS (TTT)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
T	EARNED CAR		EXPER LOSS					BASE	BASE	BASE	ADV
E	YRS YR	UND	COST 5 YRS				INDEX	CLASS	CLASS	CLASS	LOSS
R	ENDED	LOSS	END	EXPER		FORM	(6) TO	LOSS	LOSS	LOSS	COST
R	12/31/2018	COST	12/31/2018	RATIO	CRED	RATIO	STATE	PRES	IND*	REV	CHG**
111	1345	324.08	351.04	1.083	0.25	1.049	1.012	297	316	316	6.4%
112	2905	294.40	302.31	1.027	0.30	1.034	0.997	285	299	299	4.9%
113	649	392.52	470.87	1.200	0.15	1.061	1.023	343	369	369	7.6%
117	5744	279.27	297.28	1.064	0.45	1.049	1.012	281	299	299	6.4%
118	1701	217.92	245.70	1.127	0.25	1.060	1.022	213	229	229	7.5%
119	2859	246.39	212.76	0.864	0.30	0.985	0.950	260	259	259	-0.4%
123	3815	271.33	296.28	1.092	0.35	1.056	1.018	282	302	302	7.1%
124	12502	268.53	265.07	0.987	0.65	1.005	0.969	285	290	290	1.8%
125	2400	238.04	236.93	0.995	0.25	1.027	0.990	246	256	256	4.1%
126	7785	234.51	230.79	0.984	0.45	1.013	0.977	234	240	240	2.6%
128	22556	231.25	242.19	1.047	0.85	1.046	1.009	249	264	264	6.0%
130	3183	239.68	260.67	1.088	0.30	1.052	1.014	240	256	256	6.7%
131	720	201.64	165.18	0.819	0.15	1.004	0.968	239	243	243	1.7%
132	3603	290.78	307.39	1.057	0.40	1.045	1.008	286	303	303	5.9%
133	8169	294.16	319.11	1.085	0.60	1.066	1.028	290	313	313	7.9%
134	2581	306.63	306.03	0.998	0.30	1.025	0.988	299	310	310	3.7%
135	779	318.13	414.90	1.304	0.20	1.090	1.051	324	358	358	10.5%
SW	83296	259.66	269.38	1.037		1.037					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 5.1 PERCENT.

\*\* PERCENTAGE CHANGE IN LOSS COST IS (COL 10/COL 8)

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE  
PHYSICAL DAMAGE - COMPREHENSIVE

DETERMINATION OF LOSS COST LEVEL CHANGES BY TERRITORY  
PRIVATE PASSENGER TYPES (PPT)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
T	EARNED CAR		EXPER LOSS					BASE	BASE	BASE	ADV
E	YRS YR	UND	COST 5 YRS				INDEX	CLASS	CLASS	CLASS	LOSS
R	ENDED	LOSS	END	EXPER		FORM	(6) TO	LOSS	LOSS	LOSS	LOSS
R	12/31/2018	COST	12/31/2018	RATIO	CRED	RATIO	STATE	COST	COST	COST	COST
								PRES	IND*	REV	CHG**
111	511	197.99	185.36	0.936	0.10	1.120	0.976	176	184	184	4.5%
112	905	146.40	144.54	0.987	0.15	1.117	0.973	125	131	131	4.8%
113	280	165.05	92.48	0.560	0.05	1.111	0.968	141	146	146	3.5%
117	1554	114.91	112.28	0.977	0.20	1.107	0.964	94	97	97	3.2%
118	427	90.91	100.05	1.101	0.10	1.136	0.990	81	86	86	6.2%
119	641	101.50	86.67	0.854	0.10	1.111	0.968	86	89	89	3.5%
123	1141	113.88	139.52	1.225	0.20	1.157	1.008	100	108	108	8.0%
124	3454	106.25	129.21	1.216	0.30	1.163	1.013	87	95	95	9.2%
125	315	178.69	249.24	1.395	0.10	1.166	1.016	160	174	174	8.8%
126	1184	167.23	218.82	1.308	0.20	1.174	1.023	140	154	154	10.0%
128	4922	114.13	146.92	1.287	0.40	1.199	1.044	97	109	109	12.4%
130	1397	101.31	135.24	1.335	0.15	1.169	1.018	85	93	93	9.4%
131	169	85.86	150.38	1.751	0.05	1.171	1.020	73	80	80	9.6%
132	1682	118.01	135.69	1.150	0.20	1.142	0.995	96	103	103	7.3%
133	3819	105.05	108.28	1.031	0.30	1.107	0.964	80	83	83	3.8%
134	1501	87.57	72.91	0.833	0.15	1.094	0.953	70	72	72	2.9%
135	179	95.05	73.93	0.778	0.05	1.122	0.977	81	85	85	4.9%
SW	24081	115.42	131.60	1.140		1.148					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 7.3 PERCENT.

\*\* PERCENTAGE CHANGE IN LOSS COST IS (COL 10/COL 8)

INSURANCE SERVICES OFFICE, INC.

MICHIGAN  
COMMERCIAL AUTOMOBILE INSURANCE  
PHYSICAL DAMAGE - COLLISION

DETERMINATION OF LOSS COST LEVEL CHANGES BY TERRITORY  
PRIVATE PASSENGER TYPES (PPT)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
T	EARNED CAR		EXPER LOSS					BASE	BASE
E	YRS YR	UND	COST 5 YRS				INDEX	CLASS	CLASS
R	ENDED	LOSS	END	EXPER		FORM	(6) TO	LOSS	LOSS
R	12/31/2018	COST	12/31/2018	RATIO	CRED	RATIO	STATE	COST	COST
								PRES	IND*
111	440	522.56	596.27	1.141	0.20	1.072	1.013	572	590
112	744	594.28	665.26	1.119	0.30	1.074	1.015	634	656
113	237	730.64	723.58	0.990	0.15	1.045	0.988	739	744
117	1267	455.55	501.13	1.100	0.40	1.073	1.014	492	508
118	364	429.67	441.87	1.028	0.20	1.050	0.992	486	491
119	547	375.20	270.06	0.720	0.20	0.988	0.934	425	405
123	891	368.83	388.43	1.053	0.30	1.054	0.996	409	415
124	2824	462.56	483.17	1.045	0.55	1.050	0.992	479	484
125	239	301.28	310.13	1.029	0.10	1.052	0.994	365	370
126	942	358.69	344.43	0.960	0.30	1.027	0.971	407	403
128	3908	361.75	394.77	1.091	0.60	1.077	1.018	404	419
130	1204	457.50	460.07	1.006	0.30	1.040	0.983	464	465
131	144	253.74	176.11	0.694	0.10	1.019	0.963	297	291
132	1337	618.78	680.99	1.101	0.45	1.076	1.017	628	651
133	3162	574.35	600.35	1.045	0.65	1.049	0.991	563	569
134	1316	415.17	453.90	1.093	0.35	1.068	1.009	415	427
135	134	535.08	595.38	1.113	0.10	1.061	1.003	564	576
SW	19700	461.49	486.77	1.055		1.058			

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 1.9 PERCENT.

DUE TO THE MODEST INDICATION, WE WILL NOT BE FILING THESE  
INDICATED LOSS COSTS. THE LOSS COSTS IN COLUMN (8) REMAIN IN EFFECT.

## INSURANCE SERVICES OFFICE, INC.

COMMERCIAL AUTOMOBILE LIABILITY INSURANCE  
MULTISTATE LOSS ADJUSTMENT EXPENSE EXPERIENCE

Calendar Year

Development of Unallocated Loss Adjustment Expense Factor

		<u>Bodily Injury</u> (000's)					3 YR.	5 YR.
		<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>AVG</u>	<u>AVG</u>
(1)	ITEM Direct Losses Incurred	4,201,981	4,808,966	5,392,813	5,762,768	6,343,079		
(2)	Allocated Loss Adjustment Expenses Incurred	480,882	516,366	609,253	669,634	692,813		
(3)	Unallocated Loss Adjustment Expense Incurred	431,513	471,206	478,672	478,481	509,596		
(4)	Unallocated LAE as a Ratio to Losses + Allocated LAE (3)/[(1)+(2)]	9.2%	8.8%	8.0%	7.4%	7.2%	7.6%	8.1%
(5)	Selected Factor							7.5%

		<u>Property Damage</u> (000's)					3 YR.	5 YR.
		<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>AVG</u>	<u>AVG</u>
(1)	ITEM Direct Losses Incurred	965,963	1,036,103	1,144,361	1,240,811	1,278,538		
(2)	Allocated Loss Adjustment Expenses Incurred	70,743	69,240	85,269	72,162	83,354		
(3)	Unallocated Loss Adjustment Expense Incurred	113,312	129,347	129,840	127,728	134,901		
(4)	Unallocated LAE as a Ratio to Losses + Allocated LAE (3)/[(1)+(2)]	10.9%	11.7%	10.6%	9.7%	9.9%	10.1%	10.6%
(5)	Selected Factor							10.0%

All items are from Special Call Submission for available writers.

## INSURANCE SERVICES OFFICE, INC.

COMMERCIAL AUTOMOBILE PHYSICAL DAMAGE INSURANCE  
MULTISTATE LOSS ADJUSTMENT EXPENSE EXPERIENCE

Calendar Year

Development of Factor to Include all Loss Adjustment Expenses

		(000's)					3 YR.	5 YR.
		<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>AVG</u>	<u>AVG</u>
(1)	ITEM Direct Losses Incurred	3,615,666	4,009,807	4,293,030	4,806,080	5,434,351		
(2)	Loss Adjustment Expenses Incurred	581,191	657,537	578,445	622,951	702,920		
(3)	Losses + LAE Incurred as Ratio to Losses Incurred [(1)+(2)]/(1)	1.161	1.164	1.135	1.130	1.129	1.131	1.144
(4)	Selected							1.130

Items (1) and (2) are from the Insurance Expense Exhibits for agency and direct writers.

INSURANCE SERVICES OFFICE, INC.

COMMERCIAL AUTO LIABILITY  
DETERMINATION OF FACTORS TO ADJUST ACCIDENT YEAR  
LOSS RATIOS FOR SUBSEQUENT CHANGES

AVERAGE PAID CLAIM COST DATA

YEAR ENDED	MICHIGAN				MULTISTATE*			
	BODILY INJURY (\$100000 LIMITS)		PROPERTY DAMAGE (\$100000 LIMITS)		BODILY INJURY (\$100000 LIMITS)		PROPERTY DAMAGE (\$100000 LIMITS)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	ACTUAL	EXPONENTIAL FIT	ACTUAL	EXPONENTIAL FIT	ACTUAL	EXPONENTIAL FIT	ACTUAL	EXPONENTIAL FIT
3/31/2016	37710.31	35689.58	2990.78	3031.18	21452.49	21338.63	4097.81	4094.24
6/30/2016	35884.70	35697.57	3108.30	3082.38	21640.70	21626.08	4157.45	4137.34
9/30/2016	36288.53	35705.55	3204.14	3134.44	22032.66	21917.40	4185.35	4180.90
12/31/2016	35375.78	35713.54	3277.74	3187.37	22305.11	22212.64	4228.88	4224.91
3/31/2017	34892.82	35721.52	3261.01	3241.21	22511.43	22511.86	4273.58	4269.39
6/30/2017	34074.65	35729.51	3224.36	3295.95	22784.19	22815.11	4296.48	4314.33
9/30/2017	35516.78	35737.51	3269.92	3351.62	22751.25	23122.44	4347.40	4359.75
12/31/2017	34449.91	35745.50	3266.19	3408.22	23154.91	23433.92	4380.42	4405.65
3/31/2018	33458.45	35753.49	3425.69	3465.79	23561.65	23749.59	4423.60	4452.02
6/30/2018	37204.66	35761.49	3600.99	3524.32	24127.67	24069.51	4490.97	4498.89
9/30/2018	36475.82	35769.49	3644.90	3583.84	24648.04	24393.74	4558.73	4546.25
12/31/2018	37771.64	35777.49	3686.26	3644.37	24953.34	24722.34	4637.72	4594.11

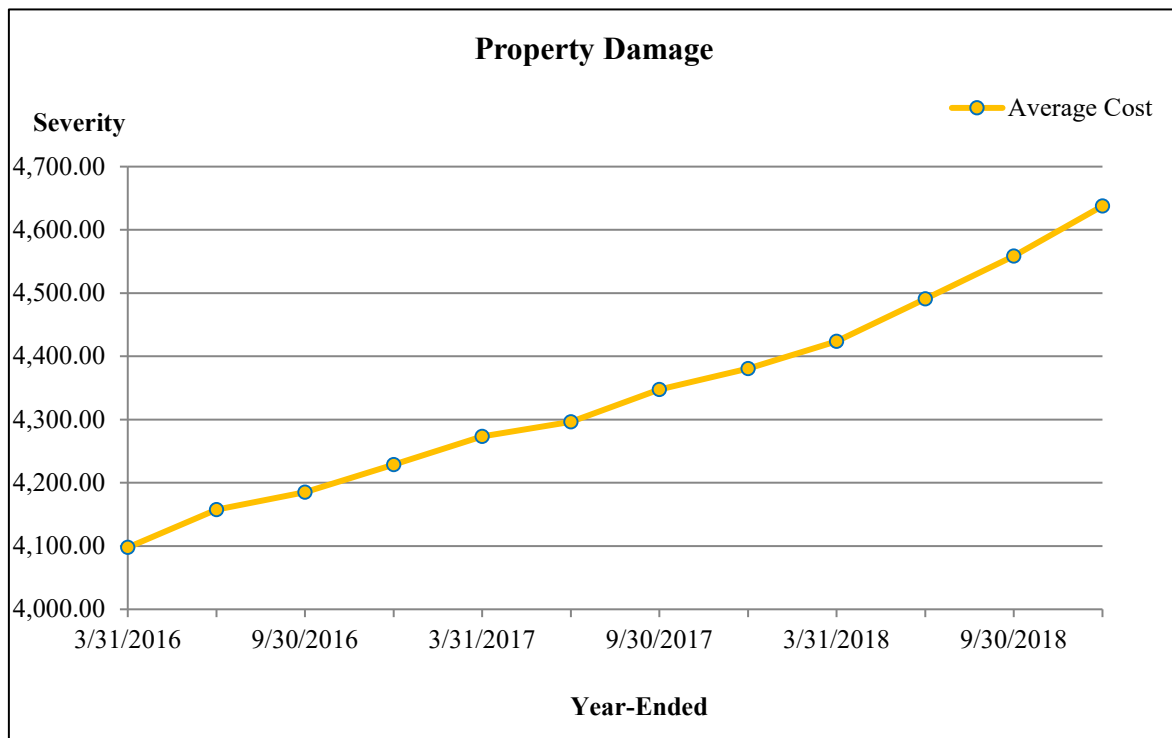
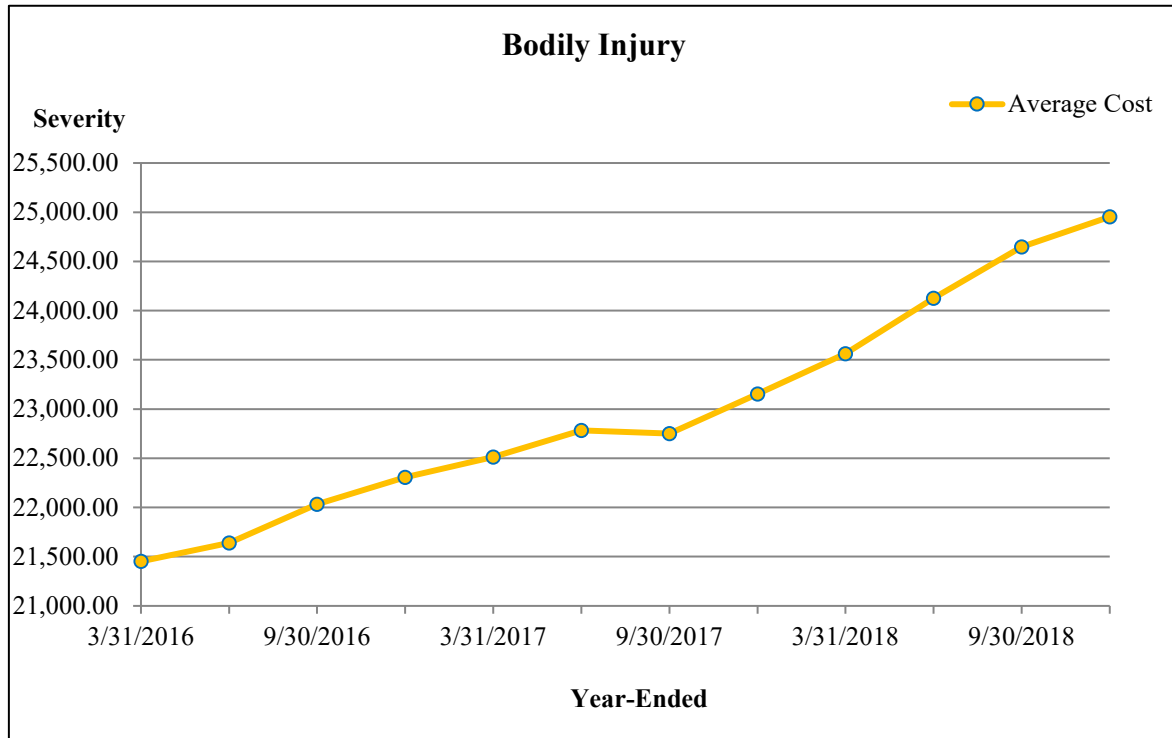
		BODILY INJURY	PROPERTY DAMAGE
(9)	AVERAGE ANNUAL PERCENT CHANGE IN PAID CLAIM COST (12TH POINT / 8TH POINT)		
	(A) MICHIGAN	0.1%	6.9%
	(B) MULTISTATE	5.5%	4.3%
(10)	CREDIBILITY	0.00	0.20
(11)	WEIGHTED AVERAGE ANNUAL PERCENT CHANGE IN PAID CLAIM COSTS { (10) * (9A) } + { (1.0 - (10)) * (9B) }	5.5%	4.8%
(12)	SELECTED ANNUAL PERCENT CHANGE IN CLAIM FREQUENCY	0.0%	0.0%
(13)	AVERAGE ANNUAL PERCENT CHANGE IN LIABILITY LOSS RATIO (11) * (12)	5.5%	4.8%

\* EXCLUDES MASSACHUSETTS



## INSURANCE SERVICES OFFICE, INC.

Commercial Automobile Liability  
Average Paid Claim Cost Experience  
Multistate\*



\*Excludes Massachusetts

INSURANCE SERVICES OFFICE, INC.

COMMERCIAL AUTO LIABILITY  
INCURRED CLAIM FREQUENCY

MULTISTATE\*

TRUCKS, TRACTORS, AND TRAILERS

<u>YEAR</u> <u>ENDING</u>	<u>BODILY INJURY</u> <u>ACTUAL</u>	<u>BODILY INJURY</u> <u>ACTUAL CHANGE@</u>	<u>PROPERTY DAMAGE</u> <u>ACTUAL</u>	<u>PROPERTY DAMAGE</u> <u>ACTUAL CHANGE@</u>
12/31/2012	0.7355		2.6523	
3/31/2013	0.7330		2.6853	
6/30/2013	0.7440		2.7160	
9/30/2013	0.7560		2.7489	
12/31/2013	0.7561	2.8% &	2.7667	4.3% &
3/31/2014	0.7707		2.8565	
6/30/2014	0.7615		2.8560	
9/30/2014	0.7580	0.3%	2.8630	4.2%
12/31/2014	0.7634		2.8658	
3/31/2015	0.7542		2.8301	
6/30/2015	0.7626		2.8382	
9/30/2015	0.7717	1.8%	2.8619	0.0%
12/31/2015	0.7859		2.8770	
3/31/2016	0.8009		2.8604	
6/30/2016	0.8113		2.8688	
9/30/2016	0.8190	6.1%	2.8747	0.4%
12/31/2016	0.8230		2.8738	
3/31/2017	0.8259		2.8501	
6/30/2017	0.8321		2.8439	
9/30/2017	0.8268	1.0%	2.8082	-2.3%
12/31/2017	0.8239		2.7930	
3/31/2018	0.8187		2.8032	
6/30/2018	0.8095		2.8067	
9/30/2018	0.8054	-2.6%	2.7990	-0.3%

\* EXCLUDES MASSACHUSETTS

@ CHANGE BASED ON YEARS ENDING 9/30/XXXX

&amp; CHANGE BASED ON YEAR ENDING 12/31/2013 divided by 12/31/2012

INSURANCE SERVICES OFFICE, INC.

COMMERCIAL AUTO LIABILITY  
INCURRED CLAIM FREQUENCY

MULTISTATE\*

PRIVATE PASSENGER TYPES

<u>YEAR</u> <u>ENDING</u>	<u>BODILY INJURY</u> <u>ACTUAL</u>	<u>BODILY INJURY</u> <u>ACTUAL CHANGE@</u>	<u>PROPERTY DAMAGE</u> <u>ACTUAL</u>	<u>PROPERTY DAMAGE</u> <u>ACTUAL CHANGE@</u>
12/31/2012	0.8711		3.1723	
3/31/2013	0.8593		3.1432	
6/30/2013	0.8532		3.0989	
9/30/2013	0.8616		3.1097	
12/31/2013	0.8680	-0.4% &	3.1399	-1.0% &
3/31/2014	0.8645		3.1695	
6/30/2014	0.8651		3.1686	
9/30/2014	0.8549	-0.8%	3.1242	0.5%
12/31/2014	0.8504		3.0988	
3/31/2015	0.8306		3.0699	
6/30/2015	0.8147		3.0428	
9/30/2015	0.8126	-4.9%	3.0784	-1.5%
12/31/2015	0.8122		3.0889	
3/31/2016	0.8248		3.0901	
6/30/2016	0.8310		3.1116	
9/30/2016	0.8464	4.2%	3.1038	0.8%
12/31/2016	0.8370		3.0882	
3/31/2017	0.8347		3.0235	
6/30/2017	0.8335		2.9874	
9/30/2017	0.8112	-4.2%	2.9073	-6.3%
12/31/2017	0.8110		2.8743	
3/31/2018	0.8170		2.8885	
6/30/2018	0.8150		2.8403	
9/30/2018	0.8133	0.3%	2.7969	-3.8%

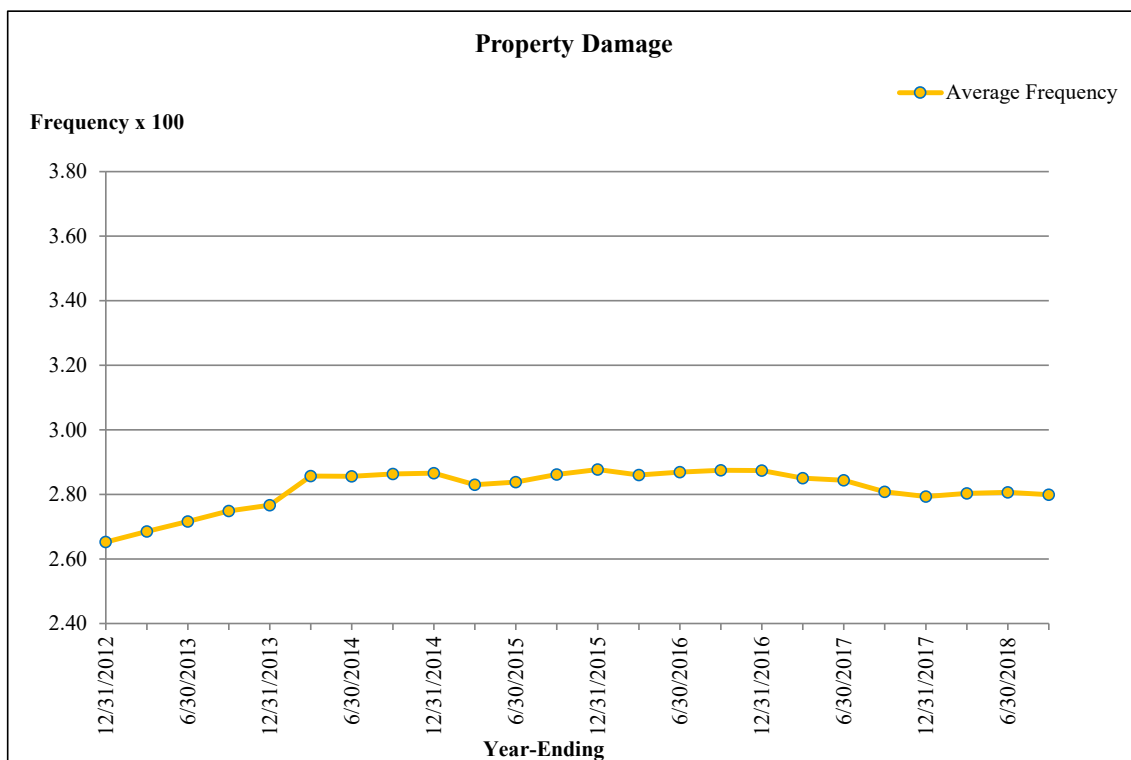
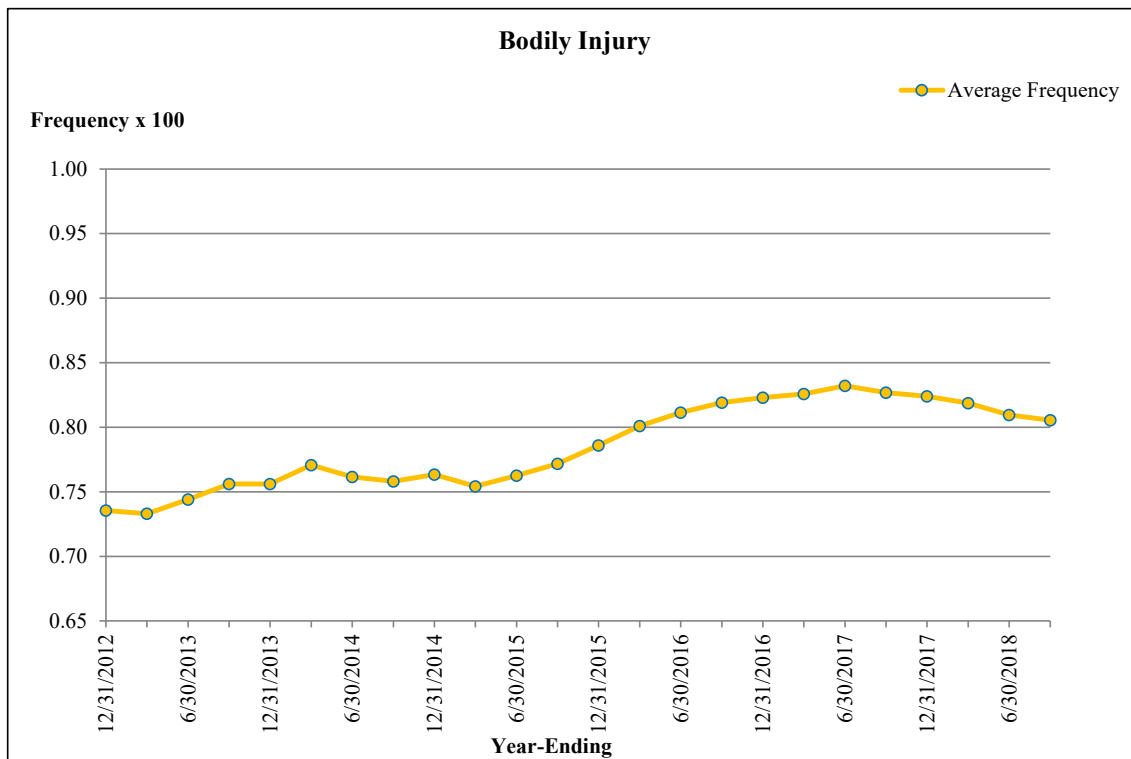
\* EXCLUDES MASSACHUSETTS

@ CHANGE BASED ON YEARS ENDING 9/30/XXXX

&amp; CHANGE BASED ON YEAR ENDING 12/31/2013 divided by 12/31/2012

INSURANCE SERVICES OFFICE, INC.

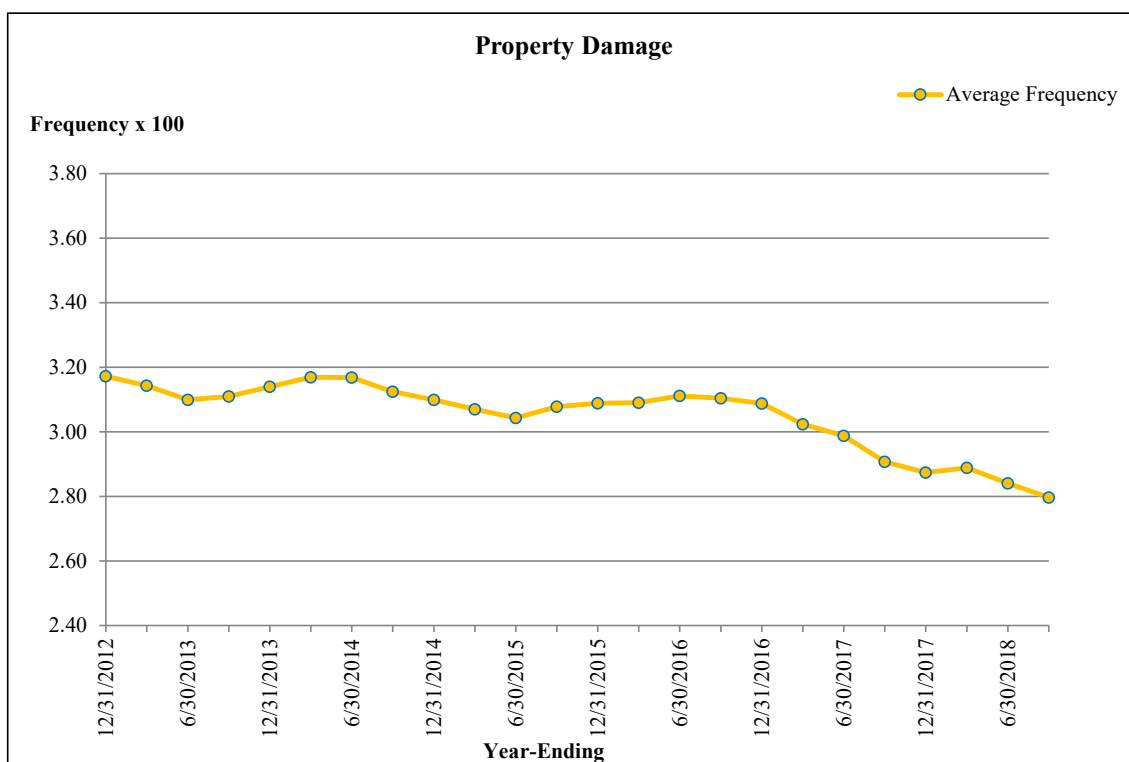
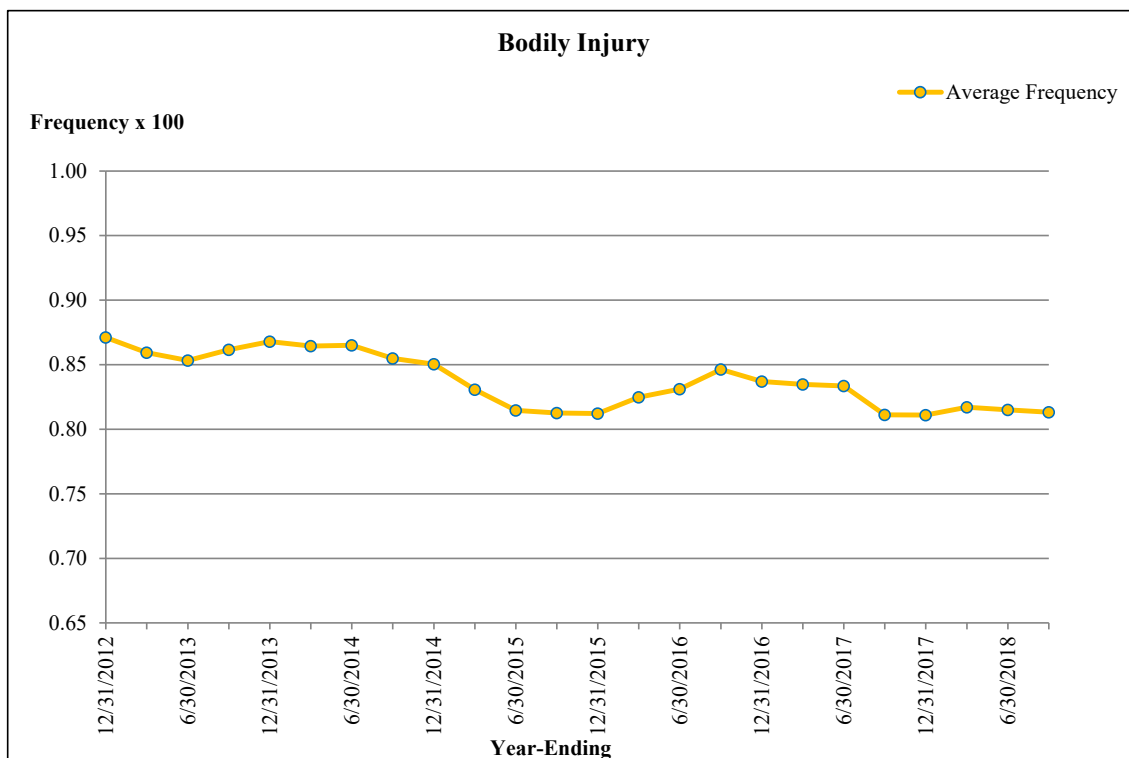
Commercial Automobile Liability  
Incurred Claim Frequency Experience  
Trucks, Tractors, and Trailers  
Multistate\*



\*Excludes Massachusetts

## INSURANCE SERVICES OFFICE, INC.

Commercial Automobile Liability  
 Incurred Claim Frequency Experience  
 Private Passenger Types  
 Multistate\*



\*Excludes Massachusetts

## INSURANCE SERVICES OFFICE, INC.

Multistate\*  
Trucks, Tractors & Trailers Physical Damage  
Other Than Collision

Frequency (expressed as claims per 100 exposures)

	\$250 Deductible		\$500 Deductible		\$1,000 Deductible	
Year Ending:	Actual	Change**	Actual	Change**	Actual	Change**
6/30/2014	2.50		1.40		0.92	
12/31/2014	2.47		1.37		0.90	
6/30/2015	2.37		1.35		0.89	
12/31/2015	2.31	-6.5%	1.35	-1.5%	0.89	-1.1%
6/30/2016	2.22		1.34		0.91	
12/31/2016	2.22	-3.9%	1.34	-0.7%	0.90	1.1%
6/30/2017	2.23		1.36		0.90	
12/31/2017	2.26	1.8%	1.41	5.2%	0.92	2.2%
6/30/2018	2.38		1.47		0.94	
12/31/2018	2.49	10.2%	1.53	8.5%	0.96	4.3%

Volume\*\*\* of losses for the most recent year by deductible:

Deductible:	Percent of Losses
Full	0.4%
\$50	0.4%
\$100	2.5%
\$200	0.2%
\$250	9.3%
\$500	36.3%
\$1,000	44.1%
\$2,000	4.3%
\$3,000	0.9%
\$5,000	1.6%

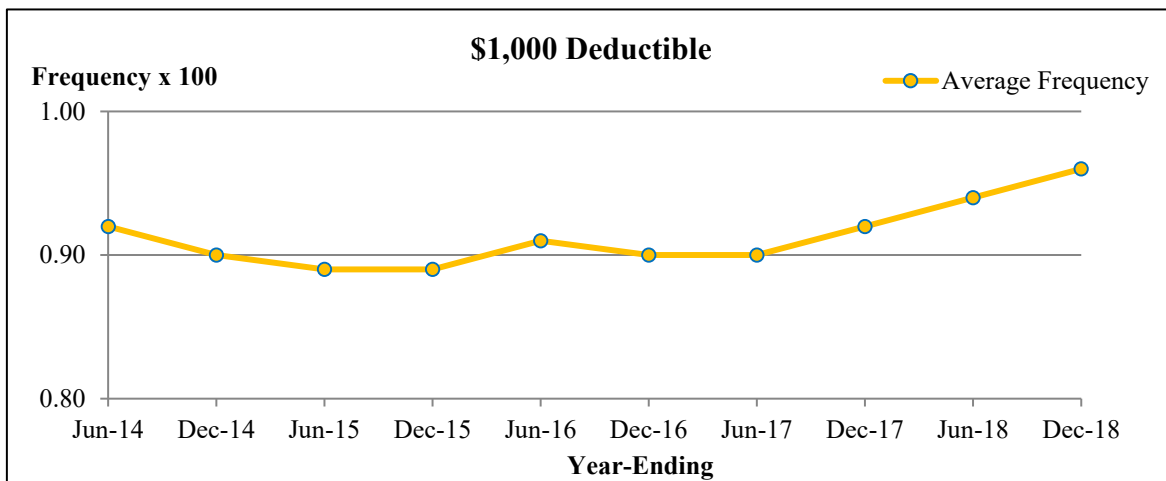
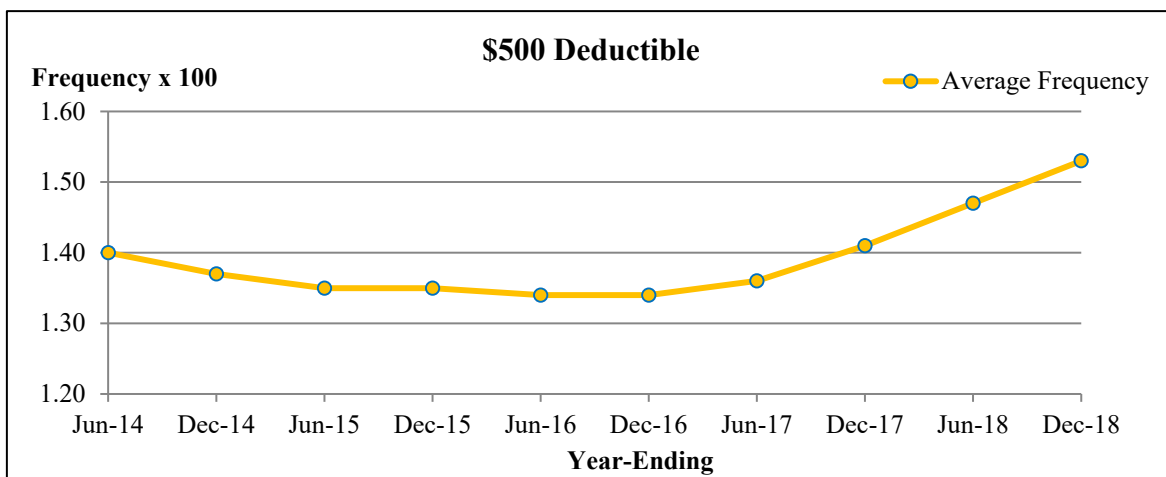
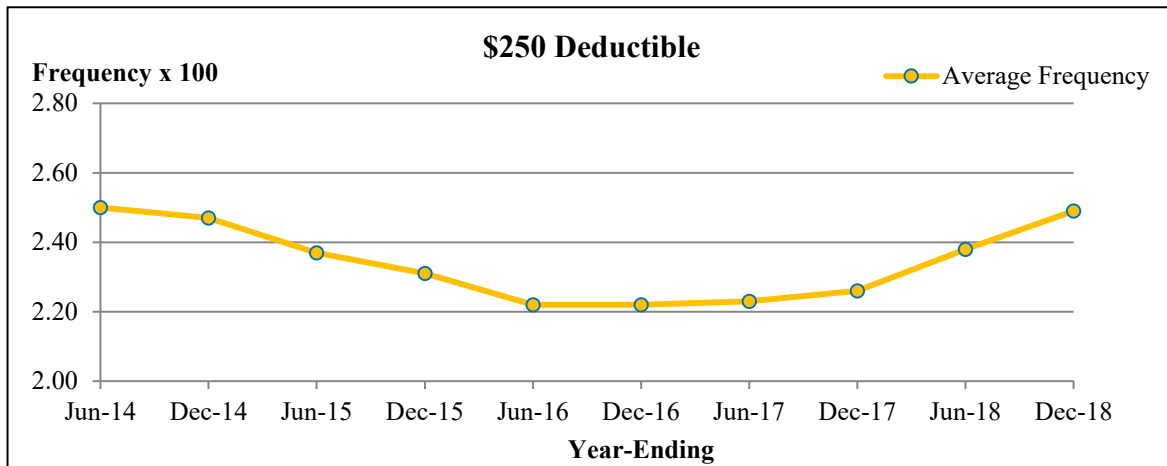
\* Multistate data excludes Massachusetts

\*\* Change based on years ending 12/31/xxxx

\*\*\* Deductibles above \$1,000, totaling 6.8% of losses, are excluded from the trend calculations.

## INSURANCE SERVICES OFFICE, INC.

Commercial Automobile  
Trucks, Tractors & Trailers Physical Damage  
Other Than Collision Frequency Trend  
Multistate\*



\*Excludes Massachusetts

Selected Other Than Collision Frequency Trend Factor: 0.0%

## INSURANCE SERVICES OFFICE, INC.

Multistate\*  
Trucks, Tractors & Trailers Physical Damage  
Other Than Collision

## Severity Trend

Year Ending:	\$250 Deductible	\$500 Deductible	\$1,000 Deductible
6/30/2014	2,885.88	4,948.54	7,327.88
12/31/2014	2,981.15	5,079.85	7,452.83
6/30/2015	3,055.82	5,160.68	7,491.47
12/31/2015	3,156.42	5,431.05	7,733.42
6/30/2016	3,403.34	5,597.25	8,031.89
12/31/2016	3,469.71	5,649.55	8,378.59
6/30/2017	3,534.58	5,945.59	8,739.47
12/31/2017	3,708.55	6,293.24	9,153.24
6/30/2018	3,753.56	6,314.13	9,369.71
12/31/2018	3,862.44	6,393.21	9,409.87

## Average Annual Change Using Exponential Fits:

10 point fit:	7.0%	6.4%	6.6%
8 point fit:	6.8%	6.5%	7.4%
6 point fit:	5.4%	6.2%	6.9%

Selected severity trend:	7.0%
Selected frequency trend:	0.0%
Selected pure premium trend:	7.0%

\* Multistate data excludes Massachusetts



## INSURANCE SERVICES OFFICE, INC.

Multistate\*  
Trucks, Tractors & Trailers Physical Damage  
Collision

Frequency (expressed as claims per 100 exposures)

	\$500 Deductible		\$1,000 Deductible		\$2,000 Deductible	
Year Ending:	Actual	Change**	Actual	Change**	Actual	Change**
6/30/2014	2.32		1.98		1.58	
12/31/2014	2.32		1.99		1.59	
6/30/2015	2.29		1.98		1.60	
12/31/2015	2.31	-0.4%	2.01	1.0%	1.63	2.5%
6/30/2016	2.29		2.01		1.63	
12/31/2016	2.38	3.0%	2.08	3.5%	1.68	3.1%
6/30/2017	2.40		2.07		1.69	
12/31/2017	2.33	-2.1%	2.00	-3.8%	1.65	-1.8%
6/30/2018	2.35		2.02		1.67	
12/31/2018	2.37	1.7%	2.03	1.5%	1.70	3.0%

Volume\*\*\* of losses for the most recent year by deductible:

Deductible:	Percent of Losses
\$100	0.1%
\$200	0.0%
\$250	1.8%
\$500	34.1%
\$1,000	53.5%
\$2,000	5.4%
\$3,000	1.6%
\$5,000	3.6%

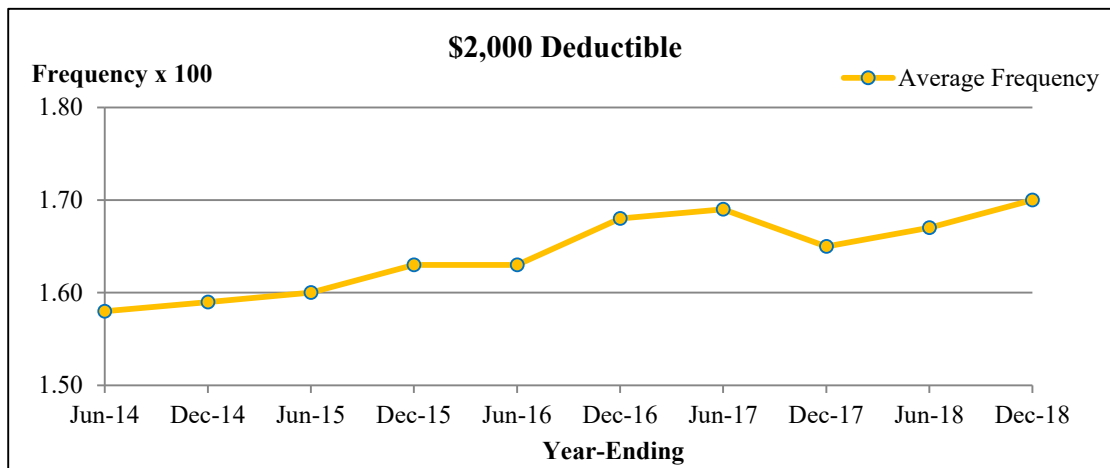
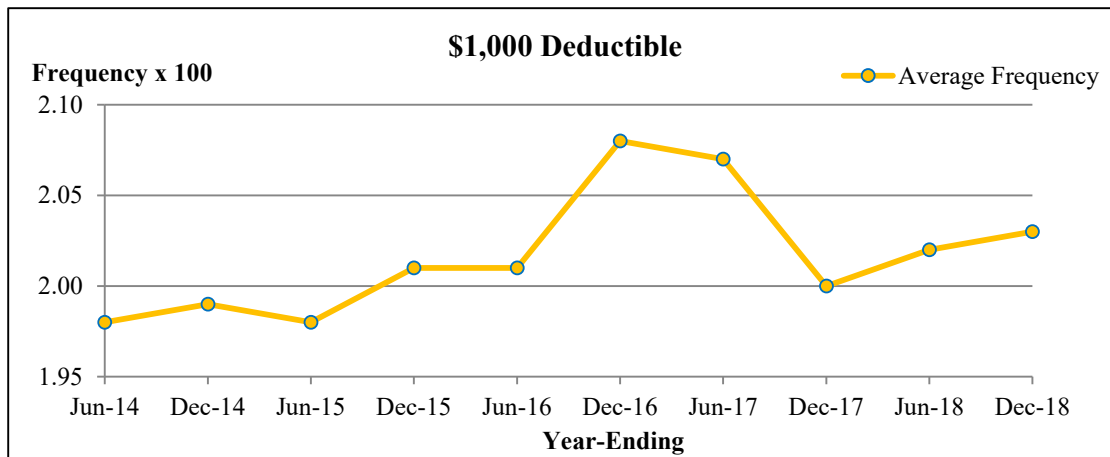
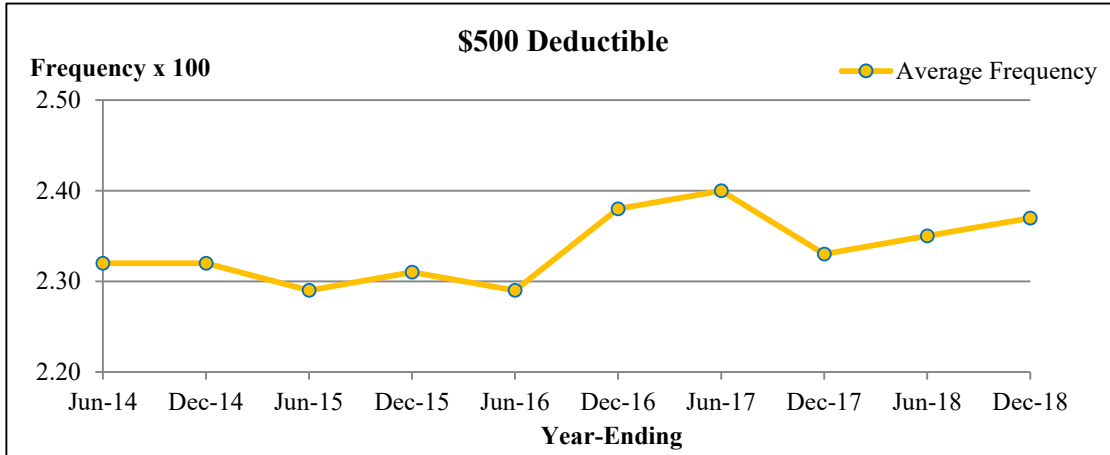
\* Multistate data excludes Massachusetts

\*\* Change based on years ending 12/31/xxxx

\*\*\* Deductibles above \$2,000, totaling 5.2% of losses, are excluded from trend calculations.

## INSURANCE SERVICES OFFICE, INC.

Commercial Automobile  
Trucks, Tractors & Trailers Physical Damage  
Collision Frequency Trend  
Multistate\*



\*Excludes Massachusetts

Selected Collision Frequency Trend Factor: 0.0%

## INSURANCE SERVICES OFFICE, INC.

Multistate\*  
Trucks, Tractors & Trailers Physical Damage  
Collision

Severity Trend

Year Ending:	\$500 Deductible	\$1,000 Deductible	\$2,000 Deductible
6/30/2014	8,006.95	9,709.23	10,578.28
12/31/2014	8,328.42	10,052.35	10,996.98
6/30/2015	8,624.52	10,264.31	11,154.78
12/31/2015	8,784.58	10,478.77	11,361.59
6/30/2016	9,123.06	10,789.93	11,709.15
12/31/2016	9,290.63	10,973.53	11,920.32
6/30/2017	9,302.59	10,979.20	11,887.61
12/31/2017	9,547.23	11,200.14	12,123.28
6/30/2018	9,800.39	11,561.15	12,548.35
12/31/2018	10,206.82	11,967.55	12,822.63

Average Annual Change Using Exponential Fits:

10 point fit:	5.0%	4.3%	4.0%
8 point fit:	4.5%	4.1%	3.8%
6 point fit:	4.4%	4.0%	3.7%

Selected severity trend:	4.5%
Selected frequency trend:	0.0%
Selected pure premium trend:	4.5%

\* Multistate data excludes Massachusetts

## INSURANCE SERVICES OFFICE, INC.

Multistate\*  
Private Passenger Types Physical Damage  
Other Than Collision

Frequency (expressed as claims per 100 exposures)

	\$250 Deductible		\$500 Deductible		\$1,000 Deductible	
Year Ending:	Actual	Change**	Actual	Change**	Actual	Change**
6/30/2014	5.47		3.24		1.93	
12/31/2014	5.30		3.18		1.92	
6/30/2015	4.95		3.07		1.89	
12/31/2015	4.97	-6.2%	3.15	-0.9%	1.94	1.0%
6/30/2016	4.97		3.19		1.98	
12/31/2016	4.98	0.2%	3.09	-1.9%	1.92	-1.0%
6/30/2017	4.83		2.99		1.89	
12/31/2017	4.79	-3.8%	3.03	-1.9%	1.94	1.0%
6/30/2018	5.04		3.16		2.00	
12/31/2018	5.13	7.1%	3.30	8.9%	2.05	5.7%

Volume\*\*\* of losses for the most recent year by deductible:

Deductible:	Percent of Losses
Full	0.3%
\$50	0.6%
\$100	3.3%
\$200	0.8%
\$250	12.1%
\$500	43.5%
\$1,000	36.7%
\$2,000	1.8%
\$3,000	0.2%
\$5,000	0.7%

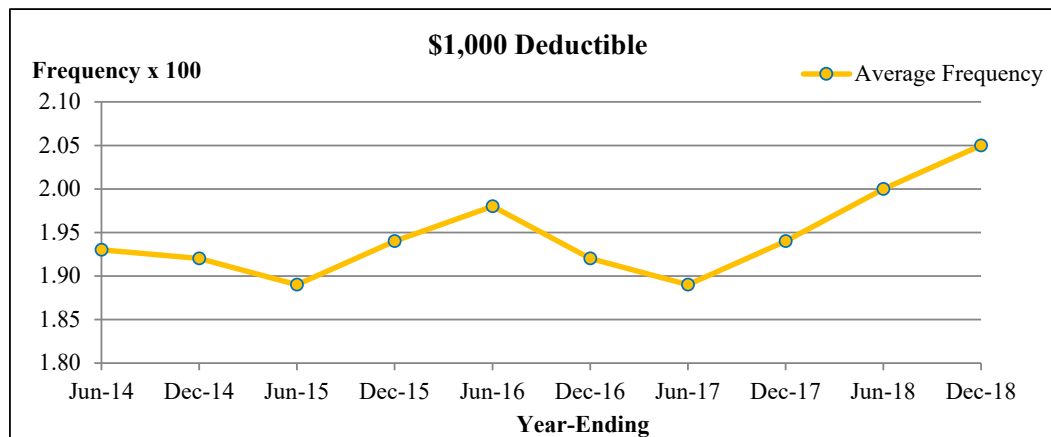
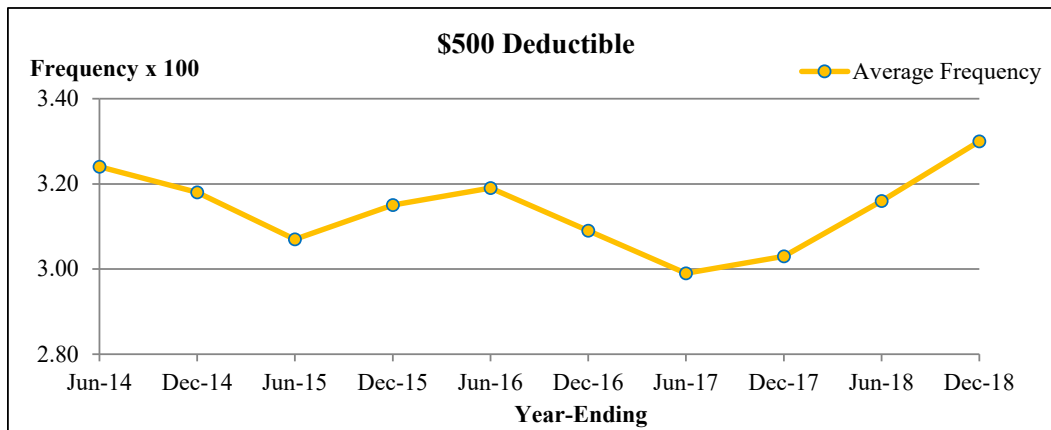
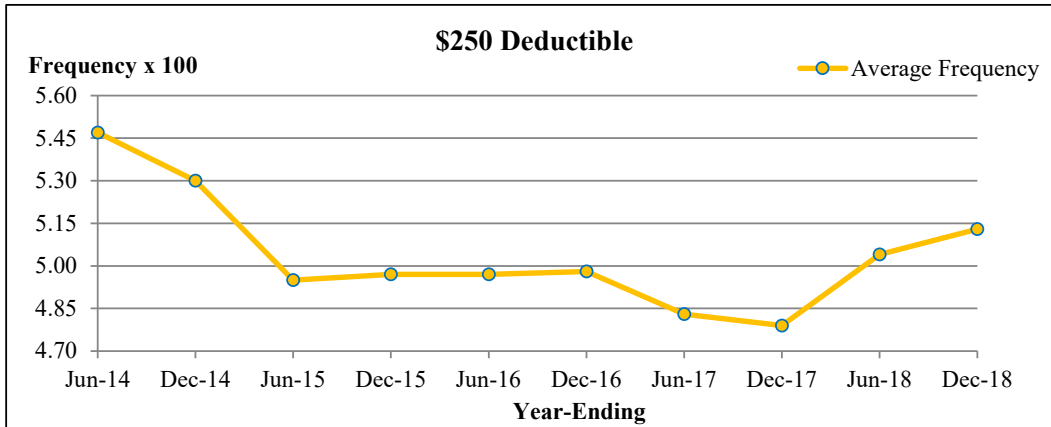
\* Multistate data excludes Massachusetts

\*\* Change based on years ending 12/31/xxxx

\*\*\* Deductibles above \$1,000, totaling 2.7% of losses, are excluded from trend calculations.

## INSURANCE SERVICES OFFICE, INC.

Commercial Automobile  
Private Passenger Types Physical Damage  
Other Than Collision Frequency Trend  
Multistate\*



\*Excludes Massachusetts

Selected Other Than Collision Frequency Trend Factor: 0.0%

## INSURANCE SERVICES OFFICE, INC.

Multistate\*  
Private Passenger Types Physical Damage  
Other Than Collision

## Severity Trend

Year Ending:	\$250 Deductible	\$500 Deductible	\$1,000 Deductible
6/30/2014	1,366.03	1,928.14	2,657.81
12/31/2014	1,462.11	2,016.19	2,772.23
6/30/2015	1,556.40	2,079.78	2,801.32
12/31/2015	1,642.60	2,188.48	2,872.90
6/30/2016	1,754.27	2,304.25	3,008.71
12/31/2016	1,752.96	2,315.04	3,012.76
6/30/2017	1,788.88	2,365.29	3,054.54
12/31/2017	1,880.66	2,537.30	3,344.40
6/30/2018	1,843.29	2,585.74	3,464.52
12/31/2018	1,777.16	2,602.52	3,519.67

## Average Annual Change Using Exponential Fits:

10 point fit:	6.5%	7.1%	6.5%
8 point fit:	4.2%	6.7%	7.1%
6 point fit:	1.5%	5.9%	7.7%

Selected severity trend:	6.5%
Selected frequency trend:	0.0%
Selected pure premium trend:	6.5%

\* Multistate data excludes Massachusetts

## INSURANCE SERVICES OFFICE, INC.

Multistate\*  
Private Passenger Types Physical Damage  
Collision

Frequency (expressed as claims per 100 exposures)

	\$500 Deductible		\$1,000 Deductible		\$2,000 Deductible	
Year Ending:	Actual	Change**	Actual	Change**	Actual	Change**
6/30/2014	5.33		4.39		3.17	
12/31/2014	5.39		4.49		3.26	
6/30/2015	5.31		4.42		3.24	
12/31/2015	5.32	-1.3%	4.46	-0.7%	3.30	1.2%
6/30/2016	5.24		4.44		3.29	
12/31/2016	5.29	-0.6%	4.48	0.4%	3.34	1.2%
6/30/2017	5.27		4.46		3.34	
12/31/2017	5.25	-0.8%	4.39	-2.0%	3.32	-0.6%
6/30/2018	5.32		4.48		3.42	
12/31/2018	5.24	-0.2%	4.52	3.0%	3.48	4.8%

Volume\*\*\* of losses for the most recent year by deductible:

Deductible:	Percent of Losses
\$100	0.3%
\$200	0.2%
\$250	2.2%
\$500	43.8%
\$1,000	51.0%
\$2,000	1.6%
\$3,000	0.2%
\$5,000	0.7%

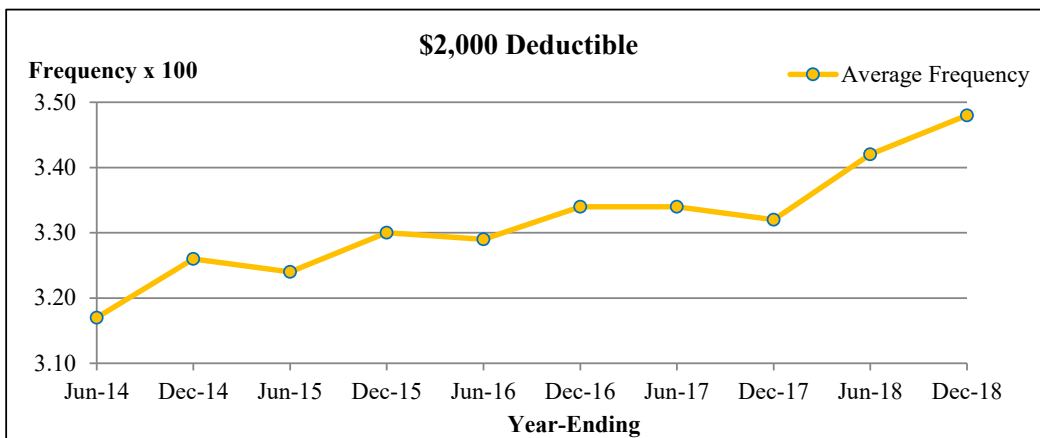
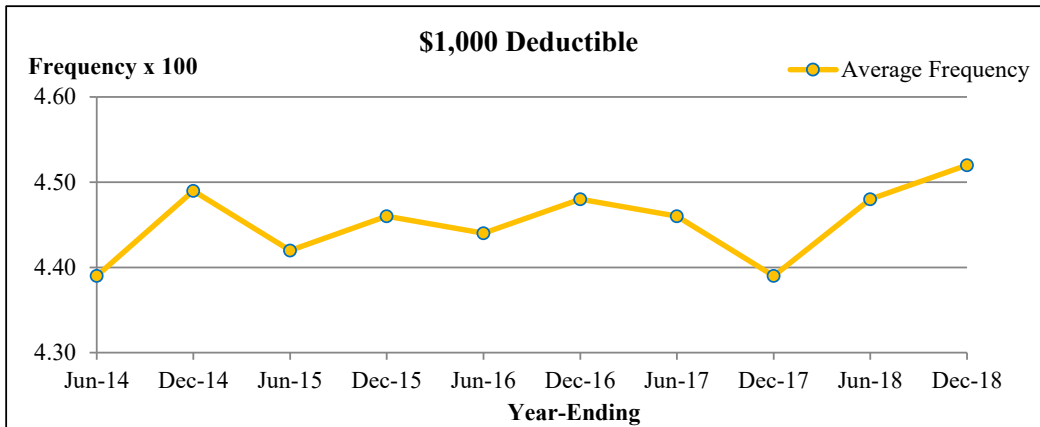
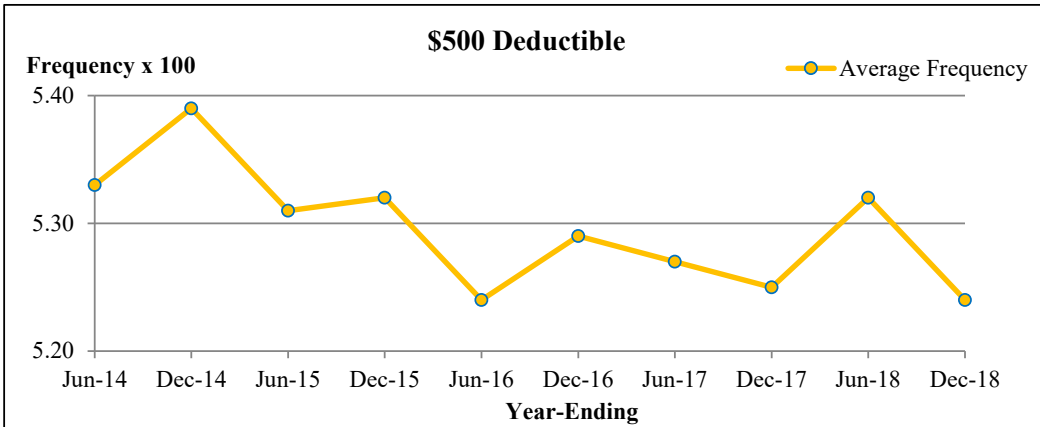
\* Multistate data excludes Massachusetts

\*\* Change based on years ending 12/31/xxxx

\*\*\* Deductibles above \$2,000, totaling 0.9% of losses, are excluded from trend calculations.

## INSURANCE SERVICES OFFICE, INC.

Commercial Automobile  
Private Passenger Types Physical Damage  
Collision Frequency Trend  
Multistate\*



\*Excludes Massachusetts

Selected Collision Frequency Trend Factor: 0.0%



## INSURANCE SERVICES OFFICE, INC.

Multistate\*  
Private Passenger Types Physical Damage  
Collision

Severity Trend

Year Ending:	\$500 Deductible	\$1,000 Deductible	\$2,000 Deductible
6/30/2014	5,156.37	5,594.21	6,157.26
12/31/2014	5,357.24	5,728.50	6,314.77
6/30/2015	5,488.01	5,894.43	6,480.44
12/31/2015	5,597.55	6,037.33	6,575.33
6/30/2016	5,763.57	6,147.42	6,699.19
12/31/2016	5,906.51	6,216.56	6,778.85
6/30/2017	5,881.16	6,234.50	6,756.30
12/31/2017	5,949.76	6,353.81	6,847.15
6/30/2018	6,296.12	6,571.80	7,066.71
12/31/2018	6,507.32	6,866.24	7,355.27

Average Annual Change Using Exponential Fits:

10 point fit:	4.7%	4.1%	3.4%
8 point fit:	4.6%	3.9%	3.2%
6 point fit:	4.7%	4.3%	3.5%

Selected severity trend:	4.0%
Selected frequency trend:	0.0%
Selected pure premium trend:	4.0%

\* Multistate data excludes Massachusetts

## INSURANCE SERVICES OFFICE, INC.

MULTISTATE  
TRUCKS, TRACTORS & TRAILERS  
PHYSICAL DAMAGE  
OCN TREND CALCULATION

AVERAGE OCN RELATIVITIES

YEAR ENDING	OTHER THAN COLLISION	COLLISION
6/30/2014	1.238	1.376
12/31/2014	1.243	1.385
6/30/2015	1.249	1.393
12/31/2015	1.255	1.403
6/30/2016	1.261	1.414
12/31/2016	1.266	1.423
6/30/2017	1.272	1.434
12/31/2017	1.279	1.446
6/30/2018	1.285	1.458
12/31/2018	1.289	1.466

EXPONENTIAL TREND (AVERAGE ANNUAL CHANGE)

9 POINTS	0.9%	1.5%
7 POINTS	0.9%	1.5%
5 POINTS	0.9%	1.5%
Selected Other Than Collision Physical Damage Annual OCN Trend:		0.9%
Selected Collision Physical Damage Annual OCN Trend:		1.5%

Data excludes the following state: Massachusetts

## INSURANCE SERVICES OFFICE, INC.

MULTISTATE  
PRIVATE PASSENGER TYPES  
PHYSICAL DAMAGE  
OCN TREND CALCULATION

AVERAGE OCN RELATIVITIES

YEAR ENDING	OTHER THAN COLLISION	COLLISION
6/30/2014	1.315	1.156
12/31/2014	1.320	1.158
6/30/2015	1.325	1.161
12/31/2015	1.332	1.165
6/30/2016	1.339	1.169
12/31/2016	1.347	1.173
6/30/2017	1.354	1.177
12/31/2017	1.360	1.180
6/30/2018	1.365	1.182
12/31/2018	1.372	1.185

EXPONENTIAL TREND (AVERAGE ANNUAL CHANGE)

9 POINTS	1.0%	0.6%
7 POINTS	1.0%	0.6%
5 POINTS	0.9%	0.5%
Selected Other Than Collision Physical Damage Annual OCN Trend:		1.0%
Selected Collision Physical Damage Annual OCN Trend:		0.6%

Data excludes the following state: Massachusetts

## INSURANCE SERVICES OFFICE, INC.

## MICHIGAN

## Automobile Liability Insurance - Trucks, Tractors and Trailers

## Loss Development

## Incurred Losses and Expenses

## Bodily Injury

Accident Year	\$100,000 Basic Limit			Loss Development Factors	
<u>Ending</u>	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	15 to 27 <u>Months</u>	27 to 39 <u>Months</u>
12/31/2007	2,667,293	3,986,631	4,705,505	1.495	1.180
12/31/2008	2,016,161	3,964,118	4,645,215	1.966	1.172
12/31/2009	1,606,819	3,614,551	4,091,368	2.250	1.132
12/31/2010	2,342,303	4,368,932	5,237,425	1.865	1.199
12/31/2011	3,762,357	6,343,046	7,248,633	1.686	1.143
12/31/2012	3,712,372	6,011,245	7,251,046	1.619	1.206
12/31/2013	2,729,414	4,842,018	5,991,213	1.774	1.237
12/31/2014	4,014,764	6,715,678	7,995,688	1.673	1.191
12/31/2015	5,258,658	7,966,561	9,507,156	1.515	1.193
12/31/2016	6,302,822	10,423,980	11,857,184	1.654	1.137
12/31/2017	7,322,410	9,918,033		1.354	
12/31/2018	6,325,985				
(1) Average Factor (Best 3 of 5) :				(A) State	1.614
				(B) Multistate	1.197
(2) Credibility					1.393
(3) Credibility Weighted Factors					0.950
					0.890
					1.603
					1.192

## Property Damage

Accident Year	\$100,000 Basic Limit			Loss Development Factors	
<u>Ending</u>	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	15 to 27 <u>Months</u>	27 to 39 <u>Months</u>
12/31/2007	2,130,311	2,231,559	2,235,111	1.048	1.002
12/31/2008	2,087,124	2,128,894	2,123,313	1.020	0.997
12/31/2009	1,706,093	1,770,731	1,823,761	1.038	1.030
12/31/2010	1,718,794	1,801,121	1,823,767	1.048	1.013
12/31/2011	1,946,644	2,038,484	2,010,232	1.047	0.986
12/31/2012	2,216,215	2,152,862	2,193,602	0.971	1.019
12/31/2013	2,177,799	2,429,219	2,430,183	1.115	1.000
12/31/2014	2,186,674	2,277,737	2,319,181	1.042	1.018
12/31/2015	2,076,169	2,384,849	2,467,832	1.149	1.035
12/31/2016	2,652,257	2,760,377	2,750,498	1.041	0.996
12/31/2017	2,512,161	2,632,015		1.048	
12/31/2018	2,754,078				
(1) Average Factor (Best 3 of 5) :				(A) State	1.068
				(B) Multistate	1.012
(2) Credibility					1.045
(3) Credibility Weighted Factors					0.830
					0.000
					1.064
					1.009

## Summary of Factors

	Bodily <u>Injury</u>	Property <u>Damage</u>
39 to Ultimate **	1.084	1.004
27 to Ultimate	1.292	1.013
15 to Ultimate	2.071	1.078

\*\* Multistate factors

## INSURANCE SERVICES OFFICE, INC.

Basic Limits Loss Development  
Trucks, Tractors and Trailers - Bodily Injury  
No Fault States  
Incurred Losses and Expenses

Accident Year <u>Ending</u>	\$100,000 Basic Limit				
	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>
12/31/2007	131,415,218	176,058,424	194,744,343	203,918,004	206,831,184
12/31/2008	114,878,534	154,595,558	171,793,399	180,304,674	182,279,698
12/31/2009	105,045,929	139,833,866	157,616,290	165,591,146	168,819,309
12/31/2010	110,655,796	151,426,641	170,540,087	180,181,303	183,428,699
12/31/2011	122,878,460	166,652,657	189,562,212	203,418,911	203,717,704
12/31/2012	121,333,075	170,582,247	197,042,867	204,993,102	206,753,746
12/31/2013	132,137,684	183,877,518	210,612,444	225,648,737	229,550,076
12/31/2014	141,332,577	195,246,759	226,585,738	237,397,140	241,726,458
12/31/2015	149,302,677	218,498,166	249,209,205	263,186,880	
12/31/2016	166,698,637	230,821,588	267,993,516		
12/31/2017	172,989,099	242,430,506			
12/31/2018	189,224,301				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2007	1.340	1.106	1.047	1.014
12/31/2008	1.346	1.111	1.050	1.011
12/31/2009	1.331	1.127	1.051	1.019
12/31/2010	1.368	1.126	1.057	1.018
12/31/2011	1.356	1.137	1.073	1.001
12/31/2012	1.406	1.155	1.040	1.009
12/31/2013	1.392	1.145	1.071	1.017
12/31/2014	1.381	1.161	1.048	1.018
12/31/2015	1.463	1.141	1.056	
12/31/2016	1.385	1.161		
12/31/2017	1.401			
Average Factor:	1.393	1.154	1.058	1.015
( Best 3 of 5 )				

## Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.009
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.024
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.084
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.250
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.742

## INSURANCE SERVICES OFFICE, INC.

Basic Limits Loss Development  
Trucks, Tractors and Trailers - Bodily Injury  
No Fault States  
Incurred Losses and Expenses

Accident Year <u>Ending</u>	\$100,000 Basic Limit <u>75 Months</u>	<u>87 Months</u>	<u>99 Months</u>	<u>111 Months</u>	<u>123 Months</u>
12/31/2007	208,119,745	209,315,655	209,266,167	209,303,811	209,359,281
12/31/2008	183,710,219	184,571,981	184,680,927	184,688,976	184,565,628
12/31/2009	169,497,368	169,381,917	169,549,392	169,640,378	169,600,405
12/31/2010	183,192,192	183,726,911	184,037,513	184,028,779	
12/31/2011	205,058,238	204,910,362	205,151,763		
12/31/2012	207,932,110	208,453,966			
12/31/2013	231,235,523				

## Ratios

Accident Year <u>Ending</u>	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>	<u>123:111</u>
12/31/2007	1.006	1.006	1.000	1.000	1.000
12/31/2008	1.008	1.005	1.001	1.000	0.999
12/31/2009	1.004	0.999	1.001	1.001	1.000
12/31/2010	0.999	1.003	1.002	1.000	
12/31/2011	1.007	0.999	1.001		
12/31/2012	1.006	1.003			
12/31/2013	1.007				
Average Factor: ( Best 3 of 5 )	1.006	1.002	1.001	1.000	1.000

## Summary of Factors

123 to Ult:	(1.000)	=	1.000
111 to Ult:	(123:111) (123:Ult)	=	1.000
99 to Ult:	(111:99) (123:111) (123:Ult)	=	1.000
87 to Ult:	(99:87) (111:99) (123:111) (123:Ult)	=	1.001
75 to Ult:	(87:75) (99:87) (111:99) (123:111) (123:Ult)	=	1.003

## INSURANCE SERVICES OFFICE, INC.

Basic Limits Loss Development  
Trucks, Tractors and Trailers - Property Damage  
Multistate  
Incurred Losses and Expenses

Accident Year <u>Ending</u>	\$100,000 Basic Limit <u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>
12/31/2007	453,578,766	469,739,966	473,077,220	472,712,914	473,098,460
12/31/2008	404,661,210	414,935,982	417,270,996	417,514,888	418,271,866
12/31/2009	344,659,574	353,667,486	355,921,303	356,479,783	356,213,694
12/31/2010	358,561,523	371,121,418	374,062,959	374,883,916	375,081,017
12/31/2011	396,648,288	409,088,285	412,330,516	413,783,506	414,594,474
12/31/2012	396,400,012	410,519,962	413,551,050	414,340,760	414,996,640
12/31/2013	422,343,833	437,334,375	442,923,912	443,743,458	444,214,878
12/31/2014	447,785,527	467,713,496	471,176,837	472,601,704	473,298,743
12/31/2015	475,784,542	497,912,958	502,880,070	504,250,770	
12/31/2016	505,559,237	527,555,729	532,888,321		
12/31/2017	514,794,984	542,551,154			
12/31/2018	570,729,230				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2007	1.036	1.007	0.999	1.001
12/31/2008	1.025	1.006	1.001	1.002
12/31/2009	1.026	1.006	1.002	0.999
12/31/2010	1.035	1.008	1.002	1.001
12/31/2011	1.031	1.008	1.004	1.002
12/31/2012	1.036	1.007	1.002	1.002
12/31/2013	1.035	1.013	1.002	1.001
12/31/2014	1.045	1.007	1.003	1.001
12/31/2015	1.047	1.010	1.003	
12/31/2016	1.044	1.010		
12/31/2017	1.054			
Average Factor:	1.045	1.009	1.003	1.001
( Best 3 of 5 )				

## Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.000
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.001
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.004
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.013
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.059

## INSURANCE SERVICES OFFICE, INC.

Basic Limits Loss Development  
Trucks, Tractors and Trailers - Property Damage  
Multistate  
Incurred Losses and Expenses

Accident Year <u>Ending</u>	\$100,000 Basic Limit <u>75 Months</u>	<u>87 Months</u>	<u>99 Months</u>	<u>111 Months</u>
12/31/2007	473,825,003	473,687,543	473,720,995	473,697,052
12/31/2008	418,229,625	418,270,326	418,414,204	418,285,323
12/31/2009	356,393,139	356,393,033	356,615,417	356,705,304
12/31/2010	375,150,876	374,996,154	375,087,116	375,162,341
12/31/2011	414,717,965	414,781,494	414,868,974	
12/31/2012	415,331,657	415,703,661		
12/31/2013	444,303,596			

## Ratios

Accident Year <u>Ending</u>	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>
12/31/2007	1.002	1.000	1.000	1.000
12/31/2008	1.000	1.000	1.000	1.000
12/31/2009	1.001	1.000	1.001	1.000
12/31/2010	1.000	1.000	1.000	1.000
12/31/2011	1.000	1.000	1.000	
12/31/2012	1.001	1.001		
12/31/2013	1.000			
Average Factor: ( Best 3 of 5 )	1.000	1.000	1.000	1.000

## Summary of Factors

111 to Ult:	(1.000)	=	1.000
99 to Ult:	(111:99) (111:Ult)	=	1.000
87 to Ult:	(99:87) (111:99) (111:Ult)	=	1.000
75 to Ult:	(87:75) (99:87) (111:99) (111:Ult)	=	1.000



## INSURANCE SERVICES OFFICE, INC.

## MICHIGAN

## Automobile Liability Insurance - Private Passenger Types

## Loss Development

## Incurred Losses and Expenses

## Bodily Injury

Accident Year Ending	\$100,000 Basic Limit			Loss Development Factors	
	15 Months	27 Months	39 Months	15 to 27 Months	27 to 39 Months
12/31/2007	492,384	976,112	987,738	1.982	1.012
12/31/2008	666,441	845,691	1,162,758	1.269	1.375
12/31/2009	1,053,526	2,217,252	2,354,129	2.105	1.062
12/31/2010	1,586,859	2,287,094	2,447,467	1.441	1.070
12/31/2011	1,419,760	1,909,920	2,393,749	1.345	1.253
12/31/2012	1,522,754	2,272,544	2,784,228	1.492	1.225
12/31/2013	1,579,571	2,485,866	2,685,947	1.574	1.080
12/31/2014	1,434,940	2,098,645	2,204,971	1.463	1.051
12/31/2015	1,087,593	1,922,978	2,462,336	1.768	1.280
12/31/2016	1,390,853	2,244,959	2,746,232	1.614	1.223
12/31/2017	1,703,910	2,626,718		1.542	
12/31/2018	1,054,063				
(1) Average Factor (Best 3 of 5) :					
				(A) State	1.577
				(B) Multistate	1.176
(2) Credibility					1.404
(3) Credibility Weighted Factors					1.158
					0.860
					0.790
					1.553
					1.172

## Property Damage

Accident Year Ending	\$100,000 Basic Limit			Loss Development Factors	
	15 Months	27 Months	39 Months	15 to 27 Months	27 to 39 Months
12/31/2007	581,016	712,162	709,443	1.226	0.996
12/31/2008	539,507	565,056	575,897	1.047	1.019
12/31/2009	555,102	569,256	571,282	1.025	1.004
12/31/2010	475,780	494,268	495,461	1.039	1.002
12/31/2011	509,339	531,640	583,722	1.044	1.098
12/31/2012	514,794	555,539	556,568	1.079	1.002
12/31/2013	548,916	541,050	538,503	0.986	0.995
12/31/2014	536,849	541,444	545,156	1.009	1.007
12/31/2015	440,508	530,017	520,398	1.203	0.982
12/31/2016	540,964	572,863	580,352	1.059	1.013
12/31/2017	487,362	575,317		1.180	
12/31/2018	610,041				
(1) Average Factor (Best 3 of 5) :					
				(A) State	1.083
				(B) Multistate	1.001
(2) Credibility					1.045
(3) Credibility Weighted Factors					1.008
					0.710
					0.000
					1.072
					1.008

## Summary of Factors

	Bodily <u>Injury</u>	Property <u>Damage</u>
39 to Ultimate **	1.082	1.004
27 to Ultimate	1.268	1.012
15 to Ultimate	1.969	1.085

\*\* Multistate factors

## INSURANCE SERVICES OFFICE, INC.

Basic Limits Loss Development  
Private Passenger Types - Bodily Injury  
No Fault States  
Incurred Losses and Expenses

Accident Year <u>Ending</u>	\$100,000 Basic Limit <u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>
12/31/2007	29,626,743	40,579,773	46,270,280	48,182,761	49,137,656
12/31/2008	28,517,180	38,060,182	43,461,513	45,321,199	46,318,925
12/31/2009	28,117,800	39,517,298	45,030,332	47,072,574	47,163,510
12/31/2010	31,777,293	44,385,590	49,465,744	53,113,728	54,278,363
12/31/2011	32,405,824	46,530,239	52,238,324	54,454,928	55,516,771
12/31/2012	34,599,845	45,601,779	53,276,162	56,174,743	57,630,797
12/31/2013	34,299,874	48,228,706	54,778,769	59,696,315	60,991,563
12/31/2014	33,499,870	47,380,333	55,890,607	58,865,440	59,899,543
12/31/2015	31,505,027	46,314,677	52,703,592	56,036,879	
12/31/2016	38,100,564	52,314,303	61,159,868		
12/31/2017	33,637,526	46,786,833			
12/31/2018	31,967,478				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2007	1.370	1.140	1.041	1.020
12/31/2008	1.335	1.142	1.043	1.022
12/31/2009	1.405	1.140	1.045	1.002
12/31/2010	1.397	1.114	1.074	1.022
12/31/2011	1.436	1.123	1.042	1.019
12/31/2012	1.318	1.168	1.054	1.026
12/31/2013	1.406	1.136	1.090	1.022
12/31/2014	1.414	1.180	1.053	1.018
12/31/2015	1.470	1.138	1.063	
12/31/2016	1.373	1.169		
12/31/2017	1.391			
Average Factor: ( Best 3 of 5 )	1.404	1.158	1.057	1.021

## Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.003
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.024
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.082
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.253
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.760

## INSURANCE SERVICES OFFICE, INC.

Basic Limits Loss Development  
 Private Passenger Types - Bodily Injury  
 No Fault States  
 Incurred Losses and Expenses

Accident Year <u>Ending</u>	\$100,000 Basic Limit <u>75 Months</u>	<u>87 Months</u>	<u>99 Months</u>	<u>111 Months</u>	<u>123 Months</u>
12/31/2007	49,879,173	49,928,285	49,770,875	49,781,121	49,783,088
12/31/2008	46,576,962	46,983,302	46,949,168	46,891,902	46,897,023
12/31/2009	47,237,436	47,113,409	47,092,536	47,171,211	47,176,881
12/31/2010	54,706,247	54,776,004	54,687,318	54,765,130	
12/31/2011	55,458,331	55,506,325	55,495,745		
12/31/2012	58,125,021	57,865,737			
12/31/2013	60,589,106				

## Ratios

Accident Year <u>Ending</u>	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>	<u>123:111</u>
12/31/2007	1.015	1.001	0.997	1.000	1.000
12/31/2008	1.006	1.009	0.999	0.999	1.000
12/31/2009	1.002	0.997	1.000	1.002	1.000
12/31/2010	1.008	1.001	0.998	1.001	
12/31/2011	0.999	1.001	1.000		
12/31/2012	1.009	0.996			
12/31/2013	0.993				
Average Factor: ( Best 3 of 5 )	1.003	1.000	0.999	1.001	1.000

## Summary of Factors

123 to Ult:	(1.000)	=	1.000
111 to Ult:	(123:111) (123:Ult)	=	1.000
99 to Ult:	(111:99) (123:111) (123:Ult)	=	1.001
87 to Ult:	(99:87) (111:99) (123:111) (123:Ult)	=	1.000
75 to Ult:	(87:75) (99:87) (111:99) (123:111) (123:Ult)	=	1.000

## INSURANCE SERVICES OFFICE, INC.

Basic Limits Loss Development  
Private Passenger Types - Property Damage  
Multistate  
Incurred Losses and Expenses

Accident Year <u>Ending</u>	\$100,000 Basic Limit <u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>
12/31/2007	88,217,477	90,127,510	90,485,562	90,819,605	90,861,489
12/31/2008	83,958,499	86,601,082	86,797,411	86,855,151	86,833,617
12/31/2009	78,718,247	81,132,797	81,453,911	81,724,545	81,685,214
12/31/2010	79,918,898	82,738,957	83,056,280	83,251,080	83,234,839
12/31/2011	85,441,799	88,035,482	88,605,150	89,040,457	89,253,120
12/31/2012	87,896,204	91,282,849	91,913,860	92,122,374	92,085,827
12/31/2013	88,760,482	92,620,605	93,239,528	93,532,881	93,549,792
12/31/2014	87,916,075	92,108,244	92,577,330	92,843,486	92,903,680
12/31/2015	91,168,401	95,223,290	96,053,523	96,398,494	
12/31/2016	95,873,624	100,107,250	101,241,339		
12/31/2017	90,719,422	95,657,774			
12/31/2018	96,240,312				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2007	1.022	1.004	1.004	1.000
12/31/2008	1.031	1.002	1.001	1.000
12/31/2009	1.031	1.004	1.003	1.000
12/31/2010	1.035	1.004	1.002	1.000
12/31/2011	1.030	1.006	1.005	1.002
12/31/2012	1.039	1.007	1.002	1.000
12/31/2013	1.043	1.007	1.003	1.000
12/31/2014	1.048	1.005	1.003	1.001
12/31/2015	1.044	1.009	1.004	
12/31/2016	1.044	1.011		
12/31/2017	1.054			
Average Factor: ( Best 3 of 5 )	1.045	1.008	1.003	1.000

## Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.001
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.001
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.004
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.012
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.058

## INSURANCE SERVICES OFFICE, INC.

Basic Limits Loss Development  
Private Passenger Types - Property Damage  
Multistate  
Incurred Losses and Expenses

Accident Year <u>Ending</u>	\$100,000 Basic Limit <u>75 Months</u>	<u>87 Months</u>	<u>99 Months</u>	<u>111 Months</u>
12/31/2007	90,949,656	90,840,041	90,843,403	90,844,292
12/31/2008	86,830,882	86,802,173	86,800,373	86,798,574
12/31/2009	81,693,663	81,725,681	81,715,760	81,706,953
12/31/2010	83,438,417	83,428,317	83,427,420	83,372,138
12/31/2011	89,339,108	89,403,496	89,403,525	
12/31/2012	92,187,822	92,130,655		
12/31/2013	93,540,610			

## Ratios

Accident Year <u>Ending</u>	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>
12/31/2007	1.001	0.999	1.000	1.000
12/31/2008	1.000	1.000	1.000	1.000
12/31/2009	1.000	1.000	1.000	1.000
12/31/2010	1.002	1.000	1.000	0.999
12/31/2011	1.001	1.001	1.000	
12/31/2012	1.001	0.999		
12/31/2013	1.000			
Average Factor: ( Best 3 of 5 )	1.001	1.000	1.000	1.000

## Summary of Factors

111 to Ult:	(1.000)	=	1.000
99 to Ult:	(111:99) (111:Ult)	=	1.000
87 to Ult:	(99:87) (111:99) (111:Ult)	=	1.000
75 to Ult:	(87:75) (99:87) (111:99) (111:Ult)	=	1.000

## INSURANCE SERVICES OFFICE, INC.

Physical Damage Loss Development  
Trucks, Tractors and Trailers - Other than Collision  
Multistate  
Paid Losses

Accident Year <u>Ending</u>	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>
12/31/2007	141,522,276	145,069,053	144,817,899	144,711,804	144,646,931
12/31/2008	171,013,107	174,320,692	174,311,746	174,229,528	174,203,296
12/31/2009	141,551,003	143,657,672	143,943,827	144,040,822	144,069,848
12/31/2010	163,525,914	166,553,181	166,726,703	166,571,590	166,703,162
12/31/2011	186,150,891	189,182,048	189,404,166	189,492,002	189,446,108
12/31/2012	209,105,866	213,371,965	213,362,467	213,446,208	213,705,968
12/31/2013	170,684,329	174,742,867	175,182,720	175,556,520	175,523,843
12/31/2014	180,159,469	184,752,951	184,883,833	184,752,485	184,705,503
12/31/2015	177,284,933	181,084,061	181,187,579	181,662,577	
12/31/2016	228,360,717	233,053,109	233,235,102		
12/31/2017	241,691,033	247,462,565			
12/31/2018	232,734,585				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2007	1.025	0.998	0.999	1.000
12/31/2008	1.019	1.000	1.000	1.000
12/31/2009	1.015	1.002	1.001	1.000
12/31/2010	1.019	1.001	0.999	1.001
12/31/2011	1.016	1.001	1.000	1.000
12/31/2012	1.020	1.000	1.000	1.001
12/31/2013	1.024	1.003	1.002	1.000
12/31/2014	1.025	1.001	0.999	1.000
12/31/2015	1.021	1.001	1.003	
12/31/2016	1.021	1.001		
12/31/2017	1.024			
Average Factor: ( Best 3 of 5 )	1.023	1.001	1.001	1.000

## Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.000
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.000
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.001
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.002
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.025

## INSURANCE SERVICES OFFICE, INC.

Physical Damage Loss Development  
Trucks, Tractors and Trailers - Other than Collision  
Multistate  
Paid Losses

Accident Year <u>Ending</u>	<u>75 Months</u>	<u>87 Months</u>	<u>99 Months</u>	<u>111 Months</u>	<u>123 Months</u>
12/31/2007	144,728,816	144,666,655	144,653,099	144,565,639	144,586,432
12/31/2008	174,380,600	174,348,870	174,354,858	174,440,876	174,441,339
12/31/2009	143,919,576	143,918,677	143,934,901	144,011,838	144,001,352
12/31/2010	166,799,002	166,855,302	166,847,170	166,844,994	
12/31/2011	189,436,240	189,425,268	189,412,395		
12/31/2012	213,680,136	213,746,174			
12/31/2013	175,578,683				

## Ratios

Accident Year <u>Ending</u>	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>	<u>123:111</u>
12/31/2007	1.001	1.000	1.000	0.999	1.000
12/31/2008	1.001	1.000	1.000	1.000	1.000
12/31/2009	0.999	1.000	1.000	1.001	1.000
12/31/2010	1.001	1.000	1.000	1.000	
12/31/2011	1.000	1.000	1.000		
12/31/2012	1.000	1.000			
12/31/2013	1.000				
Average Factor: ( Best 3 of 5 )	1.000	1.000	1.000	1.000	1.000

## Summary of Factors

123 to Ult:	(1.000)	=	1.000
111 to Ult:	(123:111) (123:Ult)	=	1.000
99 to Ult:	(111:99) (123:111) (123:Ult)	=	1.000
87 to Ult:	(99:87) (111:99) (123:111) (123:Ult)	=	1.000
75 to Ult:	(87:75) (99:87) (111:99) (123:111) (123:Ult)	=	1.000

## INSURANCE SERVICES OFFICE, INC.

Physical Damage Loss Development  
Trucks, Tractors and Trailers - Collision  
Michigan  
Paid Losses

Accident Year <u>Ending</u>	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>
12/31/2007	11,133,988	11,425,559	11,418,862
12/31/2008	12,927,173	13,126,301	13,132,673
12/31/2009	9,335,098	9,371,110	9,356,710
12/31/2010	10,311,399	10,536,897	10,549,128
12/31/2011	12,547,522	12,757,636	12,753,981
12/31/2012	11,698,402	11,749,598	11,748,604
12/31/2013	13,871,511	14,068,213	14,050,096
12/31/2014	16,376,097	16,324,409	16,325,967
12/31/2015	16,288,033	16,340,054	16,281,843
12/31/2016	16,417,606	16,600,536	16,594,381
12/31/2017	17,397,605	17,548,723	
12/31/2018	19,368,304		

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>
12/31/2007	1.026	0.999
12/31/2008	1.015	1.000
12/31/2009	1.004	0.998
12/31/2010	1.022	1.001
12/31/2011	1.017	1.000
12/31/2012	1.004	1.000
12/31/2013	1.014	0.999
12/31/2014	0.997	1.000
12/31/2015	1.003	0.996
12/31/2016	1.011	1.000
12/31/2017	1.009	
Average Factor: (A) State		
( Best 3 of 5 )	1.008	1.000
(B) Multistate		
(2) Credibility	0.974	0.994
(3) Credibility Weighted Factors	1.000	1.000
	1.008	1.000

Summary of Factors

39 to Ultimate **	0.999
27 to Ultimate	0.999
15 to Ultimate	1.007
** Multistate factors	



## INSURANCE SERVICES OFFICE, INC.

Physical Damage Loss Development  
Private Passenger Types - Other than Collision  
Multistate  
Paid Losses

Accident Year <u>Ending</u>	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>
12/31/2007	46,557,889	47,282,510	47,128,139	47,159,440	47,281,418
12/31/2008	55,276,971	55,712,839	55,567,520	55,552,069	55,542,828
12/31/2009	50,559,306	50,563,933	50,561,876	50,495,364	50,488,170
12/31/2010	55,049,683	55,135,618	55,121,654	55,118,331	55,135,813
12/31/2011	71,674,738	71,778,446	71,651,334	71,690,455	71,692,691
12/31/2012	79,520,364	78,693,615	78,754,369	78,787,194	78,807,770
12/31/2013	56,923,773	57,385,208	57,603,148	57,612,663	57,604,841
12/31/2014	59,183,291	60,015,446	60,101,420	60,044,399	60,082,113
12/31/2015	50,567,693	51,119,630	51,003,475	51,024,459	
12/31/2016	63,595,106	64,222,635	64,203,403		
12/31/2017	74,529,690	74,687,286			
12/31/2018	61,735,361				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2007	1.016	0.997	1.001	1.003
12/31/2008	1.008	0.997	1.000	1.000
12/31/2009	1.000	1.000	0.999	1.000
12/31/2010	1.002	1.000	1.000	1.000
12/31/2011	1.001	0.998	1.001	1.000
12/31/2012	0.990	1.001	1.000	1.000
12/31/2013	1.008	1.004	1.000	1.000
12/31/2014	1.014	1.001	0.999	1.001
12/31/2015	1.011	0.998	1.000	
12/31/2016	1.010	1.000		
12/31/2017	1.002			
Average Factor: ( Best 3 of 5 )	1.010	1.001	1.000	1.000

## Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.000
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.000
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.000
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.001
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.011

## INSURANCE SERVICES OFFICE, INC.

Physical Damage Loss Development  
 Private Passenger Types - Other than Collision  
 Multistate  
 Paid Losses

Accident Year Ending	<u>75 Months</u>	<u>87 Months</u>	<u>99 Months</u>	<u>111 Months</u>	<u>123 Months</u>
12/31/2007	47,213,496	47,211,461	47,210,385	47,209,023	47,223,478
12/31/2008	55,525,573	55,526,983	55,525,237	55,525,716	55,534,760
12/31/2009	50,489,215	50,489,359	50,492,986	50,498,949	50,495,252
12/31/2010	55,069,099	55,071,861	55,103,683	55,103,177	
12/31/2011	71,706,426	71,713,041	71,707,312		
12/31/2012	78,813,584	78,812,598			
12/31/2013	57,613,295				

## Ratios

Accident Year Ending	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>	<u>123:111</u>
12/31/2007	0.999	1.000	1.000	1.000	1.000
12/31/2008	1.000	1.000	1.000	1.000	1.000
12/31/2009	1.000	1.000	1.000	1.000	1.000
12/31/2010	0.999	1.000	1.001	1.000	
12/31/2011	1.000	1.000	1.000		
12/31/2012	1.000	1.000			
12/31/2013	1.000				
Average Factor: ( Best 3 of 5 )	1.000	1.000	1.000	1.000	1.000

## Summary of Factors

123 to Ult:	(1.000)	=	1.000
111 to Ult:	(123:111) (123:Ult)	=	1.000
99 to Ult:	(111:99) (123:111) (123:Ult)	=	1.000
87 to Ult:	(99:87) (111:99) (123:111) (123:Ult)	=	1.000
75 to Ult:	(87:75) (99:87) (111:99) (123:111) (123:Ult)	=	1.000

## INSURANCE SERVICES OFFICE, INC.

Physical Damage Loss Development  
Private Passenger Types - Collision  
Michigan  
Paid Losses

Accident Year <u>Ending</u>	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>
12/31/2007	6,907,252	6,932,971	6,941,648
12/31/2008	6,536,046	6,526,399	6,519,313
12/31/2009	6,411,696	6,479,442	6,477,942
12/31/2010	7,087,645	7,072,193	7,043,084
12/31/2011	7,270,350	7,349,176	7,348,956
12/31/2012	7,354,122	7,402,368	7,402,339
12/31/2013	8,483,482	8,439,948	8,442,320
12/31/2014	8,314,576	8,322,561	8,319,756
12/31/2015	8,938,645	8,940,179	8,952,104
12/31/2016	9,535,524	9,495,764	9,476,772
12/31/2017	7,703,934	7,703,127	
12/31/2018	8,099,797		

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>
12/31/2007	1.004	1.001
12/31/2008	0.999	0.999
12/31/2009	1.011	1.000
12/31/2010	0.998	0.996
12/31/2011	1.011	1.000
12/31/2012	1.007	1.000
12/31/2013	0.995	1.000
12/31/2014	1.001	1.000
12/31/2015	1.000	1.001
12/31/2016	0.996	0.998
12/31/2017	1.000	
Average Factor: (A) State		
( Best 3 of 5 )	0.999	1.000
(B) Multistate		
(2) Credibility	0.953	0.994
(3) Credibility Weighted Factors	1.000	1.000
	0.999	1.000

Summary of Factors

39 to Ultimate **	0.999
27 to Ultimate	0.999
15 to Ultimate	0.998
** Multistate factors	

## INSURANCE SERVICES OFFICE, INC.

(1)	<b>Public Automobiles Liability</b>	Differentials to Base Loss Cost CSL Liab	PIP	PPI
	Taxis & Limos	6.20	6.78	2.74
	School and Church Buses	0.55	0.82	0.60
	Other Buses	3.80	7.90	2.04
	Van Pools	1.50	0.90	0.92
(2)	<b>Public Automobiles Physical Damage</b>			
	Taxis, Limos and Van Pools			
	Other Than Collision:	1.02		
	Collision	1.27		
	School, Church, and Other Buses			
	Other Than Collision:	0.70		
	Collision	0.65		
(3)	<b>PIP Relativities</b>			
	Class of Business			
	TTT Covered by Workers' Compensation	0.650		
	PPT principally operated by employees	0.650		
	T&L Other Than Owner Operated	0.700		
	Van Pool Furnished by Employer	0.445		
(4)	<b>Specified Cause of Loss Relativity</b>	0.792		
	This factor is now being used for Private Passenger Types as well as Trucks, Tractors and Trailers.			
(5)	<b>Liability Interstate Relativities</b>			
	Class of Business			
	TTT	2.000		
	Publics	2.000		
(6)	<b>PIP Interstate Relativities</b>			
	Class of Business			
	TTT	0.650		
	School and Church Buses	0.500		
	Other Buses	0.500		
	Van Pools	0.610		
(7)	<b>PPI Interstate Relativities</b>			
	Class of Business			
	TTT	0.500		
	School and Church Buses	0.500		
	Other Buses	0.500		
	Van Pools	0.920		
(8)	The loss cost for hired autos is set forth in Section D. It applies in all territories and is calculated as 0.15% of the statewide \$100,000 Combined Single Limit average loss cost for all Trucks, Tractors, & Trailers.			

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AUTOMOBILE  
LOSS COST PAGES**

**MICHIGAN (21)  
TERRITORY 111**

LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Not Covered By Workers' Comp.	Covered By Workers' Comp.
\$ 294	\$ 20	\$ 275	\$ 179
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 588	\$ 10		\$ 179
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 268	\$ 7	\$ 369	\$ 240
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
\$ 1823	\$ 55	Owner Operated	Other Than Owner Operated
		\$ 1865	\$ 1306
– SCHOOL AND CHURCH BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 162	\$ 12	\$ 226	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 324	\$ 6	\$ 113	
– OTHER BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 1117	\$ 41	\$ 2173	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 2234	\$ 21	\$ 1087	
– VAN POOLS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Employer Furnished	All Other
\$ 441	\$ 18	\$ 110	\$ 248
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 882	\$ 9		\$ 109
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
\$ 330	\$ 8	All Autos	
		\$ 134	
<ul style="list-style-type: none"><li>For liability increased limits factors, refer to Rule <b>100</b>.</li><li>For liability fleet factors, refer to Rules <b>22</b>. and <b>39</b>.</li><li>Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>49</b>.</li></ul>			

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DIVISION ONE  
AUTOMOBILE  
LOSS COST PAGES

LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Not Covered By Workers' Comp.	Covered By Workers' Comp.
\$ 201	\$ 22	\$ 152	\$ 99
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 402	\$ 11		\$ 99
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 190	\$ 3	\$ 336	\$ 218
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
\$ 1246	\$ 60	Owner Operated \$ 1031	Other Than Owner Operated \$ 722
– SCHOOL AND CHURCH BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 111	\$ 13	\$ 125	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 222	\$ 7	\$ 63	
– OTHER BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 764	\$ 45	\$ 1201	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 1528	\$ 23	\$ 601	
– VAN POOLS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Employer Furnished \$ 61	All Other \$ 137
\$ 302	\$ 20		
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 604	\$ 10		\$ 60
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
\$ 245	\$ 11	All Autos \$ 74	
<ul style="list-style-type: none"><li>For liability increased limits factors, refer to Rule 100.</li><li>For liability fleet factors, refer to Rules 22. and 39.</li><li>Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule 49.</li></ul>			

**COMMERCIAL LINES MANUAL  
DIVISION ONE  
AUTOMOBILE  
LOSS COST PAGES**

**MICHIGAN (21)  
TERRITORY 113**

LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
		Not Covered By Workers' Comp.	Covered By Workers' Comp.
• Intrastate \$ 271	\$ 21	\$ 387	\$ 252
• Interstate \$ 542	\$ 11		All Autos \$ 252
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 261	\$ 5	\$ 811	\$ 527
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
\$ 1680	\$ 58	Owner Operated \$ 2624	Other Than Owner Operated \$ 1837
– SCHOOL AND CHURCH BUSES			
• Intrastate \$ 149	\$ 13	All Autos \$ 317	
• Interstate \$ 298	\$ 7	\$ 159	
– OTHER BUSES			
• Intrastate \$ 1030	\$ 43	All Autos \$ 3057	
• Interstate \$ 2060	\$ 22	\$ 1529	
– VAN POOLS			
• Intrastate \$ 407	\$ 19	Employer Furnished \$ 155	All Other \$ 348
• Interstate \$ 814	\$ 10		All Autos \$ 154
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
\$ 305	\$ 8	All Autos \$ 150	
<ul style="list-style-type: none"><li>• For liability increased limits factors, refer to Rule <b>100</b>.</li><li>• For liability fleet factors, refer to Rules <b>22</b>. and <b>39</b>.</li><li>• Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>49</b>.</li></ul>			

COMMERCIAL LINES MANUAL  
DIVISION ONE  
AUTOMOBILE  
LOSS COST PAGES

LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
		Not Covered By Workers' Comp.	Covered By Workers' Comp.
• Intrastate \$ 168	\$ 22	\$ 84	\$ 55
• Interstate \$ 336	\$ 11		All Autos \$ 55
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 117	\$ 6	\$ 238	\$ 155
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
\$ 1042	\$ 60	Owner Operated \$ 570	Other Than Owner Operated \$ 399
– SCHOOL AND CHURCH BUSES			
• Intrastate \$ 92	\$ 13	All Autos \$ 69	
• Interstate \$ 184	\$ 7	\$ 35	
– OTHER BUSES			
• Intrastate \$ 638	\$ 45	All Autos \$ 664	
• Interstate \$ 1276	\$ 23	\$ 332	
– VAN POOLS			
• Intrastate \$ 252	\$ 20	Employer Furnished \$ 34	All Other \$ 76
• Interstate \$ 504	\$ 10		All Autos \$ 34
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
\$ 180	\$ 7	All Autos \$ 41	
<ul style="list-style-type: none"><li>• For liability increased limits factors, refer to Rule <b>100</b>.</li><li>• For liability fleet factors, refer to Rules <b>22</b>. and <b>39</b>.</li><li>• Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>49</b>.</li></ul>			



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AUTOMOBILE  
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**MICHIGAN (21)  
TERRITORY 118**

LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION		
Limit Of Liab. \$100,000		Basic Limits		
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS				
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Not Covered By Workers' Comp.	Covered By Workers' Comp.	
\$ 189	\$ 23	\$ 105	\$ 68	
<ul style="list-style-type: none"><li>Interstate</li></ul>				All Autos
\$ 378	\$ 12			\$ 68
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS				
		Not Principally Operated By Employees	Principally Operated By Employees	
\$ 170	\$ 5	\$ 296	\$ 192	
RULE 40. PUBLIC AUTO CLASSIFICATIONS				
– TAXICABS AND LIMOUSINES				
\$ 1172	\$ 63	Owner Operated	Other Than Owner Operated	
		\$ 712	\$ 498	
– SCHOOL AND CHURCH BUSES				
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos		
\$ 104	\$ 14	\$ 86		
<ul style="list-style-type: none"><li>Interstate</li></ul>				
\$ 208	\$ 7	\$ 43		
– OTHER BUSES				
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos		
\$ 718	\$ 47	\$ 830		
<ul style="list-style-type: none"><li>Interstate</li></ul>				
\$ 1436	\$ 24	\$ 415		
– VAN POOLS				
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Employer Furnished	All Other	
\$ 284	\$ 21	\$ 42	\$ 95	
<ul style="list-style-type: none"><li>Interstate</li></ul>				All Autos
\$ 568	\$ 11			\$ 41
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT				
\$ 237	\$ 6		All Autos	
			\$ 51	
<ul style="list-style-type: none"><li>For liability increased limits factors, refer to Rule 100.</li><li>For liability fleet factors, refer to Rules 22. and 39.</li><li>Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule 49.</li></ul>				

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DIVISION ONE  
AUTOMOBILE  
LOSS COST PAGES

LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Not Covered By Workers' Comp.	Covered By Workers' Comp.
\$ 163	\$ 18	\$ 157	\$ 102
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 326	\$ 9		\$ 102
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 173	\$ 9	\$ 146	\$ 95
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
\$ 1011	\$ 49	Owner Operated	Other Than Owner Operated
		\$ 1064	\$ 745
– SCHOOL AND CHURCH BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 90	\$ 11	\$ 129	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 180	\$ 6	\$ 65	
– OTHER BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 619	\$ 37	\$ 1240	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 1238	\$ 19	\$ 620	
– VAN POOLS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Employer Furnished	All Other
\$ 245	\$ 17	\$ 63	\$ 141
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 490	\$ 8		\$ 62
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
		All Autos	
\$ 208	\$ 5	\$ 76	
<ul style="list-style-type: none"><li>For liability increased limits factors, refer to Rule 100.</li><li>For liability fleet factors, refer to Rules 22. and 39.</li><li>Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule 49.</li></ul>			

**COMMERCIAL LINES MANUAL  
DIVISION ONE  
AUTOMOBILE  
LOSS COST PAGES**

**MICHIGAN (21)  
TERRITORY 123**

LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
		Not Covered By Workers' Comp.	Covered By Workers' Comp.
• Intrastate \$ 164	\$ 19	\$ 106	\$ 69
• Interstate \$ 328	\$ 10		All Autos \$ 69
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 114	\$ 5	\$ 186	\$ 121
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
\$ 1017	\$ 52	Owner Operated \$ 719	Other Than Owner Operated \$ 503
– SCHOOL AND CHURCH BUSES			
• Intrastate \$ 90	\$ 11	All Autos \$ 87	
• Interstate \$ 180	\$ 6	\$ 44	
– OTHER BUSES			
• Intrastate \$ 623	\$ 39	All Autos \$ 837	
• Interstate \$ 1246	\$ 20	\$ 419	
– VAN POOLS			
• Intrastate \$ 246	\$ 17	Employer Furnished \$ 42	All Other \$ 95
• Interstate \$ 492	\$ 9		All Autos \$ 42
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
\$ 194	\$ 8	All Autos \$ 51	
<ul style="list-style-type: none"><li>• For liability increased limits factors, refer to Rule <b>100</b>.</li><li>• For liability fleet factors, refer to Rules <b>22</b>. and <b>39</b>.</li><li>• Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>49</b>.</li></ul>			

COMMERCIAL LINES MANUAL  
DIVISION ONE  
AUTOMOBILE  
LOSS COST PAGES

LIABILITY	PROPERTY PROTECTION INSURANCE		PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000			Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS				
			Not Covered By Workers' Comp.	Covered By Workers' Comp.
• Intrastate				
\$ 196	\$ 16		\$ 126	\$ 82
• Interstate				
\$ 392	\$ 8			All Autos \$ 82
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS				
			Not Principally Operated By Employees	Principally Operated By Employees
\$ 131	\$ 3		\$ 213	\$ 138
RULE 40. PUBLIC AUTO CLASSIFICATIONS				
– TAXICABS AND LIMOUSINES				
			Owner Operated	Other Than Owner Operated
\$ 1215	\$ 44		\$ 854	\$ 598
– SCHOOL AND CHURCH BUSES				
• Intrastate			All Autos	
\$ 108	\$ 10		\$ 103	
• Interstate				
\$ 216	\$ 5		\$ 52	
– OTHER BUSES				
• Intrastate			All Autos	
\$ 745	\$ 33		\$ 995	
• Interstate				
\$ 1490	\$ 17		\$ 498	
– VAN POOLS				
• Intrastate			Employer Furnished	All Other
\$ 294	\$ 15		\$ 50	\$ 113
• Interstate				
\$ 588	\$ 7			All Autos \$ 50
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT				
			All Autos	
\$ 237	\$ 5		\$ 61	
<ul style="list-style-type: none"><li>• For liability increased limits factors, refer to Rule <b>100</b>.</li><li>• For liability fleet factors, refer to Rules <b>22</b>. and <b>39</b>.</li><li>• Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>49</b>.</li></ul>				

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**MICHIGAN (21)  
TERRITORY 125**

LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Not Covered By Workers' Comp.	Covered By Workers' Comp.
\$ 132	\$ 12	\$ 72	\$ 47
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 264	\$ 6		\$ 47
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 178	\$ 3	\$ 122	\$ 79
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
\$ 818	\$ 33	Owner Operated	Other Than Owner Operated
		\$ 488	\$ 342
– SCHOOL AND CHURCH BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 73	\$ 7	\$ 59	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 146	\$ 4	\$ 30	
– OTHER BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 502	\$ 24	\$ 569	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 1004	\$ 12	\$ 285	
– VAN POOLS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Employer Furnished	All Other
\$ 198	\$ 11	\$ 29	\$ 65
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 396	\$ 6		\$ 29
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
\$ 175	\$ 4	All Autos	
		\$ 35	
<ul style="list-style-type: none"><li>For liability increased limits factors, refer to Rule 100.</li><li>For liability fleet factors, refer to Rules 22. and 39.</li><li>Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule 49.</li></ul>			

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LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Not Covered By Workers' Comp.	Covered By Workers' Comp.
\$ 123	\$ 14	\$ 89	\$ 58
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 246	\$ 7		\$ 58
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 120	\$ 3	\$ 214	\$ 139
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
		Owner Operated	Other Than Owner Operated
\$ 763	\$ 38	\$ 603	\$ 422
– SCHOOL AND CHURCH BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 68	\$ 8	\$ 73	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 136	\$ 4	\$ 37	
– OTHER BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 467	\$ 29	\$ 703	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 934	\$ 15	\$ 352	
– VAN POOLS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Employer Furnished	All Other
\$ 185	\$ 13	\$ 36	\$ 80
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 370	\$ 6		\$ 35
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
		All Autos	
\$ 195	\$ 5	\$ 43	
<ul style="list-style-type: none"><li>For liability increased limits factors, refer to Rule 100.</li><li>For liability fleet factors, refer to Rules 22. and 39.</li><li>Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule 49.</li></ul>			

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**MICHIGAN (21)  
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LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
		Not Covered By Workers' Comp.	Covered By Workers' Comp.
• Intrastate \$ 127	\$ 17	\$ 69	\$ 45
• Interstate \$ 254	\$ 9		All Autos \$ 45
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 124	\$ 4	\$ 153	\$ 99
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
		Owner Operated	Other Than Owner Operated
\$ 787	\$ 47	\$ 468	\$ 328
– SCHOOL AND CHURCH BUSES			
• Intrastate \$ 70	\$ 10	All Autos \$ 57	
• Interstate \$ 140	\$ 5	\$ 29	
– OTHER BUSES			
• Intrastate \$ 483	\$ 35	All Autos \$ 545	
• Interstate \$ 966	\$ 18	\$ 273	
– VAN POOLS			
• Intrastate \$ 191	\$ 16	Employer Furnished \$ 28	All Other \$ 62
• Interstate \$ 382	\$ 8		All Autos \$ 27
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
\$ 170	\$ 4	All Autos \$ 34	
<ul style="list-style-type: none"><li>• For liability increased limits factors, refer to Rule <b>100</b>.</li><li>• For liability fleet factors, refer to Rules <b>22</b>. and <b>39</b>.</li><li>• Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>49</b>.</li></ul>			

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LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Not Covered By Workers' Comp.	Covered By Workers' Comp.
\$ 171	\$ 10	\$ 119	\$ 77
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 342	\$ 5		\$ 77
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 178	\$ 3	\$ 233	\$ 151
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
\$ 1060	\$ 27	Owner Operated \$ 807	Other Than Owner Operated \$ 565
– SCHOOL AND CHURCH BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 94	\$ 6	\$ 98	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 188	\$ 3	\$ 49	
– OTHER BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 650	\$ 20	\$ 940	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 1300	\$ 10	\$ 470	
– VAN POOLS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Employer Furnished \$ 48	All Other \$ 107
\$ 257	\$ 9		
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 514	\$ 5		\$ 47
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
		All Autos	
\$ 212	\$ 4	\$ 58	
<ul style="list-style-type: none"><li>For liability increased limits factors, refer to Rule 100.</li><li>For liability fleet factors, refer to Rules 22. and 39.</li><li>Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule 49.</li></ul>			



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**MICHIGAN (21)  
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LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Not Covered By Workers' Comp.	Covered By Workers' Comp.
\$ 147	\$ 14	\$ 82	\$ 53
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 294	\$ 7		\$ 53
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 158	\$ 3	\$ 162	\$ 105
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
\$ 911	\$ 38	Owner Operated	Other Than Owner Operated
		\$ 556	\$ 389
– SCHOOL AND CHURCH BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 81	\$ 8	\$ 67	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 162	\$ 4	\$ 34	
– OTHER BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 559	\$ 29	\$ 648	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 1118	\$ 15	\$ 324	
– VAN POOLS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Employer Furnished	All Other
\$ 221	\$ 13	\$ 33	\$ 74
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 442	\$ 6		\$ 32
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
\$ 201	\$ 5	All Autos	
		\$ 40	
<ul style="list-style-type: none"><li>For liability increased limits factors, refer to Rule <b>100</b>.</li><li>For liability fleet factors, refer to Rules <b>22</b>. and <b>39</b>.</li><li>Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>49</b>.</li></ul>			

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LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Not Covered By Workers' Comp.	Covered By Workers' Comp.
\$ 237	\$ 17	\$ 147	\$ 96
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 474	\$ 9		\$ 96
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 189	\$ 5	\$ 215	\$ 140
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
\$ 1469	\$ 47	Owner Operated	Other Than Owner Operated
		\$ 997	\$ 698
– SCHOOL AND CHURCH BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 130	\$ 10	\$ 121	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 260	\$ 5	\$ 61	
– OTHER BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 901	\$ 35	\$ 1161	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 1802	\$ 18	\$ 581	
– VAN POOLS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Employer Furnished	All Other
\$ 356	\$ 16	\$ 59	\$ 132
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 712	\$ 8		\$ 59
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
\$ 277	\$ 6	All Autos	
		\$ 71	
<ul style="list-style-type: none"><li>For liability increased limits factors, refer to Rule 100.</li><li>For liability fleet factors, refer to Rules 22. and 39.</li><li>Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule 49.</li></ul>			

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TERRITORY 133**

LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
		Not Covered By Workers' Comp.	Covered By Workers' Comp.
• Intrastate \$ 254	\$ 16	\$ 144	\$ 94
• Interstate \$ 508	\$ 8		All Autos \$ 94
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 226	\$ 9	\$ 286	\$ 186
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
\$ 1575	\$ 44	Owner Operated \$ 976	Other Than Owner Operated \$ 683
– SCHOOL AND CHURCH BUSES			
• Intrastate \$ 140	\$ 10	All Autos \$ 118	
• Interstate \$ 280	\$ 5	\$ 59	
– OTHER BUSES			
• Intrastate \$ 965	\$ 33	All Autos \$ 1138	
• Interstate \$ 1930	\$ 17	\$ 569	
– VAN POOLS			
• Intrastate \$ 381	\$ 15	Employer Furnished \$ 58	All Other \$ 130
• Interstate \$ 762	\$ 7		All Autos \$ 57
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
\$ 281	\$ 7	All Autos \$ 70	
<ul style="list-style-type: none"><li>• For liability increased limits factors, refer to Rule <b>100</b>.</li><li>• For liability fleet factors, refer to Rules <b>22</b>. and <b>39</b>.</li><li>• Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>49</b>.</li></ul>			

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LIABILITY	PROPERTY PROTECTION INSURANCE	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000		Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Not Covered By Workers' Comp.	Covered By Workers' Comp.
\$ 216	\$ 16	\$ 89	\$ 58
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 432	\$ 8		\$ 58
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS			
		Not Principally Operated By Employees	Principally Operated By Employees
\$ 169	\$ 5	\$ 257	\$ 167
RULE 40. PUBLIC AUTO CLASSIFICATIONS			
– TAXICABS AND LIMOUSINES			
\$ 1339	\$ 44	Owner Operated	Other Than Owner Operated
		\$ 603	\$ 422
– SCHOOL AND CHURCH BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 119	\$ 10	\$ 73	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 238	\$ 5	\$ 37	
– OTHER BUSES			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		All Autos	
\$ 821	\$ 33	\$ 703	
<ul style="list-style-type: none"><li>Interstate</li></ul>			
\$ 1642	\$ 17	\$ 352	
– VAN POOLS			
<ul style="list-style-type: none"><li>Intrastate</li></ul>		Employer Furnished	All Other
\$ 324	\$ 15	\$ 36	\$ 80
<ul style="list-style-type: none"><li>Interstate</li></ul>			All Autos
\$ 648	\$ 7		\$ 35
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT			
\$ 243	\$ 6	All Autos	
		\$ 43	
<ul style="list-style-type: none"><li>For liability increased limits factors, refer to Rule 100.</li><li>For liability fleet factors, refer to Rules 22. and 39.</li><li>Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule 49.</li></ul>			

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**MICHIGAN (21)  
TERRITORY 135**

LIABILITY	PROPERTY PROTECTION INSURANCE		PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000			Basic Limits	
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS				
			Not Covered By Workers' Comp.	Covered By Workers' Comp.
• Intrastate				
\$ 235	\$ 19		\$ 178	\$ 116
• Interstate				All Autos
\$ 470	\$ 10			\$ 116
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS				
			Not Principally Operated By Employees	Principally Operated By Employees
\$ 155	\$ 3		\$ 237	\$ 154
RULE 40. PUBLIC AUTO CLASSIFICATIONS				
– TAXICABS AND LIMOUSINES				
			Owner Operated	Other Than Owner Operated
\$ 1457	\$ 52		\$ 1207	\$ 845
– SCHOOL AND CHURCH BUSES				
• Intrastate			All Autos	
\$ 129	\$ 11		\$ 146	
• Interstate				
\$ 258	\$ 6		\$ 73	
– OTHER BUSES				
• Intrastate			All Autos	
\$ 893	\$ 39		\$ 1406	
• Interstate				
\$ 1786	\$ 20		\$ 703	
– VAN POOLS				
• Intrastate			Employer Furnished	All Other
\$ 353	\$ 17		\$ 71	\$ 160
• Interstate				All Autos
\$ 706	\$ 9			\$ 71
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT				
			All Autos	
\$ 264	\$ 7		\$ 87	
<ul style="list-style-type: none"><li>• For liability increased limits factors, refer to Rule <b>100</b>.</li><li>• For liability fleet factors, refer to Rules <b>22</b>. and <b>39</b>.</li><li>• Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>49</b>.</li></ul>				

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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 129	\$ 163	\$ 316
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 146	\$ 184	\$ 572
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 132	\$ 166	\$ 401
– SCHOOL AND CHURCH BUSES			
	\$ 90	\$ 114	\$ 205
– OTHER BUSES			
	\$ 90	\$ 114	\$ 205
– VAN POOLS			
	\$ 132	\$ 166	\$ 401
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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**MICHIGAN (21)  
TERRITORY 112**

<b>PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>Comp.</b>	<b>\$500 Ded. Coll.</b>
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 114	\$ 144	\$ 299
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 104	\$ 131	\$ 634
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 116	\$ 147	\$ 380
– SCHOOL AND CHURCH BUSES			
	\$ 80	\$ 101	\$ 194
– OTHER BUSES			
	\$ 80	\$ 101	\$ 194
– VAN POOLS			
	\$ 116	\$ 147	\$ 380
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 135	\$ 171	\$ 369
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 116	\$ 146	\$ 739
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 138	\$ 174	\$ 469
– SCHOOL AND CHURCH BUSES			
	\$ 95	\$ 120	\$ 240
– OTHER BUSES			
	\$ 95	\$ 120	\$ 240
– VAN POOLS			
	\$ 138	\$ 174	\$ 469
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			



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**MICHIGAN (21)  
TERRITORY 117**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 80	\$ 101	\$ 299
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 77	\$ 97	\$ 492
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 82	\$ 103	\$ 380
– SCHOOL AND CHURCH BUSES			
	\$ 56	\$ 71	\$ 194
– OTHER BUSES			
	\$ 56	\$ 71	\$ 194
– VAN POOLS			
	\$ 82	\$ 103	\$ 380
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 88	\$ 111	\$ 229
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 68	\$ 86	\$ 486
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 90	\$ 113	\$ 291
– SCHOOL AND CHURCH BUSES			
	\$ 62	\$ 78	\$ 149
– OTHER BUSES			
	\$ 62	\$ 78	\$ 149
– VAN POOLS			
	\$ 90	\$ 113	\$ 291
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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**MICHIGAN (21)  
TERRITORY 119**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 67	\$ 84	\$ 259
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 70	\$ 89	\$ 425
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 68	\$ 86	\$ 329
– SCHOOL AND CHURCH BUSES			
	\$ 47	\$ 59	\$ 168
– OTHER BUSES			
	\$ 47	\$ 59	\$ 168
– VAN POOLS			
	\$ 68	\$ 86	\$ 329
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 87	\$ 110	\$ 302
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 86	\$ 108	\$ 409
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 89	\$ 112	\$ 384
– SCHOOL AND CHURCH BUSES			
	\$ 61	\$ 77	\$ 196
– OTHER BUSES			
	\$ 61	\$ 77	\$ 196
– VAN POOLS			
	\$ 89	\$ 112	\$ 384
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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**MICHIGAN (21)  
TERRITORY 124**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 86	\$ 109	\$ 290
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 75	\$ 95	\$ 479
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 88	\$ 111	\$ 368
– SCHOOL AND CHURCH BUSES			
	\$ 60	\$ 76	\$ 189
– OTHER BUSES			
	\$ 60	\$ 76	\$ 189
– VAN POOLS			
	\$ 88	\$ 111	\$ 368
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 135	\$ 170	\$ 256
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 138	\$ 174	\$ 365
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 138	\$ 173	\$ 325
– SCHOOL AND CHURCH BUSES			
	\$ 95	\$ 119	\$ 166
– OTHER BUSES			
	\$ 95	\$ 119	\$ 166
– VAN POOLS			
	\$ 138	\$ 173	\$ 325
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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**MICHIGAN (21)  
TERRITORY 126**

<b>PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>Comp.</b>	<b>\$500 Ded. Coll.</b>
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 95	\$ 120	\$ 240
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 122	\$ 154	\$ 407
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 97	\$ 122	\$ 305
– SCHOOL AND CHURCH BUSES			
	\$ 67	\$ 84	\$ 156
– OTHER BUSES			
	\$ 67	\$ 84	\$ 156
– VAN POOLS			
	\$ 97	\$ 122	\$ 305
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 86	\$ 108	\$ 264
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 86	\$ 109	\$ 404
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 88	\$ 110	\$ 335
– SCHOOL AND CHURCH BUSES			
	\$ 60	\$ 76	\$ 172
– OTHER BUSES			
	\$ 60	\$ 76	\$ 172
– VAN POOLS			
	\$ 88	\$ 110	\$ 335
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			



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**MICHIGAN (21)  
TERRITORY 130**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 77	\$ 97	\$ 256
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 74	\$ 93	\$ 464
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 79	\$ 99	\$ 325
– SCHOOL AND CHURCH BUSES			
	\$ 54	\$ 68	\$ 166
– OTHER BUSES			
	\$ 54	\$ 68	\$ 166
– VAN POOLS			
	\$ 79	\$ 99	\$ 325
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 62	\$ 78	\$ 243
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 63	\$ 80	\$ 297
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 63	\$ 80	\$ 309
– SCHOOL AND CHURCH BUSES			
	\$ 43	\$ 55	\$ 158
– OTHER BUSES			
	\$ 43	\$ 55	\$ 158
– VAN POOLS			
	\$ 63	\$ 80	\$ 309
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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**MICHIGAN (21)  
TERRITORY 132**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>Comp.</b>	<b>\$500 Ded. Coll.</b>
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 101	\$ 128	\$ 303
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 82	\$ 103	\$ 628
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 103	\$ 131	\$ 385
– SCHOOL AND CHURCH BUSES			
	\$ 71	\$ 90	\$ 197
– OTHER BUSES			
	\$ 71	\$ 90	\$ 197
– VAN POOLS			
	\$ 103	\$ 131	\$ 385
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 87	\$ 110	\$ 313
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 66	\$ 83	\$ 563
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 89	\$ 112	\$ 398
– SCHOOL AND CHURCH BUSES			
	\$ 61	\$ 77	\$ 203
– OTHER BUSES			
	\$ 61	\$ 77	\$ 203
– VAN POOLS			
	\$ 89	\$ 112	\$ 398
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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**MICHIGAN (21)  
TERRITORY 134**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>Comp.</b>	<b>\$500 Ded. Coll.</b>
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 85	\$ 107	\$ 310
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 57	\$ 72	\$ 415
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 87	\$ 109	\$ 394
– SCHOOL AND CHURCH BUSES			
	\$ 60	\$ 75	\$ 202
– OTHER BUSES			
	\$ 60	\$ 75	\$ 202
– VAN POOLS			
	\$ 87	\$ 109	\$ 394
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 86	\$ 109	\$ 358
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 67	\$ 85	\$ 564
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 88	\$ 111	\$ 455
– SCHOOL AND CHURCH BUSES			
	\$ 60	\$ 76	\$ 233
– OTHER BUSES			
	\$ 60	\$ 76	\$ 233
– VAN POOLS			
	\$ 88	\$ 111	\$ 455
<ul style="list-style-type: none"> <li>• For physical damage fleet factors, refer to Rules <b>22.</b> and <b>39.</b></li> <li>• For additional coverages, refer to the Additional Coverages Table in Rules <b>23.</b> and <b>40.</b></li> <li>• For Deductible factors, refer to Rule <b>98.</b></li> <li>• For Original Cost New and Age Group factors, refer to Rule <b>101.</b></li> <li>• For Stated Amount factors, refer to Rule <b>101.</b></li> <li>• For Limited and Broadened Collision, refer to Rule <b>101.</b></li> </ul>			

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**90. HIRED AUTOS**

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<b>Cost Of Hire Basis – All Territories Liability Base Loss Cost</b>
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\$ <u>0.300</u> <del>.27</del>
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**Table 90.B.3.b.(LC) Cost Of Hire Basis Liability Loss Cost**

## Supplementary Information – Michigan

### Introduction

This document provides additional information on the attached loss cost level experience review, including:

- A summary of recent trends in Liability claim costs
- A summary of significant factors used in the development of loss cost indications and a comparison to the factors used in the prior filing that underlie the loss costs currently in effect
- A discussion of the experience underlying the loss cost level evaluation, and how it compares to the prior review
- Issues related to Commercial Auto in Michigan

Statistical plan data reported to ISO is first processed through a system of rigorous automated data verification processes so that only data that would be valid is used for ratemaking. Subsequent to this initial data submission review, additional analyses involving an even more customized data review for this line was performed by staff. During these processes, various data records were excluded from the review, corrected or adjusted. Specifically, various reported exposure amounts have been adjusted prior to their use in the calculations. The ISO staff responsible for this loss cost review also reviewed the data for reasonableness.

### Trends in Liability Claim Costs

The table below shows the latest sixteen evaluations of 12-pt. paid claim cost trends.

#### Multistate Paid Claim Cost Trends

<u>Data Through</u>	<u>\$100,000 Bodily Injury</u>	<u>\$100,000 Property Damage</u>
03/31/2015	+1.5%	+3.3%
06/30/2015	+2.2%	+3.5%
09/30/2015	+1.9%	+3.7%
12/31/2015	+2.3%	+4.6%
03/31/2016	+2.9%	+4.8%
06/30/2016	+2.9%	+5.2%
09/30/2016	+2.6%	+5.5%
12/31/2016	+2.7%	+5.7%
03/31/2017	+2.7%	+5.7%
06/30/2017	+2.8%	+5.6%
09/30/2017	+3.0%	+5.4%
12/31/2017	+3.8%	+4.8%
03/31/2018	+4.2%	+4.5%
06/30/2018	+4.4%	+4.3%
09/30/2018	+5.1%	+4.2%
12/31/2018	+5.5%	+4.3%

ISO believes that bodily injury claim cost trends will primarily be driven by changes in the costs of providing medical care. At times, other factors serve to reduce (or exacerbate) the claim cost trends.



## Supplementary Information – Michigan

### Trends in Medical Care Costs

The table below shows the last twelve annual rates of change, based upon the CPI, for Medical Care and Hospital & Other Related Services, separately.

<u>Period</u>	<u>CPI – Medical Care Annual Rate of Change<sup>1</sup></u>	<u>CPI – Hospital &amp; Other Related Services Annual Rate of Change</u>
October 2007 - September 2008	3.2%	6.6%
October 2008 - September 2009	3.5%	6.6%
October 2009 - September 2010	3.4%	7.3%
October 2010 - September 2011	2.8%	4.9%
October 2011 - September 2012	4.1%	4.7%
October 2012 - September 2013	2.4%	5.4%
October 2013 - September 2014	2.0%	3.5%
October 2014 - September 2015	2.5%	3.3%
October 2015 - September 2016	4.9%	5.6%
October 2016 - September 2017	1.6%	4.3%
October 2017 - September 2018	1.7%	3.7%
October 2018 - September 2019	3.5%	2.1%

### Claim Frequencies

Historically, frequency trends for Commercial Auto liability have been quite variable, have differed between Trucks, Tractors, and Trailers (TTT) and Private Passenger Types (PPT) liability classes, and have often displayed cyclical patterns. As a result, an exponential curve of the form  $Y=A(B^X)$  does not fit the data well over the long term. To reflect these characteristics and the difficulty in predicting turning points and rates of change, frequency trend is being selected to be 0% for TTT and PPT for both the Bodily Injury and Property Damage coverages.

### Claim Counts

Claim counts are now being estimated from information on the individual loss records reported to ISO, rather than the claim counts that have been reported to ISO via the statistical plans. This is being done to address company inconsistencies in interpreting ISO's claim count reporting rules.

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<sup>1</sup> Annual Rate of Change for a particular year is calculated as the CPI index for September of that year divided by the same index for September for the previous year, minus one.

## Supplementary Information – Michigan

### Michigan Trends

#### **Trucks, Tractors & Trailers and Private Passenger Types Liability**

	Current Trends <u>Data through 12/31/2018</u>	Previous Trends <u>Data through 12/31/2017</u>
Michigan Claim Cost Trends		
Bodily Injury (\$100,000 Limit)	0.1%	-2.3%
Property Damage (\$100,000 Limit)	6.9%	6.3%
Credibility-Weighted Claim Cost Trends		
Bodily Injury (\$100,000 Limit)	5.5%	3.8%
Property Damage (\$100,000 Limit)	4.8%	5.1%
Selected Claim Frequency Trends		
Trucks, Tractors & Trailers		
Bodily Injury	0.0%	0.0%
Property Damage	0.0%	0.0%
Private Passenger Types		
Bodily Injury	0.0%	0.0%
Property Damage	0.0%	0.0%
Selected Pure Premium Trends		
Trucks, Tractors & Trailers		
Bodily Injury (\$100,000 Limit)	5.5%	3.8%
Property Damage (\$100,000 Limit)	4.8%	5.1%
Private Passenger Types		
Bodily Injury (\$100,000 Limit)	5.5%	3.8%
Property Damage (\$100,000 Limit)	4.8%	5.1%

Michigan bodily injury severity trend receives 0% weight when combined with multistate trend in the filing, property damage trend receives 20% weight.

If the prior trends were used to calculate the indicated changes in this document, the Truck, Tractors & Trailers Liability indication would have been 8.2% rather than 12.4%. For the Private Passenger Types coverage, the indication would have been 4.5% instead of 7.2%. The Trucks, Tractors & Trailers PPI indication would have been 2.5% instead of 1.9% and the Private Passenger Types PPI indication would have been 3.5% rather than 3.1%.

## Supplementary Information – Michigan

### Physical Damage Loss Trend

	<u>Coverage</u>	<u>Current Trends</u>	<u>Previous Trends</u>
		<u>Data through 12/31/2018</u>	<u>Data through 12/31/2017</u>
Trucks, Tractors & Trailers	OTC	+7.0%	+7.0%
	Collision	+4.5%	+5.0%
Private Passenger Types	OTC	+6.5%	+6.5%
	Collision	+4.0%	+4.5%

### Physical Damage OCN Trend

	<u>Coverage</u>	<u>Current Trends</u>	<u>Previous Trends</u>
		<u>Data through 12/31/2018</u>	<u>Data through 12/31/2017</u>
Trucks, Tractors & Trailers	OTC	+0.9%	+1.0%
	Collision	+1.5%	+1.6%
Private Passenger Types	OTC	+1.0%	+1.1%
	Collision	+0.6%	+0.6%

The loss trend has remained the same for Trucks, Tractors & Trailers OTC and Private Passenger Types OTC. The OCN trend has decreased by 0.1 points for Trucks, Tractors & Trailers OTC and has decreased by 0.1 points for Private Passenger Types OTC. If the prior loss and OCN trends were used, the Trucks, Tractors and Trailers and Private Passenger Types OTC indications in this document would have 8.9%, instead of 9.2%, and 7.0%, instead of 7.3%, respectively.

The loss trend has decreased by 0.5 points for Trucks, Tractors & Trailers collision and for Private Passenger Types collision. The OCN trend has decreased by 0.1 points for Trucks, Tractors, & Trailers collision and has remained the same for Private Passenger Types collision. If the prior loss and OCN trends were used, the Trucks, Tractors & Trailers and Private Passenger Types collision indications in this document would have been 6.6%, instead of 5.1%, and 3.6%, instead of 1.9%, respectively.

## Supplementary Information – Michigan

### Loss Development

#### Methodology

For the Trucks, Tractors & Trailers and Private Passenger Types Liability coverages, we continue to employ a credibility-weighted combination of Michigan and multistate factors for the 15 to 27 month link ratios for BI and PD, and the 27 to 39 month link ratios for BI only. For all coverages, the "best three of five" link ratios have been used. Specifically, the highest and lowest link ratios from the latest five years of the experience have been removed from the calculation and the remaining three ratios are used to calculate the three-year average.

#### Factors

	<u>Current (100K)</u>	<u>Previous (100K)</u>
Trucks, Tractors and Trailers BI		
39 to Ultimate	1.084	1.094
27 to Ultimate	1.292	1.295
15 to Ultimate	2.071	2.099
Trucks, Tractors and Trailers PD		
39 to Ultimate	1.004	1.003
27 to Ultimate	1.013	1.011
15 to Ultimate	1.078	1.088
Private Passenger Types BI		
39 to Ultimate	1.082	1.090
27 to Ultimate	1.268	1.286
15 to Ultimate	1.969	1.983
Private Passenger Types PD		
39 to Ultimate	1.004	1.004
27 to Ultimate	1.012	1.012
15 to Ultimate	1.085	1.061

## Supplementary Information – Michigan

### Other Factors

Unallocated Loss Adjustment Expense factors:

	<u>Data through 12/31/2017</u>	<u>Data through 12/31/2016</u>
Bodily Injury	1.075	1.080
Property Damage	1.100	1.105
Physical Damage	1.130	1.140

### Indicated vs. Filed Changes

An overall change of 8.3% is indicated when each of the coverage indications is weighted by its respective loss cost volume. Staff will file the indications, which reflect a 07/01/2020 proposed effective date, with the following exceptions:

<u>Coverage</u>	<u>Indicated Change</u>	<u>Filed Change</u>
Trucks, Tractors and Trailers PPI	1.9%	N.C.
Private Passenger Types PPI	3.1%	N.C.
Private Passenger Types Collision	1.9%	N.C.

The overall filed change is 8.0%.

### Notes

- Trucks, Tractors and Trailers Liability (12.4%)- The high indication is due to the poor experience in the latest 4 years.
- Trucks, Tractors and Trailers Other than Collision (9.2%)- The high indication is due to the overall poor experience, especially in the most recent year.
- PIP coverages are not being reviewed this year due to recent changes to Michigan No Fault insurance.
- The Auto Dealers Liability and PIP coverages are not being reviewed this year.
- The Auto Dealers and Garagekeepers physical damage coverages are not being reviewed this year.