

LOSS COSTS – IMPLEMENTATION

MAY 10, 2019

COMMERCIAL AUTOMOBILE

LI-CA-2019-091

## MISSOURI REVISED COMMERCIAL AUTO ADVISORY PROSPECTIVE LOSS COSTS, INCLUDING REVISED MEDICAL PAYMENTS, NON-OWNERSHIP LIABILITY AND UNINSURED AND UNDERINSURED MOTORISTS LOSS COSTS, TO BE IMPLEMENTED; NEW FILING FORMAT

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### KEY MESSAGE

Loss costs representing a +3.5% statewide change to be implemented.

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### BACKGROUND

In circular [LI-CA-2019-055](#), we provided you with information about the Commercial Auto loss cost level experience review.

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### ISO ACTION

We filed CA-2019-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 Missouri, 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 October 1, 2019.

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 October 1, 2019, 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 **SEPTEMBER 11, 2019**. 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-2019-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-2018-044](#) 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 10-19 (or the earliest possible subsequent date), along with any new and/or revised manual pages.

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## REFERENCE(S)

- [LI-CA-2019-055](#) (03/06/2019) Commercial Auto Experience Level Indications Reviewed By Staff
  - [LI-CL-2018-044](#) (11/27/2018) Revised Lead Time Requirements Listing
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## ATTACHMENT(S)

- Filing CA-2019-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 was 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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## 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).

## MISSOURI

### BASIC LIMITS PROSPECTIVE LOSS COST LEVEL – COMMERCIAL AUTOMOBILE

#### FILING CA-2019-BRLA1

#### EXECUTIVE SUMMARY

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##### PURPOSE

This document:

- revises the advisory prospective loss costs for the major Commercial Automobile classes. These loss costs represent a +3.5% statewide change from the loss costs currently in effect.
  - provides the analyses used to derive these advisory loss costs.
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##### DEFINITION OF THE ISO ADVISORY PROSPECTIVE LOSS COSTS

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.”

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##### OPTIONAL CLASS PLAN LOSS COSTS

The loss costs contained in this filing CA-2019-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-2019-BRLB1.

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##### CHANGE IN FORMAT

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 F-24, the exhibits are labeled EXHIBIT A1 through EXHIBIT C17, and the revised prospective loss cost pages are numbered G-1 through G-51.

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##### AUTO DEALERS LIABILITY COVERAGE

The Auto Dealers Liability coverage is not being reviewed this year.

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##### MEDICAL PAYMENTS COVERAGE

A revision of the Medical Payments loss costs is included in this document. The overall change for the Trucks, Tractors and Trailers, Private Passenger Types and Public Automobiles medical payments revision is reflected in the overall change quoted in this filing. The documentation for this revision can be found in Section D.

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##### NON-OWNERSHIP LIABILITY COVERAGE

A revision of the Non-ownership Liability loss costs contained in Rule 89.C.1.a.(1) is included in this document. The overall change for this coverage is reflected in the overall change quoted in this filing. The documentation for this revision can be found in Section E.

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UNINSURED/  
UNDERINSURED  
MOTORISTS  
COVERAGE

A revision of the Uninsured and Underinsured Motorists loss costs contained in Rule 97 is included in this document. The overall change for the Private Passenger Types and Other than Private Passenger Types UM and UIM revision is reflected in the overall change quoted in this filing. The documentation for this revision can be found in Section F.

REVISED LOSS  
COST CHANGES

The statewide advisory loss cost level changes are:

<u>Trucks, Tractors &amp; Trailers</u>	<u>Indicated</u>	<u>Filed</u>
Liability		
Single Limit Liability	+6.6%	+6.6%
Medical Payments	-82.2%	-82.2%
Uninsured/Underinsured Motorists	+6.0%	+6.0%
Physical Damage		
Other than Collision	+16.0%	+16.0%
Collision	-2.0%	N.C.
Total Trucks, Tractors & Trailers	+2.8%	+3.1%
<u>Private Passenger Types</u>		
Liability		
Single Limit Liability	+2.1%	N.C.
Medical Payments	-50.1%	-50.1%
Uninsured/Underinsured Motorists	+13.4%	+13.4%
Physical Damage		
Other than Collision	+6.8%	+6.8%
Collision	+1.4%	N.C.
Total Private Passenger Types	+1.9%	+0.3%
<u>Public Automobile Classes</u>		
Medical Payments	-26.1%	-26.1%
<u>Non-Ownership Liability</u>	+97.5%	+97.5%
<u>Grand Total</u>	+3.4%	+3.5%

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

INDICATED VS.  
FILED

Indicated changes are based on standard ISO methodology, utilizing a 10/01/2019 trend effective date. The filed loss cost level changes are the same as the indicated with the following exceptions: For Trucks, Tractors & Trailers Collision, Private Passenger Types Liability, and Private Passenger Types Collision, No Change (N.C.) was selected due to the modest indications.

PRIOR ISO  
REVISIONS

The latest selected revisions in this state are:

<u>Filing</u>	CA-2018-BRLA1	CA-2017-BRLA1	CA-2016-BRLA1
Rate Level/ Loss Costs	Loss Costs	Loss Costs	Loss Costs
Effective Date	10/01/2018	10/01/2017	10/01/2016
<u>Changes</u>			
Indicated	+12.6%	+8.1%	-0.5%
Filed	+12.6%	+7.9%	-0.6%
Approved	+12.6%	+7.9%	-0.6%

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 03/31/2018 for all coverages.

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 2017 and claim frequency trend data through third quarter 2017 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	+3.6%
Property Damage	+5.4%
Private Passenger Types Liability:	
Bodily Injury	+3.6%
Property Damage	+5.4%
Trucks, Tractors & Trailers OTC	+7.0%
Trucks, Tractors & Trailers Collision	+5.0%
Private Passenger Types OTC	+6.5%
Private Passenger Types Collision	+4.5%

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 +1.0% and +1.6% for OTC and Collision respectively. For Private Passenger Types, the OCN Trend factors are +1.1% 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. Travelers Indemnity Company
2. Zurich American Insurance Company
3. Nationwide Mutual Insurance Co.
4. Cincinnati Insurance Company
5. Liberty Mutual Insurance Company
6. Tokio Marine Companies
7. Federated Mutual Insurance Company
8. AMCO Insurance Company
9. Sentry Insurance A Mutual Company
10. Hartford Accident & Indemnity Co.

PHYSICAL DAMAGE (ASLOB 21.2)

1. Motors Insurance Corporation
2. Travelers Indemnity Company
3. Zurich American Insurance Company
4. Liberty Mutual Insurance Company
5. Cincinnati Insurance Company
6. Canal Insurance Company
7. Sentry Insurance A Mutual Company
8. Tokio Marine Companies
9. Nationwide Mutual Insurance Co.
10. Federated Mutual Insurance Company

Insurers are listed in descending order based on the percent of statewide written premium volume from Annual Statement Page 15 for the year ending 12/31/2017 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 12/31/2017 is:

Liability (ASLOB 19.3 & 19.4)  
39.4%

Physical Damage (ASLOB 21.2)  
37.8%

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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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MISSOURI  
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 G.

## 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

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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) \$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> $\frac{[\text{Terr. Group Col. (4)} \times \text{Terr. Group Col. (5)}] + [\text{SW Total Col. (4)} \times (1.0 - \text{Terr. Group Col. (5)})]}{[\text{Terr. Group Col. (4)} + \text{SW Total Col. (4)}]}$

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.)

---

COLUMN (8)  
BASE CLASS  
LOSS COST

Present ISO \$100,000 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.

---

COLUMN (10)  
REVISED BASE  
LOSS COST

Revised \$100,000 base loss cost.

---

COLUMN (11)  
ADVISORY  
LOSS COST  
CHANGE

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

---

EXPLANATORY MEMORANDUM FOR TRUCKS, TRACTORS & TRAILERS AND  
PRIVATE PASSENGER TYPES  
PHYSICAL DAMAGE 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) 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.)

---

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.

---

COLUMN (10)  
REVISED BASE  
LOSS COST

Revised base loss cost.

---

COLUMN (11)  
ADVISORY  
LOSS COST  
CHANGE

Percentage change:  
$$[\text{Col. (10)} / \text{Col. (8)}]$$

---

## 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:	+5.0%	+4.5%

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COMMERCIAL AUTOMOBILE PHYSICAL DAMAGE  
SUPPLEMENTARY EXHIBIT

Quarterly Values <u>Ending</u>	Consumer Price Index for Bodywork	
	<u>Actual</u>	<u>Exponential Fit</u>
12/31/2014	2.785	2.769
03/31/2015	2.792	2.786
06/30/2015	2.804	2.803
09/30/2015	2.805	2.819
12/31/2015	2.831	2.836
03/31/2016	2.847	2.853
06/30/2016	2.866	2.870
09/30/2016	2.877	2.887
12/31/2016	2.913	2.904
03/31/2017	2.925	2.922
06/30/2017	2.942	2.939
09/30/2017	2.945	2.956
12/31/2017	2.966	2.974
03/31/2018	2.999	2.992
06/30/2018	3.016	3.010
09/30/2018	3.033	3.028
	<u>R-Squared</u>	<u>Average Annual Change</u>
16 Point Fit	0.9891	2.4%
12 Point Fit	0.9901	2.5%

## 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 1.0% and 1.6% 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 1.1% and 0.6% were selected for the OTC and Collision coverages respectively.

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## LOSS DEVELOPMENT FOR LIABILITY

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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.
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DESCRIPTION OF EXPERIENCE PERIOD DATA	For Trucks, Tractors & 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 June 30, 2018. In other words, accident year ended March 31, 2018 includes all losses and allocated loss adjustment expenses paid through June 30, 2018 on accidents occurring from April 1, 2017 to March 31, 2018 and all losses and allocated loss adjustment expenses outstanding on these accidents as of June 30, 2018, 15 months after the inception of the accident year. Similarly, the incurred losses and allocated loss adjustment expenses for accident year ended March 31, 2017 include all loss and loss adjustment expenses paid through June 30, 2018 on accidents occurring from April 1, 2016 to March 31, 2017 and all losses and allocated loss adjustment expenses outstanding on these accidents as of June 30, 2018, 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.
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DESCRIPTION OF LOSS DEVELOPMENT METHODOLOGY	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 & 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.
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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 & 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.

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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	-

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.

## 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 June 30, 2018. In other words, accident year ended March 31, 2018 includes all losses paid through June 30, 2018 on accidents occurring from April 1, 2017 to March 31, 2018. Similarly, the paid losses for accident year ended March 31, 2017 include all losses paid through June 30, 2018 on accidents occurring from April 1, 2016 to March 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	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.

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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.

MISSOURI  
CLAIMS PER TERRITORY  
LIABILITY

Territory	Trucks, Tractors & Trailers	Private Passenger Types
	Incurred Claims 5 Years Ending 03/31/2018 Combined BI and PD	Incurred Claims 5 Years Ending 03/31/2018 Combined BI and PD
102	473	108
104	669	116
105	136	34
106	611	160
108	377	51
109	257	62
110	14	0
112	630	213
116	540	89
117	363	104
125	331	63
126	201	24
127	1,598	288
128	835	136
129	1,939	399
131	30	9
132	80	80
133	2,373	718
134	130	28
135	298	93
136	211	32
137	221	26
138	162	58
SW Total	12,479	2,891

Claims for Trend

BI

PD

686

2,418

MISSOURI  
CLAIMS PER TERRITORY  
PHYSICAL DAMAGE

Territory	Trucks, Tractors & Trailers Paid Claims 5 Years Ending 03/31/2018		Private Passenger Types Paid Claims 5 Years Ending 03/31/2018	
	OTC	Coll	OTC	Coll
102	150	202	63	125
104	152	293	99	123
105	81	79	20	30
106	217	268	87	126
108	105	137	35	41
109	99	105	36	46
110	5	6	0	0
112	127	276	129	223
116	245	254	78	96
117	85	221	41	88
125	75	125	25	56
126	56	80	15	16
127	598	823	299	242
128	391	396	114	108
129	1,245	1,025	436	345
131	1	15	1	3
132	22	42	52	79
133	575	941	597	769
134	23	64	13	27
135	122	127	38	76
136	56	89	33	38
137	90	95	38	25
138	150	108	58	53
SW Total	4,670	5,771	2,307	2,735

## 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  
MISSOURI

## 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	191,879	1,297,137	1,105,258	0.174	0.134	148,105	1,445,242
1988	136,530	1,559,437	1,422,907	0.096	0.212	301,656	1,861,093
1989	113,818	1,620,192	1,506,374	0.076	0.232	349,479	1,969,671
1990	193,119	1,891,986	1,698,867	0.114	0.194	329,580	2,221,566
1991	425,926	2,377,431	1,951,505	0.218	0.090	175,635	2,553,066
1992	269,982	2,440,738	2,170,756	0.124	0.184	399,419	2,840,157
1993	272,724	1,756,541	1,483,817	0.184	0.124	183,993	1,940,534
1994	818,283	2,601,188	1,782,905	0.459	-0.151	-269,219	2,331,969
1995	378,856	2,554,660	2,175,804	0.174	0.134	291,558	2,846,218
1996	510,473	2,894,283	2,383,810	0.214	0.094	224,078	3,118,361
1997	391,859	2,902,352	2,510,493	0.156	0.152	381,595	3,283,947
1998	282,149	3,005,643	2,723,494	0.104	0.204	555,593	3,561,236
1999	1,274,202	4,549,510	3,275,308	0.389	-0.081	-265,300	4,284,210
2000	174,144	3,862,111	3,687,967	0.047	0.261	962,559	4,824,670
2001	545,768	4,400,885	3,855,117	0.142	0.166	639,949	5,040,834
2002	2,758,658	5,730,404	2,971,746	0.928	-0.620	-1,842,483	3,887,921
2003	214,374	2,464,352	2,249,978	0.095	0.213	479,245	2,943,597
2004	655,351	2,289,586	1,634,235	0.401	-0.093	-151,984	2,137,602
2005	477,565	1,783,507	1,305,942	0.366	-0.058	-75,745	1,707,762
2006	1,087,490	2,453,790	1,366,300	0.796	-0.488	-666,754	1,787,036
2007	245,572	1,834,145	1,588,573	0.155	0.153	243,052	2,077,197
2008	78,706	1,277,023	1,198,317	0.066	0.242	289,993	1,567,016
2009	684,163	1,821,366	1,137,203	0.602	-0.294	-334,338	1,487,028
2010	276,018	1,943,855	1,667,837	0.165	0.143	238,501	2,182,356
2011	330,807	2,097,038	1,766,231	0.187	0.121	213,714	2,310,752
2012	1,246,161	3,196,065	1,949,904	0.639	-0.331	-645,418	2,550,647
2013	2,267,679	4,022,398	1,754,719	1.292	-0.984	-1,726,643	2,295,755
2014	576,100	2,881,151	2,305,051	0.25	0.058	133,693	3,014,844
2015	358,326	2,940,586	2,582,260	0.139	0.169	436,402	3,376,988
2016	1,048,807	3,766,604	2,717,797	0.386	-0.078	-211,988	3,554,616
2017	1,393,320	4,193,610	2,800,290	0.498	-0.19	-532,055	3,661,555
2018	822,399	4,786,216	3,963,817	0.207	0.101	400,346	5,186,562

(8) NORMAL WIND TO NON W&amp;W RATIO= AVG. (4) 0.308

## INSURANCE SERVICES OFFICE, INC.

WIND AND WATER PROCEDURE  
OTHER THAN COLLISION  
MISSOURI

## 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	166,239	1,211,105	1,044,866	0.159	0.368	384,511	1,595,616
1988	55,969	858,497	802,528	0.070	0.457	366,755	1,225,252
1989	44,161	893,425	849,264	0.052	0.475	403,400	1,296,825
1990	135,150	1,205,097	1,069,947	0.126	0.401	429,049	1,634,146
1991	323,467	1,258,599	935,132	0.346	0.181	169,259	1,427,858
1992	105,439	1,003,651	898,212	0.117	0.410	368,267	1,371,918
1993	369,054	1,287,990	918,936	0.402	0.125	114,867	1,402,857
1994	478,667	1,407,927	929,260	0.515	0.012	11,151	1,419,078
1995	317,483	1,282,490	965,007	0.329	0.198	191,071	1,473,561
1996	322,154	1,222,041	899,887	0.358	0.169	152,081	1,374,122
1997	331,920	1,421,420	1,089,500	0.305	0.222	241,869	1,663,289
1998	148,967	1,198,189	1,049,222	0.142	0.385	403,950	1,602,139
1999	917,380	2,288,749	1,371,369	0.669	-0.142	-194,734	2,094,015
2000	78,650	1,269,861	1,191,211	0.066	0.461	549,148	1,819,009
2001	213,523	1,370,449	1,156,926	0.185	0.342	395,669	1,766,118
2002	1,734,491	2,837,601	1,103,110	1.572	-1.045	-1,152,750	1,684,851
2003	129,278	985,455	856,177	0.151	0.376	321,923	1,307,378
2004	371,601	1,218,155	846,554	0.439	0.088	74,497	1,292,652
2005	761,050	1,262,842	501,792	1.517	-0.990	-496,774	766,068
2006	683,779	1,056,718	372,939	1.833	-1.306	-487,058	569,660
2007	176,948	590,832	413,884	0.428	0.099	40,975	631,807
2008	77,262	603,303	526,041	0.147	0.380	199,896	803,199
2009	174,603	591,680	417,077	0.419	0.108	45,044	636,724
2010	172,857	886,819	713,962	0.242	0.285	203,479	1,090,298
2011	152,390	755,304	602,914	0.253	0.274	165,198	920,502
2012	595,667	1,443,656	847,989	0.702	-0.175	-148,398	1,295,258
2013	1,432,172	1,984,645	552,473	2.592	-2.065	-1,140,857	843,788
2014	224,406	844,099	619,693	0.362	0.165	102,249	946,348
2015	320,576	979,546	658,970	0.486	0.041	27,018	1,006,564
2016	673,704	1,560,899	887,195	0.759	-0.232	-205,829	1,355,070
2017	472,022	1,286,954	814,932	0.579	-0.052	-42,376	1,244,578
2018	355,925	999,176	643,251	0.553	-0.026	-16,725	982,451

(8) NORMAL WIND TO NON W&amp;W RATIO= AVG. (4) 0.527

## 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	100,000	50,000	150,000	200,000
B		30,000	50,000	80,000
C		20,000	80,000	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

## Medical Payments Loss Cost Revision: Methodology and Support

ISO's Advisory Prospective Loss Costs for the Medical Payments Coverage are calculated by multiplying the CSL Liability Loss Costs by a relativity. The revision methodology consists of the following general steps, which are discussed in more detail in the text of this document:

- Conduct experience review to determine the overall change.
- Develop predictive model to determine differentiation by territory for some vehicle classes.
- Derive new Loss costs from the new relativities and make selections where necessary.

**Experience Period:** We performed the review using six Accident Years ending 12/31/2016 of exposures, incurred losses, and incurred ALAE.

**Jurisdictions Included:** ISO collects Commercial Auto Statistical Data from 51 jurisdictions: 49 states, Puerto Rico, and the District of Columbia. Most jurisdictions were combined for this experience review. Exposures and Losses from jurisdictions with mandatory No-Fault Legislation were excluded: Delaware, District of Columbia, Florida, Kansas, Kentucky, Maryland, Michigan, Minnesota, New York, North Dakota, Pennsylvania, Texas, Utah, and Hawaii were excluded. Private Passenger Types data from New Jersey and Oregon was also excluded.

**Extension of Exposures:** To review the medical payments relativities we compared the loss experience to the aggregate ISO Advisory Prospective Loss Costs, using the most recently approved loss costs in each jurisdiction, rating each reported exposure according to the instructions in the Commercial Lines Manual.

**Limit Shifts:** The most common limit in our dataset for Medical Payments Coverage (representing 86% of vehicles) is the \$5000 Limit. This is fortunate because we can restate any given exposure or loss as if it were written at a lower limit, reducing the loss amounts where necessary, in order to use as much data as possible in the experience review for each limit. After replicating all the available data at each lower limit, there is sufficient data to review the \$500, \$1000, \$2000, and \$5000 limits. When shifting the data to a lower limit, the exposures and ALAE are replicated as-is, while the incurred losses are reduced if necessary to the amount of the new, lower limit.

Table 1: Credibility Weighted Yearly Loss Trend

Jurisdiction	Indicated State Trend	Credibility	Credibility Weighted Trend	Average Prospective Loss Date
Alabama	1.1%	0.05	2.7%	2/1/2019
Alaska	3.1%	0.00	2.8%	7/1/2018
Arizona	4.0%	0.05	2.9%	10/1/2018
Arkansas	2.9%	0.00	2.8%	7/1/2018
California	0.5%	0.20	2.3%	6/1/2018
Colorado	2.1%	0.05	2.8%	1/1/2019
Connecticut	-1.6%	0.05	2.6%	2/1/2019
Georgia	3.7%	0.10	2.9%	5/1/2019
Idaho	5.6%	0.00	2.8%	7/1/2018
Illinois	0.1%	0.05	2.7%	10/1/2018
Indiana	3.3%	0.05	2.8%	4/1/2019
Iowa	-1.1%	0.00	2.8%	8/1/2018
Louisiana	1.4%	0.05	2.7%	11/1/2018
Maine	2.8%	0.00	2.8%	2/1/2019
Mississippi	-1.2%	0.00	2.8%	8/1/2018
Missouri	4.4%	0.05	2.9%	10/1/2018
Montana	5.5%	0.00	2.8%	7/1/2018
Nebraska	4.1%	0.00	2.8%	3/1/2019
Nevada	-0.3%	0.05	2.6%	10/1/2018
New Hampshire	4.3%	0.00	2.8%	10/1/2018
New Jersey	1.1%	0.10	2.6%	1/1/2019
New Mexico	2.6%	0.00	2.8%	10/1/2018
North Carolina	3.9%	0.10	2.9%	12/1/2018
Ohio	3.3%	0.05	2.8%	3/1/2019
Oklahoma	4.6%	0.00	2.8%	8/1/2018
Oregon	5.5%	0.05	2.9%	1/1/2019
Puerto Rico	7.7%	0.00	2.8%	1/1/2019
Rhode Island	6.8%	0.00	2.8%	3/1/2019
South Carolina	4.0%	0.05	2.9%	7/1/2019
South Dakota	6.8%	0.00	2.8%	7/1/2018
Tennessee	4.0%	0.05	2.9%	2/1/2019
Vermont	-0.9%	0.00	2.8%	1/1/2019
Virginia	4.6%	0.05	2.9%	10/1/2018
Washington	3.3%	0.05	2.8%	10/1/2018
West Virginia	2.5%	0.00	2.8%	1/1/2019
Wisconsin	0.3%	0.00	2.8%	10/1/2018
Wyoming	2.6%	0.00	2.8%	7/1/2016

Trend: The claim severity trend for Medical Payments Coverage before the application of any limit is unmeasurable since insurance losses are subject to the limit, by definition. As a stand-in, we trended claim severities using a \$100k Limit Bodily Injury Average Claim Cost trend indication from six years ending 3/31/2017. The multistate average trend was 2.8% and the state indications were credibility-weighted using the multistate average as the complement to credibility. The trend selections are summarized in Table 1.

Trend is applied by multiplying a loss amount by  $(1 + \text{trend selection})^{\text{trend period}}$ .

The trend period is the number of years from the date of accident to the average prospective loss date. Since the loss costs we are reviewing are filed independently in each jurisdiction, the average prospective loss date varies by jurisdiction. This date is also displayed in table 1. The average prospective loss date is assumed to be one year beyond the effective date of the loss costs we are reviewing.

After trending, the Medical Payments Limit was re-applied, which significantly reduces the impact of severity trends. After application of the limit, the annualized average impact of the loss trending procedure ranged from 0.2% at the \$500 Limit to 1.0% for the \$5000 limit.

Loss Development: Incurred Losses and ALAE were developed to ultimate using the loss triangle approach and a best 3 out of 5 link ratio selection. Development after 135 months is assumed to be immaterial. Separate development triangles were created for each limit and for the following 3 class groups:

- Trucks, Tractors, and Trailers
- Private Passenger Types
- All Public Autos and Buses Combined

Public Autos were combined with buses due to the low volume of data for the Public Autos alone. The loss development procedure was applied after the limit shifting and loss trending procedures described above.



\$500 Limit Loss Development  
Trucks, Tractors, and Trailers  
Medical Payments  
Multistate  
Incurred Losses and ALAE

Incurred Losses

Accident

Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months	99 Months	111 Months	123 Months	135 Months
12/31/2006	1,016,598	1,025,156	1,043,727	1,087,133	1,095,205	1,063,055	1,061,920	1,059,106	1,062,283	1,062,283	1,072,490
12/31/2007	1,088,897	1,332,850	1,462,442	1,491,841	1,503,002	1,501,208	1,499,328	1,500,709	1,500,709	1,500,755	
12/31/2008	1,056,469	1,077,296	1,090,329	1,121,796	1,167,302	1,216,159	1,214,482	1,216,920	1,216,770		
12/31/2009	1,057,945	1,095,704	1,169,646	1,169,418	1,182,235	1,187,385	1,187,049	1,196,924			
12/31/2010	1,210,970	1,199,389	1,231,722	1,265,609	1,279,144	1,291,211	1,292,133				
12/31/2011	1,232,179	1,247,659	1,283,485	1,363,099	1,399,037	1,417,000					
12/31/2012	1,215,176	1,249,968	1,352,076	1,423,634	1,491,889						
12/31/2013	1,321,690	1,465,818	1,591,591	1,740,972							
12/31/2014	1,432,345	1,556,798	1,577,762								
12/31/2015	1,503,405	1,772,276									
12/31/2016	1,522,614										

Link Ratios

Accident

Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123:111	135:123
12/31/2006	1.008	1.018	1.042	1.007	0.971	0.999	0.997	1.003	1.000	1.010
12/31/2007	1.224	1.097	1.020	1.007	0.999	0.999	1.001	1.000	1.000	
12/31/2008	1.020	1.012	1.029	1.041	1.042	0.999	1.002	1.000		
12/31/2009	1.036	1.067	1.000	1.011	1.004	1.000	1.008			
12/31/2010	0.990	1.027	1.028	1.011	1.009	1.001				
12/31/2011	1.013	1.029	1.062	1.026	1.013					
12/31/2012	1.029	1.082	1.053	1.048						
12/31/2013	1.109	1.086	1.094							
12/31/2014	1.087	1.013								
12/31/2015	1.179									
Best 3 of 5	1.075	1.046	1.047	1.026	1.009	0.999	1.002	1.001	1.000	1.010
To Ultimate	1.233	1.147	1.097	1.048	1.021	1.012	1.013	1.011	1.010	1.010

\$1000 Limit Loss Development  
Trucks, Tractors, and Trailers  
Medical Payments  
Multistate  
Incurred Losses and ALAE

Incurred Losses

Accident												
Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months	99 Months	111 Months	123 Months	135 Months	
12/31/2006	1,831,051	1,809,420	1,818,590	1,855,376	1,862,171	1,829,086	1,827,335	1,824,021	1,826,698	1,826,698	1,837,405	
12/31/2007	1,938,053	2,179,704	2,291,098	2,312,512	2,317,658	2,317,688	2,313,856	2,316,073	2,316,073	2,316,119		
12/31/2008	1,902,677	1,918,289	1,927,332	1,956,420	2,000,919	2,049,956	2,048,779	2,051,217	2,051,067			
12/31/2009	1,872,787	1,933,386	1,967,987	1,965,813	1,977,367	1,982,517	1,982,681	1,992,556				
12/31/2010	2,168,921	2,147,423	2,193,605	2,222,302	2,234,484	2,247,483	2,249,384					
12/31/2011	2,260,646	2,250,792	2,278,272	2,357,457	2,389,515	2,408,941						
12/31/2012	2,190,399	2,214,244	2,309,943	2,342,380	2,385,273							
12/31/2013	2,302,701	2,371,046	2,517,606	2,665,140								
12/31/2014	2,406,841	2,495,473	2,518,643									
12/31/2015	2,563,355	2,881,948										
12/31/2016	2,601,193											

Link Ratios

Accident												
Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123:111	135:123		
12/31/2006	0.988	1.005	1.020	1.004	0.982	0.999	0.998	1.001	1.000	1.006		
12/31/2007	1.125	1.051	1.009	1.002	1.000	0.998	1.001	1.000	1.000			
12/31/2008	1.008	1.005	1.015	1.023	1.025	0.999	1.001	1.000				
12/31/2009	1.032	1.018	0.999	1.006	1.003	1.000	1.005					
12/31/2010	0.990	1.022	1.013	1.005	1.006	1.001						
12/31/2011	0.996	1.012	1.035	1.014	1.008							
12/31/2012	1.011	1.043	1.014	1.018								
12/31/2013	1.030	1.062	1.059									
12/31/2014	1.037	1.009										
12/31/2015	1.124											
Best 3 of 5	1.026	1.026	1.021	1.013	1.006	1.000	1.001	1.000	1.000	1.006		
To Ultimate	1.103	1.075	1.048	1.026	1.013	1.007	1.007	1.006	1.006	1.006		

\$2000 Limit Loss Development  
Trucks, Tractors, and Trailers  
Medical Payments  
Multistate  
Incurred Losses and ALAE

Incurred Losses

Accident												
Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months	99 Months	111 Months	123 Months	135 Months	
12/31/2006	2,804,858	2,714,876	2,719,487	2,755,121	2,761,898	2,727,404	2,725,079	2,722,765	2,725,218	2,724,677	2,736,384	
12/31/2007	3,029,458	3,273,075	3,361,892	3,361,860	3,360,659	3,363,689	3,360,857	3,364,123	3,364,123	3,364,169		
12/31/2008	3,048,244	3,046,962	3,043,958	3,073,328	3,118,218	3,168,247	3,168,070	3,170,508	3,170,358			
12/31/2009	2,993,635	3,093,135	3,095,572	3,078,161	3,087,961	3,090,898	3,092,062	3,092,265				
12/31/2010	3,567,918	3,523,809	3,601,305	3,611,935	3,622,504	3,638,357	3,641,691					
12/31/2011	3,832,908	3,763,008	3,782,394	3,861,280	3,893,647	3,915,694						
12/31/2012	3,582,300	3,582,194	3,658,958	3,673,196	3,692,095							
12/31/2013	3,764,624	3,813,836	3,943,591	4,085,252								
12/31/2014	3,912,680	3,928,975	3,959,186									
12/31/2015	4,114,753	4,475,103										
12/31/2016	4,190,510											

Link Ratios

Accident												
Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123:111	135:123		
12/31/2006	0.968	1.002	1.013	1.002	0.988	0.999	0.999	1.001	1.000	1.004		
12/31/2007	1.080	1.027	1.000	1.000	1.001	0.999	1.001	1.000	1.000			
12/31/2008	1.000	0.999	1.010	1.015	1.016	1.000	1.001	1.000				
12/31/2009	1.033	1.001	0.994	1.003	1.001	1.000	1.000					
12/31/2010	0.988	1.022	1.003	1.003	1.004	1.001						
12/31/2011	0.982	1.005	1.021	1.008	1.006							
12/31/2012	1.000	1.021	1.004	1.005								
12/31/2013	1.013	1.034	1.036									
12/31/2014	1.004	1.008										
12/31/2015	1.088											
Best 3 of 5	1.006	1.017	1.009	1.006	1.004	1.000	1.000	1.000	1.000	1.004		
To Ultimate	1.047	1.041	1.023	1.014	1.008	1.004	1.004	1.004	1.004	1.004		

\$5000 Limit Loss Development  
Trucks, Tractors, and Trailers  
Medical Payments  
Multistate  
Incurred Losses and ALAE

Incurred Losses

Accident												
Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months	99 Months	111 Months	123 Months	135 Months	
12/31/2006	4,710,960	4,539,456	4,479,942	4,508,763	4,505,275	4,468,964	4,461,710	4,459,396	4,461,849	4,460,205	4,474,912	
12/31/2007	5,107,555	5,110,979	5,193,230	5,149,755	5,159,403	5,172,513	5,165,844	5,170,520	5,170,273	5,170,323		
12/31/2008	5,362,092	5,257,885	5,159,748	5,179,114	5,188,219	5,233,294	5,236,584	5,236,063	5,235,913			
12/31/2009	5,307,743	5,416,310	5,385,690	5,337,341	5,340,341	5,339,512	5,340,124	5,339,702				
12/31/2010	6,387,662	6,318,408	6,393,163	6,315,482	6,348,918	6,366,768	6,371,957					
12/31/2011	6,973,046	6,804,811	6,759,850	6,818,604	6,829,183	6,854,863						
12/31/2012	6,528,456	6,386,281	6,416,629	6,428,069	6,399,175							
12/31/2013	6,821,163	6,737,071	6,772,763	6,894,338								
12/31/2014	7,056,965	6,929,837	6,912,069									
12/31/2015	7,428,295	7,821,620										
12/31/2016	7,547,745											

Link Ratios

Accident												
Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123:111	135:123		
12/31/2006	0.964	0.987	1.006	0.999	0.992	0.998	0.999	1.001	1.000	1.003		
12/31/2007	1.001	1.016	0.992	1.002	1.003	0.999	1.001	1.000	1.000			
12/31/2008	0.981	0.981	1.004	1.002	1.009	1.001	1.000	1.000				
12/31/2009	1.020	0.994	0.991	1.001	1.000	1.000	1.000					
12/31/2010	0.989	1.012	0.988	1.005	1.003	1.001						
12/31/2011	0.976	0.993	1.009	1.002	1.004							
12/31/2012	0.978	1.005	1.002	0.996								
12/31/2013	0.988	1.005	1.018									
12/31/2014	0.982	0.997										
12/31/2015	1.053											
Best 3 of 5	0.983	1.002	1.000	1.001	1.003	1.000	1.000	1.000	1.000	1.003		
To Ultimate	0.992	1.009	1.007	1.007	1.006	1.003	1.003	1.003	1.003	1.003		

\$500 Limit Loss Development  
Private Passenger Types  
Medical Payments  
Multistate  
Incurred Losses and ALAE

Incurred Losses

Accident											
Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months	99 Months	111 Months	123 Months	135 Months
12/31/2006	769,652	719,082	719,857	733,825	728,712	727,212	727,212	727,212	726,828	726,730	726,567
12/31/2007	705,667	736,212	749,694	790,864	789,844	772,861	774,306	770,806	770,806	770,806	
12/31/2008	706,600	680,360	693,502	716,828	752,973	787,557	750,841	750,907	750,486		
12/31/2009	737,177	752,941	759,381	778,353	788,284	795,291	795,107	794,936			
12/31/2010	801,748	787,604	809,527	865,024	889,702	890,697	891,913				
12/31/2011	789,888	785,481	790,657	795,698	797,950	796,589					
12/31/2012	818,114	813,788	808,780	827,805	826,138						
12/31/2013	844,383	1,074,054	1,124,652	1,156,142							
12/31/2014	812,884	777,075	774,074								
12/31/2015	883,695	874,375									
12/31/2016	859,868										

Link Ratios

Accident										
Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123:111	135:123
12/31/2006	0.934	1.001	1.019	0.993	0.998	1.000	1.000	0.999	1.000	1.000
12/31/2007	1.043	1.018	1.055	0.999	0.978	1.002	0.995	1.000	1.000	
12/31/2008	0.963	1.019	1.034	1.050	1.046	0.953	1.000	0.999		
12/31/2009	1.021	1.009	1.025	1.013	1.009	1.000	1.000			
12/31/2010	0.982	1.028	1.069	1.029	1.001	1.001				
12/31/2011	0.994	1.007	1.006	1.003	0.998					
12/31/2012	0.995	0.994	1.024	0.998						
12/31/2013	1.272	1.047	1.028							
12/31/2014	0.956	0.996								
12/31/2015	0.989									
Best 3 of 5	0.993	1.010	1.026	1.015	1.003	1.000	0.999	1.000	1.000	1.000
To Ultimate	1.047	1.054	1.043	1.017	1.002	0.999	0.999	1.000	1.000	1.000

\$1000 Limit Loss Development  
Private Passenger Types  
Medical Payments  
Multistate  
Incurred Losses and ALAE

Incurred Losses

Accident												
Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months	99 Months	111 Months	123 Months	135 Months	
12/31/2006	1,347,363	1,255,881	1,258,735	1,268,440	1,264,827	1,262,065	1,262,042	1,261,847	1,260,767	1,260,603	1,260,440	
12/31/2007	1,266,918	1,314,921	1,320,418	1,359,988	1,358,422	1,340,485	1,342,901	1,335,901	1,335,901	1,335,901		
12/31/2008	1,265,653	1,210,434	1,222,050	1,243,331	1,277,948	1,310,193	1,273,452	1,273,173	1,272,117			
12/31/2009	1,267,632	1,281,738	1,280,192	1,294,287	1,304,764	1,314,350	1,314,499	1,314,144				
12/31/2010	1,390,311	1,357,920	1,378,717	1,430,663	1,452,674	1,454,169	1,455,885					
12/31/2011	1,417,733	1,403,186	1,400,407	1,408,688	1,409,661	1,408,800						
12/31/2012	1,462,239	1,442,122	1,425,918	1,442,380	1,438,259							
12/31/2013	1,479,743	1,693,588	1,743,825	1,775,629								
12/31/2014	1,429,496	1,371,734	1,357,362									
12/31/2015	1,580,699	1,542,905										
12/31/2016	1,530,205											

Link Ratios

Accident												
Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123:111	135:123		
12/31/2006	0.932	1.002	1.008	0.997	0.998	1.000	1.000	0.999	1.000	1.000		
12/31/2007	1.038	1.004	1.030	0.999	0.987	1.002	0.995	1.000	1.000			
12/31/2008	0.956	1.010	1.017	1.028	1.025	0.972	1.000	0.999				
12/31/2009	1.011	0.999	1.011	1.008	1.007	1.000	1.000					
12/31/2010	0.977	1.015	1.038	1.015	1.001	1.001						
12/31/2011	0.990	0.998	1.006	1.001	0.999							
12/31/2012	0.986	0.989	1.012	0.997								
12/31/2013	1.145	1.030	1.018									
12/31/2014	0.960	0.990										
12/31/2015	0.976											
Best 3 of 5	0.984	1.001	1.014	1.008	1.003	1.000	0.999	0.999	1.000	1.000		
To Ultimate	1.008	1.024	1.023	1.009	1.001	0.998	0.998	0.999	1.000	1.000		

\$2000 Limit Loss Development  
Private Passenger Types  
Medical Payments  
Multistate  
Incurred Losses and ALAE

Incurred Losses

Accident											
Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months	99 Months	111 Months	123 Months	135 Months
12/31/2006	2,157,525	1,979,741	1,978,029	1,980,966	1,979,659	1,972,532	1,972,409	1,972,214	1,970,134	1,969,970	1,969,807
12/31/2007	2,040,975	2,097,105	2,092,927	2,124,372	2,122,847	2,103,177	2,104,649	2,094,649	2,094,649	2,094,649	
12/31/2008	2,083,829	1,985,427	1,990,533	2,013,675	2,046,832	2,075,581	2,037,840	2,036,440	2,035,285		
12/31/2009	2,145,937	2,164,395	2,146,295	2,150,103	2,160,588	2,162,174	2,162,323	2,161,968			
12/31/2010	2,317,599	2,235,580	2,253,368	2,297,454	2,317,440	2,319,936	2,323,197				
12/31/2011	2,382,965	2,343,402	2,329,488	2,337,867	2,339,440	2,339,474					
12/31/2012	2,472,804	2,407,485	2,365,708	2,378,965	2,372,693						
12/31/2013	2,450,463	2,625,221	2,663,030	2,688,262							
12/31/2014	2,341,153	2,238,435	2,216,219								
12/31/2015	2,663,961	2,561,977									
12/31/2016	2,538,379										

Link Ratios

Accident										
Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123:111	135:123
12/31/2006	0.918	0.999	1.001	0.999	0.996	1.000	1.000	0.999	1.000	1.000
12/31/2007	1.028	0.998	1.015	0.999	0.991	1.001	0.995	1.000	1.000	
12/31/2008	0.953	1.003	1.012	1.016	1.014	0.982	0.999	0.999		
12/31/2009	1.009	0.992	1.002	1.005	1.001	1.000	1.000			
12/31/2010	0.965	1.008	1.020	1.009	1.001	1.001				
12/31/2011	0.983	0.994	1.004	1.001	1.000					
12/31/2012	0.974	0.983	1.006	0.997						
12/31/2013	1.071	1.014	1.009							
12/31/2014	0.956	0.990								
12/31/2015	0.962									
Best 3 of 5	0.973	0.997	1.006	1.005	1.001	1.000	0.999	0.999	1.000	1.000
To Ultimate	0.980	1.007	1.010	1.004	0.999	0.998	0.998	0.999	1.000	1.000

\$5000 Limit Loss Development  
Private Passenger Types  
Medical Payments  
Multistate  
Incurred Losses and ALAE

Incurred Losses

Accident											
Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months	99 Months	111 Months	123 Months	135 Months
12/31/2006	3,721,166	3,375,926	3,394,135	3,388,529	3,395,097	3,374,418	3,370,248	3,370,052	3,369,972	3,369,808	3,369,645
12/31/2007	3,636,112	3,717,435	3,662,174	3,685,332	3,680,793	3,657,896	3,662,368	3,650,735	3,650,735	3,650,735	
12/31/2008	3,700,493	3,492,444	3,479,857	3,492,203	3,510,023	3,543,447	3,502,705	3,498,317	3,497,162		
12/31/2009	3,958,284	3,862,780	3,828,809	3,789,358	3,794,068	3,792,824	3,792,973	3,792,618			
12/31/2010	4,175,556	3,933,910	3,934,369	3,948,894	3,953,659	3,951,274	3,960,535				
12/31/2011	4,393,703	4,260,677	4,203,534	4,179,424	4,177,454	4,162,835					
12/31/2012	4,508,620	4,346,937	4,204,011	4,195,411	4,180,248						
12/31/2013	4,399,489	4,476,301	4,484,506	4,493,511							
12/31/2014	4,188,317	3,878,024	3,826,847								
12/31/2015	4,954,531	4,609,444									
12/31/2016	4,697,573										

Link Ratios

Accident										
Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123:111	135:123
12/31/2006	0.907	1.005	0.998	1.002	0.994	0.999	1.000	1.000	1.000	1.000
12/31/2007	1.022	0.985	1.006	0.999	0.994	1.001	0.997	1.000	1.000	
12/31/2008	0.944	0.996	1.004	1.005	1.010	0.989	0.999	1.000		
12/31/2009	0.976	0.991	0.990	1.001	1.000	1.000	1.000			
12/31/2010	0.942	1.000	1.004	1.001	0.999	1.002				
12/31/2011	0.970	0.987	0.994	1.000	0.997					
12/31/2012	0.964	0.967	0.998	0.996						
12/31/2013	1.017	1.002	1.002							
12/31/2014	0.926	0.987								
12/31/2015	0.930									
Best 3 of 5	0.955	0.991	0.998	1.001	0.999	1.000	0.999	1.000	1.000	1.000
To Ultimate	0.944	0.988	0.997	0.999	0.998	0.999	0.999	1.000	1.000	1.000



\$500 Limit Loss Development  
Public Autos and Buses  
Medical Payments  
Multistate  
Incurred Losses and ALAE

Incurred Losses

Accident

Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months	99 Months	111 Months	123 Months	135 Months
12/31/2006	699,838	668,937	664,930	695,651	698,527	698,507	700,007	700,007	699,507	699,507	699,507
12/31/2007	572,496	515,666	523,785	517,895	518,773	519,556	519,056	519,556	519,056	519,056	
12/31/2008	536,740	485,156	481,422	473,506	472,996	475,801	458,116	462,214	462,303		
12/31/2009	519,687	467,064	448,821	449,034	470,971	449,491	449,491	449,491			
12/31/2010	668,853	596,371	590,777	581,000	583,598	583,844	586,114				
12/31/2011	644,297	612,965	602,997	601,592	595,492	594,772					
12/31/2012	624,746	574,302	574,157	588,169	623,459						
12/31/2013	612,231	608,098	626,153	656,860							
12/31/2014	554,552	451,218	497,852								
12/31/2015	561,474	548,285									
12/31/2016	591,243										

Link Ratios

Accident

Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123:111	135:123
12/31/2006	0.956	0.994	1.046	1.004	1.000	1.002	1.000	0.999	1.000	1.000
12/31/2007	0.901	1.016	0.989	1.002	1.002	0.999	1.001	0.999	1.000	
12/31/2008	0.904	0.992	0.984	0.999	1.006	0.963	1.009	1.000		
12/31/2009	0.899	0.961	1.000	1.049	0.954	1.000	1.000			
12/31/2010	0.892	0.991	0.983	1.004	1.000	1.004				
12/31/2011	0.951	0.984	0.998	0.990	0.999					
12/31/2012	0.919	1.000	1.024	1.060						
12/31/2013	0.993	1.030	1.049							
12/31/2014	0.814	1.103								
12/31/2015	0.977									
Best 3 of 5	0.949	1.007	1.008	1.017	1.000	1.000	1.002	1.000	1.000	1.000
To Ultimate	0.982	1.034	1.027	1.019	1.002	1.002	1.002	1.000	1.000	1.000

\$1000 Limit Loss Development  
Public Autos and Buses  
Medical Payments  
Multistate  
Incurred Losses and ALAE

Incurred Losses

Accident												
Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months	99 Months	111 Months	123 Months	135 Months	
12/31/2006	1,226,424	1,087,936	1,064,542	1,093,211	1,096,087	1,096,067	1,099,067	1,099,067	1,098,229	1,098,229	1,098,229	
12/31/2007	993,408	876,610	870,240	859,846	861,402	862,684	861,684	862,684	861,684	861,684		
12/31/2008	916,589	805,433	785,504	774,182	771,672	773,571	755,886	759,984	760,073			
12/31/2009	926,685	804,270	764,162	757,057	778,073	757,277	757,277	757,277				
12/31/2010	1,187,978	1,011,154	982,665	957,465	961,164	961,410	964,180					
12/31/2011	1,105,152	1,022,436	996,105	993,664	983,368	983,649						
12/31/2012	1,077,404	951,458	943,756	955,044	990,612							
12/31/2013	1,061,489	1,024,632	1,048,498	1,077,292								
12/31/2014	984,233	828,636	868,446									
12/31/2015	992,025	927,666										
12/31/2016	1,027,641											

Link Ratios

Accident												
Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123:111	135:123		
12/31/2006	0.887	0.978	1.027	1.003	1.000	1.003	1.000	0.999	1.000	1.000		
12/31/2007	0.882	0.993	0.988	1.002	1.001	0.999	1.001	0.999	1.000			
12/31/2008	0.879	0.975	0.986	0.997	1.002	0.977	1.005	1.000				
12/31/2009	0.868	0.950	0.991	1.028	0.973	1.000	1.000					
12/31/2010	0.851	0.972	0.974	1.004	1.000	1.003						
12/31/2011	0.925	0.974	0.998	0.990	1.000							
12/31/2012	0.883	0.992	1.012	1.037								
12/31/2013	0.965	1.023	1.027									
12/31/2014	0.842	1.048										
12/31/2015	0.935											
Best 3 of 5	0.914	0.996	1.000	1.009	1.001	1.001	1.002	0.999	1.000	1.000		
To Ultimate	0.921	1.008	1.012	1.012	1.003	1.002	1.001	0.999	1.000	1.000		

\$2000 Limit Loss Development  
Public Autos and Buses  
Medical Payments  
Multistate  
Incurred Losses and ALAE

Incurred Losses

Accident

Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months	99 Months	111 Months	123 Months	135 Months
12/31/2006	1,766,101	1,496,719	1,443,939	1,465,849	1,468,725	1,468,705	1,474,553	1,474,553	1,473,715	1,473,715	1,473,715
12/31/2007	1,352,831	1,178,315	1,161,059	1,145,761	1,148,317	1,150,599	1,148,599	1,150,599	1,148,599	1,148,599	
12/31/2008	1,426,563	1,221,126	1,169,938	1,152,443	1,149,100	1,150,034	1,131,780	1,135,878	1,135,967		
12/31/2009	1,511,823	1,269,959	1,187,429	1,164,800	1,183,766	1,163,970	1,163,970	1,163,970			
12/31/2010	1,865,320	1,526,788	1,452,402	1,406,695	1,410,116	1,410,362	1,414,045				
12/31/2011	1,727,393	1,541,915	1,473,573	1,468,710	1,454,390	1,454,745					
12/31/2012	1,682,538	1,414,161	1,400,092	1,402,732	1,438,995						
12/31/2013	1,714,533	1,603,327	1,634,025	1,646,046							
12/31/2014	1,632,293	1,351,536	1,376,239								
12/31/2015	1,650,250	1,504,938									
12/31/2016	1,687,298										

Link Ratios

Accident

Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123:111	135:123
12/31/2006	0.847	0.965	1.015	1.002	1.000	1.004	1.000	0.999	1.000	1.000
12/31/2007	0.871	0.985	0.987	1.002	1.002	0.998	1.002	0.998	1.000	
12/31/2008	0.856	0.958	0.985	0.997	1.001	0.984	1.004	1.000		
12/31/2009	0.840	0.935	0.981	1.016	0.983	1.000	1.000			
12/31/2010	0.819	0.951	0.969	1.002	1.000	1.003				
12/31/2011	0.893	0.956	0.997	0.990	1.000					
12/31/2012	0.840	0.990	1.002	1.026						
12/31/2013	0.935	1.019	1.007							
12/31/2014	0.828	1.018								
12/31/2015	0.912									
Best 3 of 5	0.882	0.988	0.993	1.005	1.000	1.000	1.001	0.999	1.000	1.000
To Ultimate	0.870	0.986	0.998	1.005	1.000	1.000	1.000	0.999	1.000	1.000

\$5000 Limit Loss Development  
Public Autos and Buses  
Medical Payments  
Multistate  
Incurred Losses and ALAE

Incurred Losses

Accident												
Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months	75 Months	87 Months	99 Months	111 Months	123 Months	135 Months	
12/31/2006	2,785,068	2,243,083	2,126,078	2,143,552	2,145,672	2,145,606	2,152,382	2,152,382	2,151,544	2,151,544	2,151,544	
12/31/2007	2,106,170	1,816,163	1,738,619	1,702,803	1,704,270	1,709,487	1,706,105	1,711,105	1,706,105	1,706,105		
12/31/2008	2,153,119	1,851,226	1,703,050	1,661,275	1,648,797	1,648,857	1,630,351	1,634,148	1,634,086			
12/31/2009	2,491,683	1,977,321	1,839,088	1,794,139	1,812,769	1,790,289	1,790,289	1,790,289				
12/31/2010	3,076,739	2,390,679	2,208,987	2,133,295	2,133,485	2,133,731	2,139,985					
12/31/2011	2,869,407	2,481,648	2,315,738	2,305,442	2,268,052	2,268,406						
12/31/2012	2,734,074	2,159,460	2,096,756	2,073,968	2,108,169							
12/31/2013	2,866,127	2,515,960	2,571,384	2,549,996								
12/31/2014	2,793,041	2,212,994	2,219,749									
12/31/2015	2,851,665	2,530,774										
12/31/2016	2,985,496											

Link Ratios

Accident												
Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123:111	135:123		
12/31/2006	0.805	0.948	1.008	1.001	1.000	1.003	1.000	1.000	1.000	1.000		
12/31/2007	0.862	0.957	0.979	1.001	1.003	0.998	1.003	0.997	1.000			
12/31/2008	0.860	0.920	0.975	0.992	1.000	0.989	1.002	1.000				
12/31/2009	0.794	0.930	0.976	1.010	0.988	1.000	1.000					
12/31/2010	0.777	0.924	0.966	1.000	1.000	1.003						
12/31/2011	0.865	0.933	0.996	0.984	1.000							
12/31/2012	0.790	0.971	0.989	1.016								
12/31/2013	0.878	1.022	0.992									
12/31/2014	0.792	1.003										
12/31/2015	0.887											
Best 3 of 5	0.845	0.969	0.985	1.001	1.000	1.000	1.001	0.999	1.000	1.000		
To Ultimate	0.807	0.955	0.986	1.001	1.000	1.000	1.000	0.999	1.000	1.000		

Table 2: Summary of Loss Experience Review		Earned Car	Aggregate Loss	Trended and	Calculated	Indicated
	year	Years	Cost at Current Level	Developed Losses	Claim Count	Change
Trucks, Tractors and Trailers \$500 Limit	2011	2,388,171	22,902,771	1,500,065	2,611	-93%
	2012	2,470,768	23,626,377	1,590,164	2,556	-93%
	2013	2,630,429	25,140,572	1,799,420	2,615	-93%
	2014	2,690,849	25,571,828	1,680,960	2,757	-93%
	2015	2,788,305	26,544,825	1,940,491	2,980	-93%
	2016	2,888,156	27,518,393	1,789,927	2,611	-93%
Trucks, Tractors and Trailers \$1000 Limit	2011	2,347,050	35,518,830	2,497,650	2,556	-93%
	2012	2,432,845	36,706,367	2,468,552	2,494	-93%
	2013	2,592,296	39,098,849	2,643,041	2,508	-93%
	2014	2,634,474	39,530,199	2,491,749	2,529	-94%
	2015	2,713,388	40,772,283	2,887,357	2,857	-93%
	2016	2,808,286	42,274,276	2,697,388	2,564	-94%
Trucks, Tractors and Trailers \$2000 Limit	2011	2,180,463	44,990,947	4,044,554	2,420	-91%
	2012	2,274,936	46,797,212	3,777,620	2,290	-92%
	2013	2,434,748	50,089,460	3,993,456	2,352	-92%
	2014	2,478,993	50,719,920	3,814,726	2,329	-92%
	2015	2,556,137	52,351,467	4,319,600	2,612	-92%
	2016	2,650,603	54,425,330	4,113,023	2,379	-92%
Trucks, Tractors and Trailers \$5000 Limit	2011	2,010,211	60,798,695	7,209,991	2,248	-88%
	2012	2,114,211	63,637,316	6,625,246	2,127	-90%
	2013	2,271,861	68,378,861	6,792,089	2,185	-90%
	2014	2,318,461	69,443,412	6,631,986	2,182	-90%
	2015	2,399,188	71,953,804	7,448,372	2,454	-90%
	2016	2,493,969	74,976,803	7,076,839	2,193	-91%

Table 2: Summary of Loss Experience Review (Continued)		Earned Car	Aggregate Loss	Trended and	Calculated	
	year	Years	Cost at Current Level	Developed Losses	Claim Count	Indicated Change
Private Passenger Types \$500 Limit	2011	530,157	3,285,602	776,668	1,598	-76%
	2012	524,797	3,259,218	804,246	1,600	-75%
	2013	547,386	3,397,560	1,111,370	1,587	-67%
	2014	543,223	3,376,771	723,544	1,492	-79%
	2015	558,260	3,480,649	847,875	1,687	-76%
	2016	564,653	3,529,774	829,759	1,588	-76%
Private Passenger Types \$1000 Limit	2011	519,120	5,520,584	1,374,539	1,567	-75%
	2012	513,476	5,474,906	1,405,544	1,557	-74%
	2013	535,723	5,709,545	1,688,111	1,542	-70%
	2014	527,865	5,638,204	1,237,654	1,442	-78%
	2015	538,381	5,767,166	1,450,223	1,625	-75%
	2016	540,899	5,808,590	1,418,566	1,538	-76%
Private Passenger Types \$2000 Limit	2011	490,075	7,252,605	2,296,993	1,481	-68%
	2012	486,190	7,213,119	2,326,952	1,485	-68%
	2013	509,275	7,552,434	2,556,844	1,463	-66%
	2014	502,962	7,476,126	2,032,803	1,364	-73%
	2015	513,885	7,655,554	2,376,037	1,547	-69%
	2016	517,442	7,727,932	2,299,206	1,435	-70%
Private Passenger Types \$5000 Limit	2011	460,556	8,758,837	4,124,864	1,415	-53%
	2012	458,234	8,731,230	4,125,409	1,387	-53%
	2013	481,428	9,170,476	4,263,407	1,383	-54%
	2014	476,585	9,099,584	3,507,439	1,263	-61%
	2015	488,907	9,352,818	4,225,614	1,476	-55%
	2016	493,964	9,471,869	4,119,651	1,358	-57%

Table 2: Summary of Loss Experience Review (Continued)		Earned Car	Aggregate Loss	Trended and	Calculated	Indicated
	year	Years	Cost at Current Level	Developed Losses	Claim Count	Change
Other Buses \$500 Limit	2011	73,775	1,171,460	242,891	510	-79%
	2012	73,752	1,163,821	312,581	544	-73%
	2013	77,248	1,221,995	320,225	558	-74%
	2014	79,840	1,276,390	266,649	538	-79%
	2015	81,298	1,325,206	309,062	603	-77%
	2016	88,707	1,437,134	330,336	616	-77%
Other Buses \$1000 Limit	2011	69,311	1,342,097	401,700	501	-70%
	2012	69,000	1,328,802	484,070	531	-64%
	2013	74,116	1,428,945	517,916	549	-64%
	2014	78,522	1,528,615	454,567	527	-70%
	2015	80,050	1,584,731	507,170	580	-68%
	2016	80,033	1,588,094	565,125	607	-64%
Other Buses \$2000 Limit	2011	64,738	1,614,667	587,940	473	-64%
	2012	64,550	1,594,829	689,326	502	-57%
	2013	69,513	1,716,514	733,844	518	-57%
	2014	73,914	1,843,061	707,342	506	-62%
	2015	75,603	1,918,276	810,278	563	-58%
	2016	75,222	1,918,461	914,013	586	-52%
Other Buses \$5000 Limit	2011	61,235	2,080,588	953,664	452	-54%
	2012	61,066	2,051,247	1,008,396	450	-51%
	2013	65,907	2,212,614	1,184,106	484	-46%
	2014	70,142	2,372,398	1,132,085	465	-52%
	2015	71,695	2,472,855	1,436,886	546	-42%
	2016	71,841	2,501,396	1,650,502	560	-34%

Table 2: Summary of Loss Experience Review (Continued)		Earned Car	Aggregate Loss	Trended and	Calculated	
	year	Years	Cost at Current	Developed	Claim	Indicated
			Level	Losses	Count	Change
School and Church Buses \$500 Limit	2011	117,811	1,222,648	356,118	747	-71%
	2012	112,537	1,184,790	302,150	661	-74%
	2013	111,271	1,186,941	346,737	740	-71%
	2014	108,227	1,162,852	270,531	586	-77%
	2015	104,528	1,142,794	321,264	608	-72%
	2016	104,100	1,154,564	306,911	625	-73%
School and Church Buses \$1000 Limit	2011	117,347	1,811,665	591,981	744	-67%
	2012	112,145	1,755,892	505,778	661	-71%
	2013	110,923	1,759,555	576,800	707	-67%
	2014	107,860	1,722,206	470,680	585	-73%
	2015	102,799	1,651,537	514,527	594	-69%
	2016	99,844	1,617,738	518,769	611	-68%
School and Church Buses \$2000 Limit	2011	112,158	2,103,625	888,267	711	-58%
	2012	107,670	2,045,777	754,925	630	-63%
	2013	106,706	2,055,111	932,621	677	-55%
	2014	103,932	2,013,796	736,313	532	-63%
	2015	99,102	1,932,324	803,807	581	-58%
	2016	96,337	1,895,262	839,258	590	-56%
School and Church Buses \$5000 Limit	2011	105,510	2,554,979	1,347,943	657	-47%
	2012	101,477	2,488,842	1,143,923	612	-54%
	2013	100,878	2,506,433	1,442,075	642	-42%
	2014	98,798	2,472,682	1,161,344	519	-53%
	2015	94,422	2,378,493	1,237,990	554	-48%
	2016	91,743	2,329,857	1,393,893	571	-40%



Table 2: Summary of Loss Experience Review (Continued)		Earned Car	Aggregate Loss	Trended and	Calculated	Indicated
	year	Years	Cost at Current Level	Developed Losses	Claim Count	Change
Taxis and Limousines \$500 Limit	2011	1,349	63,749	12,827	22	-80%
	2012	1,852	86,864	20,309	25	-77%
	2013	2,060	108,227	19,841	42	-82%
	2014	2,239	115,269	19,541	40	-83%
	2015	2,409	124,134	16,354	33	-87%
	2016	2,456	115,754	12,628	25	-89%
Taxis and Limousines \$1000 Limit	2011	1,168	78,299	21,823	21	-72%
	2012	1,702	114,795	29,501	25	-74%
	2013	1,907	142,429	37,076	42	-74%
	2014	2,004	146,936	36,252	40	-75%
	2015	2,154	152,236	28,674	31	-81%
	2016	2,224	141,535	21,582	24	-85%
Taxis and Limousines \$2000 Limit	2011	1,040	101,697	33,119	18	-67%
	2012	1,512	147,033	43,283	24	-71%
	2013	1,771	191,286	57,392	38	-70%
	2014	1,881	199,331	64,304	40	-68%
	2015	2,018	207,854	53,352	31	-74%
	2016	2,116	194,465	30,817	21	-84%
Taxis and Limousines \$5000 Limit	2011	883	127,944	63,556	17	-50%
	2012	1,330	190,838	58,036	21	-70%
	2013	1,572	253,751	85,636	26	-66%
	2014	1,697	269,066	128,798	37	-52%
	2015	1,801	280,111	90,549	26	-68%
	2016	1,858	253,317	39,727	13	-84%

Table 2: Summary of Loss Experience Review (Continued)		Earned Car	Aggregate Loss	Trended and	Calculated	Indicated
	year	Years	Cost at Current Level	Developed Losses	Claim Count	Change
Van Pools \$500 Limit	2011	2,484	92,038	4,046	9	-96%
	2012	2,352	89,463	6,604	8	-93%
	2013	2,536	97,716	5,309	11	-95%
	2014	2,586	101,732	9,430	22	-91%
	2015	3,178	127,675	8,793	16	-93%
	2016	3,484	137,222	4,797	8	-97%
Van Pools \$1000 Limit	2011	2,437	126,657	7,266	9	-94%
	2012	2,306	122,977	8,608	8	-93%
	2013	2,491	134,431	8,528	11	-94%
	2014	2,463	135,438	18,107	22	-87%
	2015	3,097	174,973	13,148	15	-92%
	2016	3,449	191,304	6,776	8	-96%
Van Pools \$2000 Limit	2011	2,166	138,872	12,487	9	-91%
	2012	2,103	138,866	12,591	8	-91%
	2013	2,318	154,057	13,799	10	-91%
	2014	2,347	157,462	35,067	22	-78%
	2015	3,038	207,995	20,548	15	-90%
	2016	3,394	227,952	10,572	8	-95%
Van Pools \$5000 Limit	2011	1,943	160,989	27,487	9	-83%
	2012	1,861	159,068	14,809	7	-91%
	2013	2,135	184,533	21,799	8	-88%
	2014	2,194	191,311	78,608	20	-59%
	2015	2,837	251,894	25,667	12	-90%
	2016	3,167	275,757	20,297	8	-93%

### Current Relativities, Indicated Changes, and Selections

Loss experience is compared to Aggregate Loss Cost at Current Level in Tables 2 and 3. Sizable decreases are indicated for all vehicles and limits. Due to the size of the indicated decreases, we selected changes that were 5% above each indication, in order to slightly temper the indications. Volume was smallest for Van Pools, but we noted that the existing Van Pools relativities were significantly higher than the other vehicle types, which makes the indicated decreases more credible. The new Van Pools relativities are more in line with the relativities for the other vehicle types. For this reason we didn't deem it necessary to temper the indication beyond the 5% margin we used for the other classes.

Table 3: Medical Payments Relativity Selections		Trended and							
	Limit	Earned Car Years	Aggregate LC at Current Level	Developed Losses	Calculated Claim Count	Indicated Change	Selected Change	Current Relativity	Selected Relativity
Trucks, Tractors and Trailers	500	190,280,126	151,304,766	10,301,026	16,130	-93.2%	-88.2%	0.0360	0.0043
	1000	186,340,059	233,900,804	15,685,736	15,508	-93.3%	-88.3%	0.0570	0.0067
	2000	174,910,553	299,374,336	24,062,978	14,382	-92.0%	-87.0%	0.0780	0.0102
	5000	163,294,810	409,188,891	41,784,523	13,389	-89.8%	-84.8%	0.1140	0.0173
Private Passenger Types	500	39,221,709	20,329,574	5,093,462	9,552	-74.9%	-69.9%	0.0210	0.0063
	1000	38,105,559	33,918,995	8,574,636	9,271	-74.7%	-69.7%	0.0360	0.0109
	2000	36,237,947	44,877,770	13,888,837	8,775	-69.1%	-64.1%	0.0500	0.0180
	5000	34,316,083	54,584,814	24,366,383	8,282	-55.4%	-50.4%	0.0640	0.0318
Other Buses	500	5,695,447	7,596,006	1,781,744	3,369	-76.5%	-71.5%	0.0320	0.0091
	1000	5,412,369	8,801,284	2,930,548	3,295	-66.7%	-61.7%	0.0390	0.0149
	2000	5,082,487	10,605,808	4,442,743	3,148	-58.1%	-53.1%	0.0500	0.0234
	5000	4,822,631	13,691,097	7,365,638	2,957	-46.2%	-41.2%	0.0680	0.0400
School and Church Buses	500	7,901,694	7,054,590	1,903,711	3,967	-73.0%	-68.0%	0.0430	0.0138
	1000	7,811,016	10,318,593	3,178,536	3,902	-69.2%	-64.2%	0.0640	0.0229
	2000	7,510,857	12,045,896	4,955,190	3,721	-58.9%	-53.9%	0.0780	0.0360
	5000	7,113,937	14,731,286	7,727,169	3,555	-47.5%	-42.5%	0.1000	0.0575
Taxis and Limousines	500	148,391	613,996	101,500	187	-83.5%	-78.5%	0.0360	0.0078
	1000	133,917	776,230	174,907	183	-77.5%	-72.5%	0.0500	0.0138
	2000	124,056	1,041,666	282,268	172	-72.9%	-67.9%	0.0710	0.0228
	5000	109,692	1,375,027	466,302	140	-66.1%	-61.1%	0.1070	0.0416
Van Pools	500	199,437	645,845	38,979	74	-94.0%	-89.0%	0.0710	0.0078
	1000	194,896	885,780	62,432	73	-93.0%	-88.0%	0.1000	0.0120
	2000	184,400	1,025,204	105,063	72	-89.8%	-84.8%	0.1210	0.0185
	5000	169,635	1,223,553	188,667	64	-84.6%	-79.6%	0.1570	0.0321

## Predictive Modeling

We performed a predictive modeling exercise in concert with the traditional loss experience review. Relativities will vary by territory for Trucks, Tractors and Trailers, and for Buses. Attempts to make similar improvements for Private Passenger Types and Public Autos failed to significantly improve loss prediction, so those classes are unaffected and only receive a change due to the loss experience review.

We first modeled losses per exposure. Then we converted the modeling results into an adjustment to the territorial Medical Payments Loss Costs rather than implementing a more complicated rating formula with new factors reflecting vehicle classes. The primary reason for this was the information technology implementation cost savings.

Table 4:

Model

Characteristics	<u>Trucks, Tractors, and Trailers</u>	<u>Buses</u>
Loss Distribution	Tweedie	Tweedie
Link Function	Log	Log
Offset	Base Loss Cost and Trailer Factor	Base Loss Cost and Class Factor
Weight	Count of Car-Years	Count of Car-Years
Target Variable	Loss and Expense per Car-Year	Loss and Expense per Car-Year
Control Variables	Year	Year, Major Class
Training Dataset	Accident Years 2011-2013	Accident Years 2011-2013
Holdout Dataset	Accident Years 2014-2016	Accident Years 2014-2016

We found that certain segmentations based on vehicle class were predictive. Three class-based segmentations improved loss predictions for Trucks, Tractors, and Trailers:

- The Truckers and Contractors Secondary Classes were separated from the rest of the secondary classes.
- Fleet vehicles were separated from Non-Fleet vehicles.
- Vehicles were categorized by class as Light, Medium, Heavy and Extra Heavy, or Trailers.

One class-based difference was detected for Buses: Medium Radius Buses versus all other Buses.

We also found that the Liability base loss costs have more variation than medical payments losses: Medical Payment losses are higher in higher-rated liability territories, but not as much higher as we see in Bodily Injury and Property Damage. Thus, in comparison to the current rating structure, the best possible prediction was lower in high-rated territories and higher in low-rated territories.

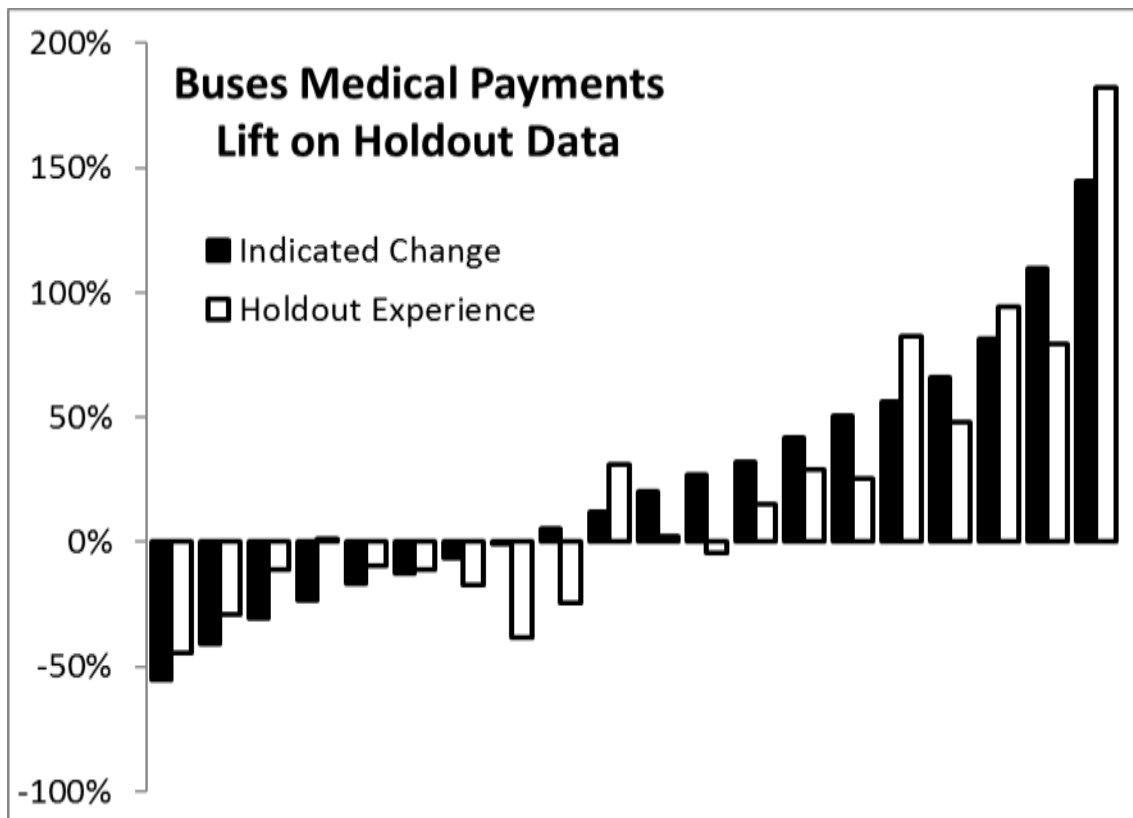
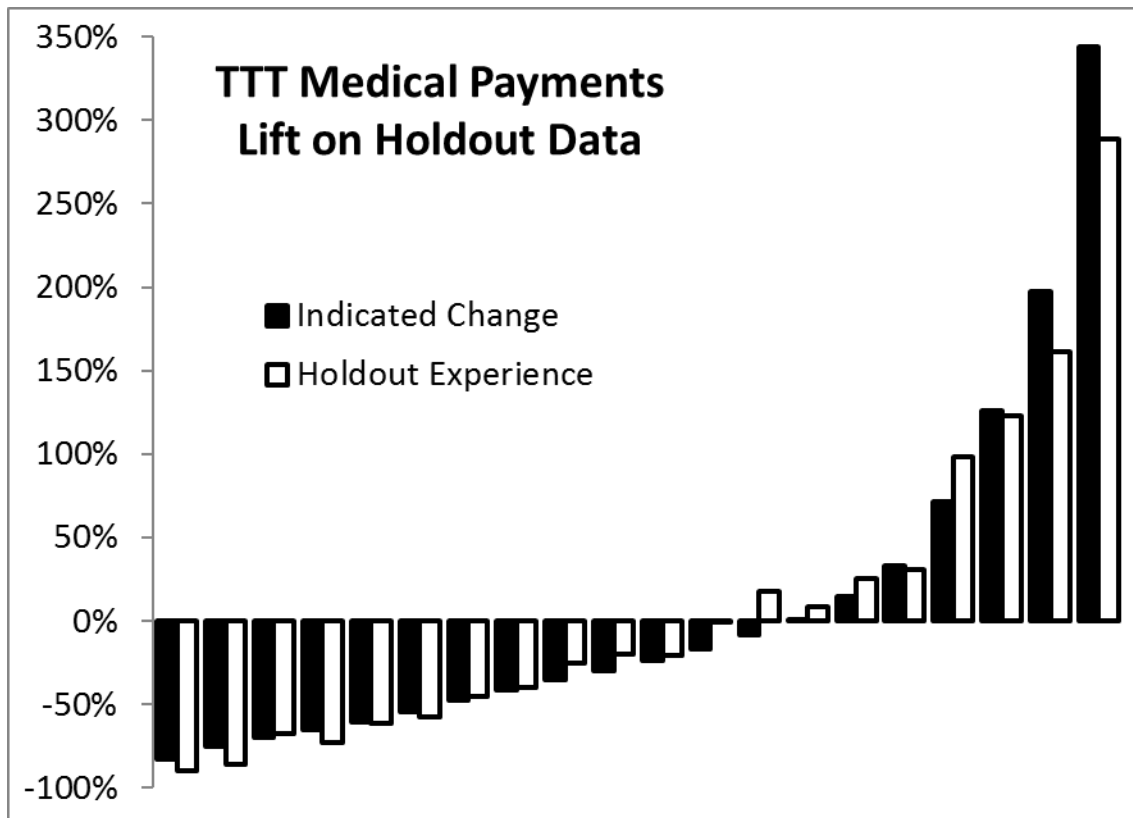
A summary of predictive model indications can be found in Table 5. With the exception of the base loss cost exponent, these results are expressed as if they were to be used in a multiplicative

class plan, although we choose not to implement the results via rating factors, as is discussed below.

We used the log of the base loss cost as a continuous variable in the model. The result of this approach is that the model estimates an exponent—the number to which the Liability Base Loss Cost would be raised, *before* applying the medical payments relativity. A positive exponent between zero and one means that the differences between territories is being compressed towards the middle.

Table 5: Predictive Modeling Indications		Training	All Data
Trucks, Tractors, and Trailers	<u>Fleet Size</u>		
	Fleet	0.27	0.29
	Non-Fleet	1.00	1.00
	<u>Weight</u>		
	Light	1.00	1.00
	Medium	0.51	0.50
	Heavy and Extra Heavy	0.31	0.30
	Trailers	0.50	0.45
	<u>Secondary Class</u>		
	Truckers	4.50	6.64
	Contractors	1.24	1.25
	All Other Secondary Classes	1.00	1.00
	<u>Territory</u>		
	Base Loss Cost (exponent)	0.35	0.40
Buses	<u>Radius</u>		
	Intermediate	0.55	0.50
	All other Radii	1.00	1.00
	<u>Territory</u>		
	Base Loss Cost (exponent)	0.19	0.32

Two lift charts follow, visually displaying the modeling results in 20 deciles. The indicated change, based on the model developed on the training dataset, is compared with the actual loss experience on the holdout dataset. The large percentage changes on the vertical access show that the model is separating risks well by loss propensity. The close correspondence between the black and white bars shows that the loss predictions from the model are quite accurate even on holdout data. (Both new and old loss costs have been rescaled to match the aggregate losses, in totoal, in order to measure lift. This allows us to zero in on the differentiation between risks, rather than the overall adequacy.)



Implementing a Medical Payment Classification Plan based on our results would be too expensive relative to the volume of premium and losses involved, yet in light of the sizable improvements the model was able to generate, we are reluctant to leave the rating totally unchanged. We decided to adjust the Medical Payments Relativities in each territory to reflect the average impact of the modeled differences. This preserves much of the loss prediction improvement without requiring any technology changes for participating insurers that use our loss costs.

Two necessary adjustments were made to the average modeled class factor in each territory. First, territories with relatively few exposures were assigned a statewide average instead of a territory average. (The cutoffs were 2500 car-years for Trucks, Tractors, and Trailers, and 167 car-years for Buses.) Next, the new set of averaged class factors for each territory were rebalanced so that their implementation would be revenue neutral on a country-wide basis. This allows us to combine the average class factors directly with the selected medical payments relativities from our experience level review, and still achieve the desired overall change.

Once the new Medical Payments Loss Costs were calculated and rounded to the nearest dollar, in some territories we selected higher values in order to ensure

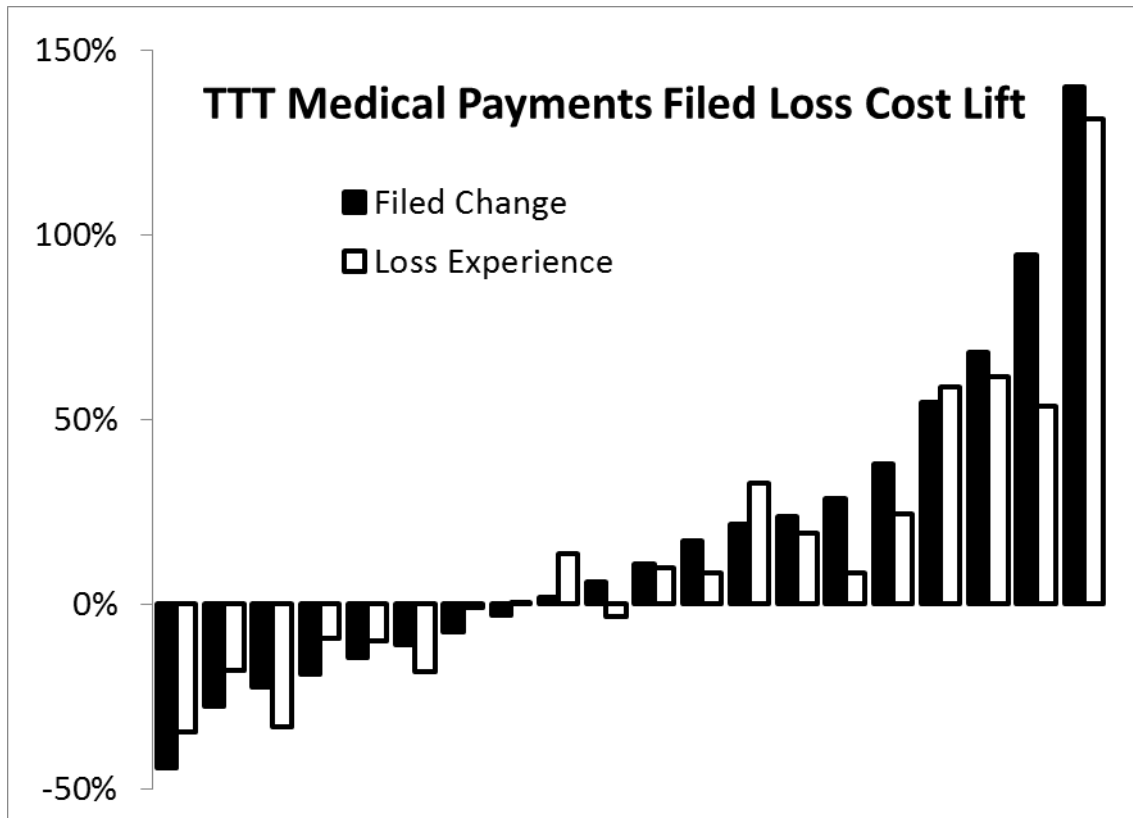
- that all the loss costs were greater than zero after rounding, and that
- each increase in the medical payments coverage resulted in an increase in premium.

The impact of these two adjustments was minimal.

It is worth inquiring, after

- averaging the model results within each territory, and
- rounding the new loss costs to the nearest whole dollar, and
- inflating a few of the loss costs to avoid zeroes and matching values for different limits,

whether there was still a significant improvement in loss prediction, or whether it was obscured by these various necessary adjustments. Lift charts comparing the actual filed rates to the current rates are on the following page. We're happy to report that the improvement in loss prediction is still quite good. The vertical axis of the lift chart shows less scale, but the changes are still quite significant. And the correspondence between the filed changes and the loss experience is still readily evident.





The revised multistate differentials that relate Medical Payments loss costs to the \$100,000 limit liability base loss costs are listed below:

### Missouri Medical Payments Relativities

Territory	Trucks, Tractors and Trailers				Private Passenger Types				Other Buses			
	Medical Payments Limit				Medical Payments Limit				Medical Payments Limit			
	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>5000</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>5000</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>5000</u>
102	0.0037	0.0058	0.0088	0.0149	0.0063	0.0109	0.0180	0.0318	0.0098	0.0161	0.0253	0.0432
104	0.0049	0.0076	0.0116	0.0196	0.0063	0.0109	0.0180	0.0318	0.0105	0.0172	0.0270	0.0462
105	0.0058	0.0090	0.0138	0.0234	0.0063	0.0109	0.0180	0.0318	0.0155	0.0254	0.0398	0.0681
106	0.0051	0.0080	0.0122	0.0207	0.0063	0.0109	0.0180	0.0318	0.0121	0.0199	0.0312	0.0534
108	0.0056	0.0088	0.0133	0.0226	0.0063	0.0109	0.0180	0.0318	0.0094	0.0154	0.0242	0.0413
109	0.0048	0.0074	0.0113	0.0192	0.0063	0.0109	0.0180	0.0318	0.0110	0.0180	0.0282	0.0483
110	0.0047	0.0073	0.0111	0.0189	0.0063	0.0109	0.0180	0.0318	0.0115	0.0189	0.0296	0.0507
112	0.0038	0.0059	0.0090	0.0152	0.0063	0.0109	0.0180	0.0318	0.0092	0.0151	0.0237	0.0405
116	0.0045	0.0071	0.0107	0.0182	0.0063	0.0109	0.0180	0.0318	0.0099	0.0163	0.0256	0.0437
117	0.0049	0.0076	0.0116	0.0197	0.0063	0.0109	0.0180	0.0318	0.0156	0.0256	0.0402	0.0686
125	0.0035	0.0055	0.0083	0.0141	0.0063	0.0109	0.0180	0.0318	0.0115	0.0189	0.0296	0.0507
126	0.0045	0.0070	0.0107	0.0181	0.0063	0.0109	0.0180	0.0318	0.0099	0.0162	0.0255	0.0435
127	0.0052	0.0080	0.0122	0.0207	0.0063	0.0109	0.0180	0.0318	0.0134	0.0220	0.0345	0.0590
128	0.0047	0.0073	0.0111	0.0188	0.0063	0.0109	0.0180	0.0318	0.0148	0.0242	0.0380	0.0650
129	0.0055	0.0085	0.0129	0.0219	0.0063	0.0109	0.0180	0.0318	0.0142	0.0232	0.0364	0.0623
131	0.0047	0.0073	0.0111	0.0189	0.0063	0.0109	0.0180	0.0318	0.0115	0.0189	0.0296	0.0507
132	0.0040	0.0063	0.0095	0.0162	0.0063	0.0109	0.0180	0.0318	0.0067	0.0110	0.0173	0.0295
133	0.0045	0.0070	0.0106	0.0180	0.0063	0.0109	0.0180	0.0318	0.0097	0.0159	0.0250	0.0427
134	0.0036	0.0056	0.0085	0.0145	0.0063	0.0109	0.0180	0.0318	0.0115	0.0189	0.0296	0.0507
135	0.0039	0.0060	0.0091	0.0155	0.0063	0.0109	0.0180	0.0318	0.0088	0.0144	0.0226	0.0387

### Missouri Medical Payments Relativities (Cont'd)

Territory	Trucks, Tractors and Trailers				Private Passenger Types				Other Buses			
	Medical Payments Limit				Medical Payments Limit				Medical Payments Limit			
	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>5000</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>5000</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>5000</u>
136	0.0037	0.0057	0.0087	0.0147	0.0063	0.0109	0.0180	0.0318	0.0099	0.0161	0.0254	0.0433
137	0.0051	0.0080	0.0121	0.0206	0.0063	0.0109	0.0180	0.0318	0.0115	0.0189	0.0296	0.0507
138	0.0044	0.0068	0.0103	0.0175	0.0063	0.0109	0.0180	0.0318	0.0147	0.0241	0.0378	0.0647

Territory	School and Church Buses				Taxis and Limos				Van Pools			
	Medical Payments Limit				Medical Payments Limit				Medical Payments Limit			
	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>5000</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>5000</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>5000</u>
102	0.0140	0.0233	0.0366	0.0585	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
104	0.0153	0.0255	0.0400	0.0639	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
105	0.0216	0.0358	0.0563	0.0899	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
106	0.0173	0.0287	0.0451	0.0720	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
108	0.0147	0.0244	0.0384	0.0614	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
109	0.0154	0.0256	0.0402	0.0643	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
110	0.0167	0.0278	0.0437	0.0698	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
112	0.0130	0.0216	0.0340	0.0543	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
116	0.0147	0.0243	0.0383	0.0611	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
117	0.0217	0.0360	0.0567	0.0905	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
125	0.0111	0.0185	0.0290	0.0464	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
126	0.0131	0.0217	0.0341	0.0544	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
127	0.0189	0.0314	0.0493	0.0787	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
128	0.0211	0.0351	0.0551	0.0880	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
129	0.0207	0.0343	0.0540	0.0862	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321

### Missouri Medical Payments Relativities (Cont'd)

Territory	School and Church Buses				Taxis and Limos				Van Pools			
	Medical Payments Limit				Medical Payments Limit				Medical Payments Limit			
	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>5000</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>5000</u>	<u>500</u>	<u>1000</u>	<u>2000</u>	<u>5000</u>
131	0.0167	0.0278	0.0437	0.0698	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
132	0.0167	0.0278	0.0437	0.0698	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
133	0.0139	0.0231	0.0362	0.0579	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
134	0.0115	0.0191	0.0301	0.0481	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
135	0.0125	0.0208	0.0327	0.0522	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
136	0.0167	0.0278	0.0437	0.0698	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
137	0.0174	0.0289	0.0455	0.0727	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
138	0.0208	0.0346	0.0543	0.0868	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321

## NON-OWNERSHIP LIABILITY LOSS COST REVIEW

A review of the Rule 89 Non-Ownership Liability loss costs was performed. Non-ownership liability insurance covers an employer from liability stemming from an employee using his or her car for employer business.

This review involved the following steps:

- 1) Class 6601 (0-25 employees) was segmented into smaller employee count ranges of 0-9, 10-19 and 20-25 employees. Classes 6602 (26-100), 6603 (101-500), 6604 (501-1000) and 6605 (over 1000) employee count ranges remain unchanged.
- 2) Predictive modeling was used to determine new class relativities for these employee count ranges and to reflect differences by state. These results were combined to produce an intermediate set of loss costs that maintain revenue neutrality on a multistate basis while better matching the relative experience differences between classes and states.
- 3) A multistate experience review was performed to calculate an overall indicated percentage change to these intermediate revenue neutral modeled loss costs based upon historical loss experience.
- 4) The overall percentage change was then applied to the intermediate loss costs to produce the final indicated prospective loss costs.

Details on the predictive modeling and the experience review follow.

## Predictive Modeling

State and Class differences for Non-Ownership Liability were developed using predictive models. Loss occurrence frequency and loss occurrence severity were modeled separately. In both cases we used a Generalized Linear Model.

Our dataset contained country-wide exposures and loss experience reported to ISO for five accident years through 12/31/2016. Losses were capped at the \$100,000 Basic Limit. Losses were not trended, developed, or adjusted for any expense loading.

Models were trained on Accident Years 2012-2014 and the fit was evaluated on 2015-2016. Once the final form of each model was established, a model with the same specification was rerun using all five years of data to yield the best possible prediction in the final result. The models are summarized in the table below, followed by discussion of particular aspects.

	<u>Frequency Model</u>	<u>Severity Model</u>
Loss Distribution	Negative Binomial	Gamma
Link Function	Log	Log
Offset	None	None
Weight	Count of Policy-Years	Count of Loss Occurrences
Target Variable	Occurrences per Policy-Year	Losses per Occurrence
Control Variables	Accident Year	Accident Year
Explanatory Variables	Employee Count	State Average PPT Liability Loss Cost

## Modeling Discussion

For frequency, the a priori distribution for random occurrences is the Poisson Distribution. However, insurance frequency data often exhibits over-dispersion, meaning the variance is higher than the mean, in contrast to the Poisson distribution's characteristic that the variance is equal to the mean. We verified that this was the case here and selected a negative binomial distribution. The negative binomial distribution results when the mean of the Poisson distribution is itself drawn from an unobservable gamma distribution.

For severity, we selected a gamma distribution to represent the dollars of Basic Limits Bodily Injury and Property Damage losses on a per-occurrence basis.

We used a log link function in both models to ensure that the results would take the form of a multiplicative expression.

The frequency model weight was a policy-year count. Note here that we are not using employee-months as the exposure basis. Instead, the number of employees will be used as a predictive variable in the model.

In lieu of loss trend and loss development, we included Accident Year as a variable in both models.

Both employee count and State Average PPT Liability Loss Cost were tested as variables for both Frequency and Severity. We found that employee count was predictive for frequency and the Average Loss Cost was predictive for severity. Discussion of both variables follows.

### Employee Count

The count of employees is the primary explanatory variable for Non-Ownership Liability and has an intuitive connection to accident frequency: Each employee of the insured company could potentially be using his or her personal vehicle for business purposes. Because the model uses a log link function, we actually used the log of employee count as our rating variable. When converting model indications to a calculation of predicted losses, this yields a multiplicative term of the form

$$(\text{Employee Count})^K$$

where K is estimated by the model. K was estimated to be 0.69. This result means that a 10% increase in the number of employees results in a prediction of about 6.8% more accidents.

We also included two binary flags as predictors, (discrete variables equal to either zero or one) which allow the model to apply a multiplicative factor to specific sets of records, if the loss experience supports that. The flags identified records with employee counts of 0 and 1, whose frequency experience did not match the general pattern. Policies with either 0 or 1 employee exhibited frequencies higher than the general pattern would otherwise indicate. Specifically, the prediction for frequencies on policies with one employee receives a factor of 1.87 and policies with zero employees received a factor of 4.04. Relatively speaking, the lowest frequency prediction was for a policy with two employees. Relative frequency predictions for select employee counts are summarized below to give an idea of the model's results.

<u>Employees</u>	<u>Relative Predicted Frequency</u>
0	2.51
1	1.16
2	1.00
3	1.32
4	1.61
5	1.88
10	3.03
50	9.18
100	14.79
500	44.79
1000	72.20

### State Average Private Passenger Types (PPT) Loss Cost

Our experience dataset does not contain location information for the non-owned vehicles, (for the obvious reason that this information is not readily obtainable,) but we do know the state the policy was written in. Cognizant that some states present more or less auto risk than others, we used the state average ISO Private Passenger Types (PPT) Liability Loss Cost as a proxy for general risk on the road, and treated this number as a continuous variable. Because the model uses a log link function, we used the log of the average loss cost as our rating variable. When converting model indications to a calculation of predicted losses, this yields a multiplicative term of the form

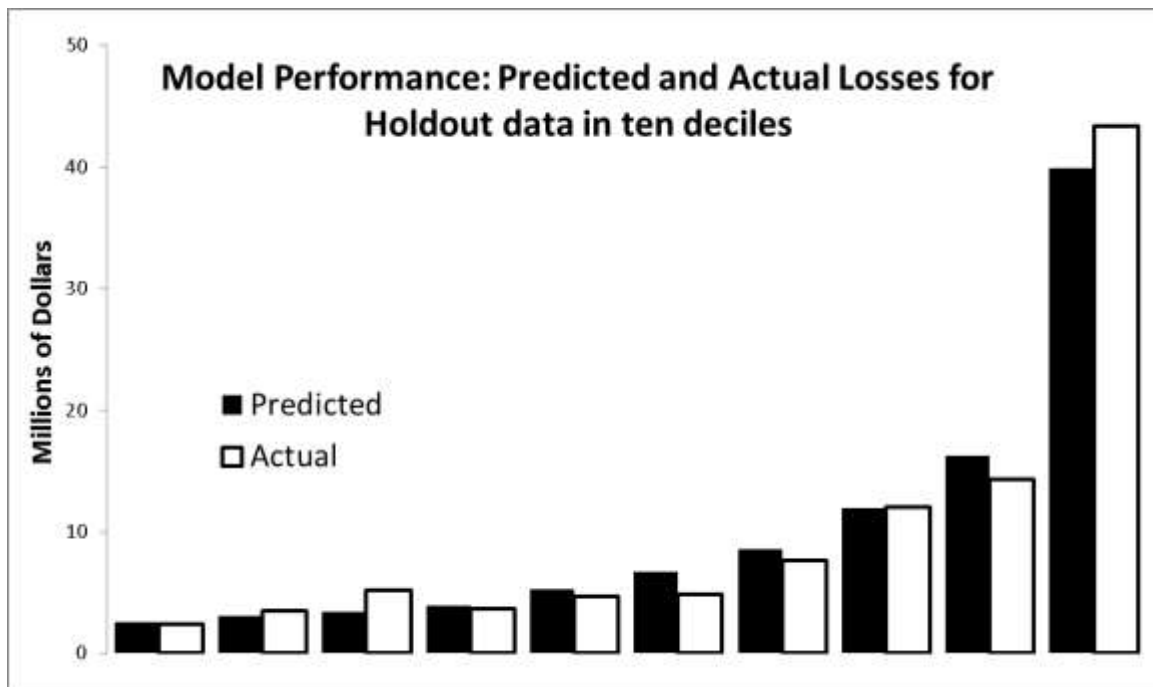
$$(\text{State Average Loss Cost})^K$$

where K is estimated by the model. K was estimated to be 0.39. This means that if one state has a 10% higher PPT Liability loss cost than a second state, the model predicts that the first state would have an average accident severity about 3.8% higher.

The somewhat low estimate of K for this variable shows that Non-Ownership Liability Losses do not vary as widely as Private Passenger Type Liability losses by state. The most expensive state is 5.80 times higher than the least expensive state when looking at the PPT Liability Average Loss Cost. In contrast, the Non-Ownership Liability loss prediction for the most expensive state is only 2.00 times the least expensive state. Nevertheless this is a significant difference in loss severity.

#### Performance of the Predictive Models:

The two models predicted occurrence per policy-year and loss per occurrence. We can multiply the predictions to yield loss per policy-year. The following chart shows the performance of this prediction after rebalancing, on ten equally sized deciles of hold-out data. The data has been sorted by the predicted loss per policy-year and then separated into deciles.



#### Calculation of Indicated Loss Costs

Additional work, described here, was necessary to calculate the loss costs for filing.

We first selected new employee count ranges as follows:

<u>Old Range</u>	<u>New Range</u>	<u>Policy Distribution</u>
	0 – 9	68%
0 – 25	10 – 19	9%
	20 – 25	15%
	26 – 100	6%
101 – 500	101 – 500	2%
501 – 1000	501 – 1000	<1%
1001 +	1001 +	<1%

Next we computed the average predicted loss per policy-year within each range on a country-wide basis to yield a set of class relativities representing the modeled relationship between the ranges or classes (“New Relationship”). Similar relationships can be calculated from the current ISO loss costs (“Current Relationship”).

<u>Range</u>	<u>Current Relationship</u>	<u>New Relationship</u>
0 – 9	1.00	1.00
10 – 19	1.00	2.13



20 – 25	1.00	3.43
26 – 100	2.33	5.79
101 – 500	5.10	15.14
501 – 1000	8.04	34.81
1001 +	18.02	73.37

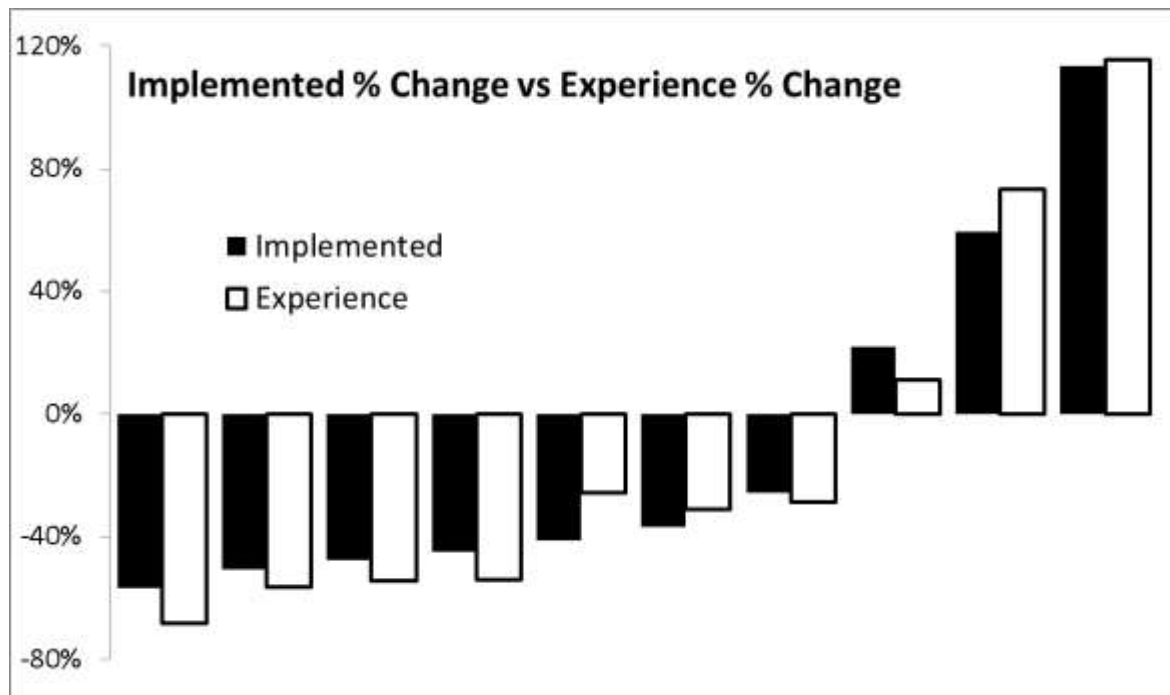
These new class relativities must be combined with a representation of the difference by state, which comes from our severity model. We returned to our predicted loss amounts and removed the effect of the employee count from that prediction, leaving a single per-policy prediction for each state. This was then multiplied by the new class relativities as developed above, and the result was off-balanced to revenue neutrality on a country-wide basis, so that the new loss costs developed from our model meet the following three constraints (before rounding):

- Relative differences from one class to another are the same in every state.
- The difference from one state and another for the same class is the same for all classes.
- The Aggregate Loss Cost for all policies in all states comes to the same grand total.

The reason for the last constraint is that we performed a separate country-wide experience review using standard actuarial methods to determine what percentage change we wanted to implement overall. The output from the calculation just described was used as an intermediate set of rates, subject to that experience review.

<u>Employee Range</u>	<u>Current Loss Costs</u>	<u>Missouri Intermediate Loss Costs</u>	<u>Intermediate Percentage Change</u>	<u>Final Indicated Loss Costs</u>	<u>Overall Percentage Change</u>
0 – 9	48	25.63	-46.6%	51	6.3%
10 – 19	48	54.64	13.8%	109	127.1%
20 – 25	48	87.84	83.0%	176	266.7%
26 – 100	112	148.45	32.5%	297	165.2%
101 – 500	245	388.00	58.4%	777	217.1%
501 – 1000	386	892.39	131.2%	1787	363.0%
1001 +	865	1880.71	117.4%	3767	335.5%

The methodology just described removes some resolution from the predicted losses as modeled. We can compare the Intermediate Loss Costs developed in this section to the Current Loss Costs and the experience losses to measure the predictive power of the final result, rather than the predictive power of the model (which is necessarily higher). We will compare the results for our Intermediate Loss Costs to the predictive power of the ISO Loss Costs currently in effect. Since we are comparing two different predictions to the loss experience, we will divide the Intermediate Loss Costs and the actual losses by the current ISO manual rates and express each of those as a percentage change. We sort by the percentage change of the Intermediate Loss Costs, and then summing the data in ten equal deciles.



The wide range on the vertical axis shows that we are making large changes, and there is a close general correspondence between the changes we are implementing and the experience loss data.

## RULE 89- NON-OWNERSHIP LIABILITY EXPERIENCE REVIEW

### DETERMINATION OF ADVISORY LOSS COST LEVEL CHANGE

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OBJECTIVE	The objective of this procedure is to determine the indicated overall advisory loss cost level change. This procedure answers the question: what percentage changes must be made on average to the Non-Ownership Liability 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?
DESCRIPTION	This procedure compares the developed and trended incurred losses and loss adjustment expenses with the aggregate loss costs at intermediate loss cost level, which is the aggregate amount that would have been collected if the revenue neutral intermediate modeled 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. This weighted experience ratio is the indicated overall advisory loss cost level change in decimal form.
EXPERIENCE BASE	The experience used in this review are 5 calendar/accident years of data ending December 31, 2016, evaluated as of March 31, 2017. Data for classes 6601, 6602, 6603, 6604 and 6605 is included. The review is being conducted on a \$100,000 Combined Single Limits basis - indemnity losses are limited to \$100,000 per occurrence. Allocated Loss Adjustment Expenses are not limited.
AGGREGATE LOSS COSTS (Item 1)	The aggregate loss costs are the loss-related revenue that would have been collected if the revenue neutral intermediate modeled loss costs were used during the experience period. It is calculated by multiplying the number of policy years by the intermediate modeled loss costs.

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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.

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.

Support for these loss related adjustments follows.

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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 intermediate loss cost level. It measures the adequacy of the intermediate loss costs for the prospective period.

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**YEAR WEIGHTS  
(Item 4)**

Year weights give more weight to recent years and were assigned as follows: accident year ending 12/31/2016: 30%; accident year ending 12/31/2015: 25%, accident year ending 12/31/2014: 20%, accident year ending 12/31/2013: 15%, and accident year ending 12/31/2012: 10%.

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**AVERAGE  
EXPERIENCE  
RATIO  
(Item 6)**

The average experience ratio, is the sum of the products of each year's experience ratio and assigned weight. This average experience ratio, converted to a percentage, is the indicated change to the revenue neutral intermediate modeled loss costs.

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MULTISTATE  
 AUTOMOBILE LIABILITY INSURANCE  
 DETERMINATION OF ADVISORY LOSS COST LEVEL CHANGES  
 NON-OWNERSHIP LIABILITY

	(1)	(2)	(3)	(4)	(5)
ACCIDENT YEAR ENDING	AGGREGATE LOSS COST (B)	\$100,000 INCURRED LOSSES (C)	EXPERIENCE RATIO (2) / (1)	ACCIDENT YEAR WEIGHTS	NUMBER OF INCURRED CLAIMS
12/31/12	\$40,075,132	\$87,923,302	2.194	10%	6,092
12/31/13	\$40,559,893	\$86,943,677	2.144	15%	6,003
12/31/14	\$41,120,603	\$92,744,249	2.255	20%	6,816
12/31/15	\$42,293,302	\$76,318,488	1.805	25%	5,316
12/31/16	\$42,734,785	\$79,828,810	1.868	30%	4,730
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3) * (4) ).				2.003
(7)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (6) - 1.000 ).				100.3%
(8)	FILED CHANGE.				100.3%
(A)	NONOWNED LIABILITY EXPERIENCE INCLUDES CLASSES 6601, 6602, 6603, 6604 AND 6605.				
(B)	THE AGGREGATE LOSS COST IS CALCULATED BY MULTIPLYING THE NUMBER OF POLICY YEARS BY THE INTERMEDIATE MODELED LOSS COSTS.				
(C)	LOSSES INCLUDE ALL LOSS ADJUSTMENT EXPENSES FOR BODILY INJURY AND PROPERTY DAMAGE LIABILITY. SEE FOLLOWING PAGE.				

## INSURANCE SERVICES OFFICE, INC.

MULTISTATE  
AUTOMOBILE LIABILITY INSURANCE  
DETERMINATION OF SINGLE LIMIT LOSSES

	ACC. YEAR ENDING	BODILY INJURY	PROPERTY DAMAGE	COMBINED
(1) INCURRED LOSSES AND	12/31/12	\$45,854,511	\$15,572,022	
ALLOCATED LOSS	12/31/13	\$46,692,601	\$15,347,718	
ADJUSTMENT EXPENSES	12/31/14	\$45,074,613	\$18,929,596	
	12/31/15	\$32,308,374	\$14,885,703	
	12/31/16	\$25,268,516	\$13,472,207	
(2) DEVELOPED LOSSES AND	12/31/12	\$50,548,179	\$17,284,944	
ALL LOSS ADJUSTMENT	12/31/13	\$52,535,947	\$17,070,039	
EXPENSES (A)	12/31/14	\$55,214,823	\$21,242,982	
	12/31/15	\$48,550,601	\$16,837,070	
	12/31/16	\$55,243,925	\$15,791,582	
(3) SELECTED ANNUAL LOSS TREND		2.7%	5.7%	3.4%
(4) TRENDED LOSSES AND	12/31/12	\$61,719,327	\$26,203,975	\$87,923,302
ALL LOSS ADJUSTMENT	12/31/13	\$62,465,241	\$24,478,436	\$86,943,677
EXPENSES (B)	12/31/14	\$63,938,765	\$28,805,484	\$92,744,249
	12/31/15	\$54,716,527	\$21,601,961	\$76,318,488
	12/31/16	\$60,657,830	\$19,170,981	\$79,828,810
(A) INCURRED LOSSES AND ALLOCATED LOSS ADJUSTMENT EXPENSES ARE ADJUSTED BY THE FOLLOWING FACTORS:				
1 - UNALLOCATED LOSS ADJUSTMENT FACTORS:		B.I. 1.085	P.D. 1.110	
2 - LOSS DEVELOPMENT FACTORS:				
	YEAR ENDING	B.I.	P.D.	
	12/31/12	1.016	1.000	
	12/31/13	1.037	1.002	
	12/31/14	1.129	1.011	
	12/31/15	1.385	1.019	
	12/31/16	2.015	1.056	
(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 1/1/2019 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.				
	YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD	
	12/31/12	7/1/12	7.500	
	12/31/13	7/1/13	6.500	
	12/31/14	7/1/14	5.500	
	12/31/15	7/1/15	4.500	
	12/31/16	7/1/16	3.500	

COMMERCIAL AUTOMOBILE LIABILITY INSURANCE  
MULTISTATE LOSS ADJUSTMENT EXPENSE EXPERIENCE

Calendar Year

Development of Unallocated Loss Adjustment Expense Factor

Bodily Injury  
(000's)

<u>ITEM</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>3 YR AVG</u>	<u>5 YR AVG</u>
(1) Direct Losses Incurred	3,382,082	4,091,432	4,241,671	4,816,654	5,408,567		
(2) Allocated Loss Adjustment Expenses Incurred	290,174	463,736	481,558	518,587	611,974		
(3) Unallocated Loss Adjustment Expenses Incurred	368,213	392,749	440,405	473,498	481,607		
(4) Unallocated LAE as a Ratio to Losses + Allocated LAE (3) / [(1) + (2)]	10.0%	8.6%	9.3%	8.9%	8.0%	8.7%	9.0%
(5) Selected Factor							8.5%

Property Damage  
(000's)

<u>ITEM</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>3 YR AVG</u>	<u>5 YR AVG</u>
(1) Direct Losses Incurred	834,325	892,691	1,005,713	1,066,493	1,164,414		
(2) Allocated Loss Adjustment Expenses Incurred	50,208	64,825	79,678	75,866	93,908		
(3) Unallocated Loss Adjustment Expenses Incurred	108,058	110,707	115,006	129,452	129,263		
(4) Unallocated LAE as a Ratio to Losses + Allocated LAE (3) / [(1) + (2)]	12.2%	11.6%	10.6%	11.3%	10.3%	10.7%	11.2%
(5) Selected Factor							11.0%

All items are from Special Call Submission for available writers.

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

AVERAGE PAID CLAIM COST DATA

MULTISTATE*					
BODILY INJURY			PROPERTY DAMAGE		
(\$100000 LIMITS)			(\$100000 LIMITS)		
	(1)	(2)	(3)	(4)	
YEAR	EXPONEN-		EXPONEN-		
ENDED	ACTUAL	TIAL FIT	ACTUAL	TIAL FIT	
3/31/2014	20088.87	20321.23	3676.14	3655.72	
6/30/2014	20380.29	20456.67	3712.11	3707.17	
9/30/2014	20732.93	20593.01	3752.08	3759.33	
12/31/2014	20933.35	20730.27	3799.50	3812.23	
3/31/2015	21106.46	20868.43	3860.83	3865.87	
6/30/2015	21156.78	21007.52	3905.50	3920.27	
9/30/2015	21179.18	21147.53	3962.46	3975.44	
12/31/2015	21029.30	21288.48	4020.15	4031.38	
3/31/2016	21143.66	21430.37	4106.33	4088.10	
6/30/2016	21391.10	21573.20	4177.05	4145.63	
9/30/2016	21760.24	21716.98	4205.66	4203.97	
12/31/2016	22103.74	21861.73	4250.83	4263.12	

	<u>BODILY INJURY</u>	<u>PROPERTY DAMAGE</u>
(5) AVERAGE ANNUAL PERCENT CHANGE IN PAID CLAIM COST (12TH POINT / 8TH POINT)	2.7%	5.7%
(6) AVERAGE ANNUAL PERCENT CHANGE IN CLAIM FREQUENCY	0.0%	0.0%
(7) AVERAGE ANNUAL PERCENT CHANGE IN LIABILITY LOSS RATIO {1.0 + (5)} * {1.0 + (6)}	2.7%	5.7%

\* EXCLUDES MASSACHUSETTS



## Insurance Services Office

Basic Limits Loss Development  
Non-Ownership Liability - Bodily Injury  
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>
12/31/2005	13,061,559	16,771,374	19,293,772	20,540,602	21,289,481
12/31/2006	11,632,975	15,042,589	17,418,810	18,669,149	19,454,171
12/31/2007	12,541,246	17,730,759	21,211,025	21,984,928	22,760,782
12/31/2008	13,949,225	19,629,717	23,573,736	25,073,532	25,340,297
12/31/2009	16,372,385	22,525,858	27,723,558	30,251,911	31,419,348
12/31/2010	17,708,864	24,527,385	30,713,069	33,988,107	34,923,951
12/31/2011	19,381,982	26,712,735	32,690,838	34,706,063	34,758,343
12/31/2012	25,407,377	35,584,544	43,413,230	46,774,764	47,900,415
12/31/2013	22,859,557	36,024,239	44,390,935	48,655,404	
12/31/2014	27,018,254	37,925,429	46,402,473		
12/31/2015	21,333,387	33,266,631			
12/31/2016	27,109,749				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2005	1.284	1.150	1.065	1.036
12/31/2006	1.293	1.158	1.072	1.042
12/31/2007	1.414	1.196	1.036	1.035
12/31/2008	1.407	1.201	1.064	1.011
12/31/2009	1.376	1.231	1.091	1.039
12/31/2010	1.385	1.252	1.107	1.028
12/31/2011	1.378	1.224	1.062	1.002
12/31/2012	1.401	1.220	1.077	1.024
12/31/2013	1.576	1.232	1.096	
12/31/2014	1.404	1.224		
12/31/2015	1.559			
Average Factor: ( Best 3 of 5 )	1.455	1.227	1.088	1.021

## Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.016
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.037
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.129
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.385
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	2.015

# Excludes Massachusetts

## Insurance Services Office

Basic Limits Loss Development  
 Non-Ownership Liability - Bodily Injury  
 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>	<u>123 Months</u>
12/31/2005	22,114,181	22,284,973	22,257,134	22,218,802	22,242,952
12/31/2006	19,680,252	19,644,591	19,677,589	19,569,159	19,571,955
12/31/2007	22,743,887	22,955,753	22,948,788	22,880,069	22,939,254
12/31/2008	26,048,487	26,113,744	25,994,674	26,257,950	
12/31/2009	31,633,170	32,022,297	32,099,114		
12/31/2010	34,934,140	35,372,233			
12/31/2011	35,273,238				

## 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>
12/31/2005	1.039	1.008	0.999	0.998	1.001
12/31/2006	1.012	0.998	1.002	0.994	1.000
12/31/2007	0.999	1.009	1.000	0.997	1.003
12/31/2008	1.028	1.003	0.995	1.010	
12/31/2009	1.007	1.012	1.002		
12/31/2010	1.000	1.013			
12/31/2011	1.015				
Average Factor: ( Best 3 of 5 )	1.007	1.008	1.000	1.000	1.001

## Summary of Factors

123 to Ult:	(1.000)	=	1.000
111 to Ult:	(123:111) (123:Ult)	=	1.001
99 to Ult:	(111:99) (123:111) (123:Ult)	=	1.001
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)	=	1.009

# Excludes Massachusetts

## Insurance Services Office

Basic Limits Loss Development  
Non-Ownership Liability - 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>
12/31/2005	7,580,188	7,706,856	8,123,141	8,136,510	8,105,876
12/31/2006	8,752,260	8,994,768	9,073,616	9,205,953	9,199,007
12/31/2007	9,160,631	9,179,682	9,343,945	9,404,828	9,427,085
12/31/2008	11,590,724	11,982,414	12,072,273	11,859,140	11,929,264
12/31/2009	13,524,488	13,692,176	13,566,398	13,592,318	13,595,982
12/31/2010	12,876,315	13,421,073	13,546,664	13,742,695	13,811,326
12/31/2011	15,010,705	15,389,065	15,339,625	15,517,737	15,501,161
12/31/2012	14,967,525	15,606,103	15,767,314	15,969,855	15,978,896
12/31/2013	15,248,746	15,575,235	15,660,042	15,604,260	
12/31/2014	17,884,629	18,942,530	19,356,686		
12/31/2015	14,582,613	15,181,001			
12/31/2016	13,676,167				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2005	1.017	1.054	1.002	0.996
12/31/2006	1.028	1.009	1.015	0.999
12/31/2007	1.002	1.018	1.007	1.002
12/31/2008	1.034	1.007	0.982	1.006
12/31/2009	1.012	0.991	1.002	1.000
12/31/2010	1.042	1.009	1.014	1.005
12/31/2011	1.025	0.997	1.012	0.999
12/31/2012	1.043	1.010	1.013	1.001
12/31/2013	1.021	1.005	0.996	
12/31/2014	1.059	1.022		
12/31/2015	1.041			
Average Factor: ( Best 3 of 5 )	1.036	1.008	1.009	1.002

## Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.000
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.002
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.011
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.019
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.056

# Excludes Massachusetts

## Insurance Services Office

Basic Limits Loss Development  
 Non-Ownership Liability - Property Damage  
 Multistate#  
 Incurred Losses and Expenses

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>
12/31/2005	8,110,269	8,119,387	8,150,477	8,150,670	8,150,670
12/31/2006	9,218,124	9,227,870	9,226,319	9,225,969	9,225,722
12/31/2007	9,407,717	9,411,181	9,424,461	9,410,060	9,410,144
12/31/2008	11,958,779	11,974,390	11,974,390	11,974,390	
12/31/2009	13,557,184	13,557,184	13,557,214		
12/31/2010	13,717,952	13,728,308			
12/31/2011	15,518,299				

## 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>
12/31/2005	1.001	1.001	1.004	1.000	1.000
12/31/2006	1.002	1.001	1.000	1.000	1.000
12/31/2007	0.998	1.000	1.001	0.998	1.000
12/31/2008	1.002	1.001	1.000	1.000	
12/31/2009	0.997	1.000	1.000		
12/31/2010	0.993	1.001			
12/31/2011	1.001				
Average Factor: ( Best 3 of 5 )	0.999	1.001	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)	=	1.001

# Excludes Massachusetts

## UNINSURED AND UNDERINSURED MOTORISTS EXPLANATORY MEMORANDUM

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### INTRODUCTION

In the prior review, Uninsured Motorists(UM) loss costs were determined based on statewide experience data as well as a model that considered the relationship between UM and BI experience, the distribution of vehicles, liability loss costs, and increased limits factors. To date, loss costs for Underinsured Motorists (UIM) coverage (or the component of Uninsured Motorists loss costs attributable to UIM coverage) have been determined using a model that accounts for the expected distribution of vehicles, policy limits, and loss potential for accidents that will involve an insured.

This section uses UM and UIM experience data to evaluate the adequacy of current ISO loss costs and makes adjustments to reflect the results. The revised UM and UIM loss costs are included in rule 97 in Section G of this filing.

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### OBJECTIVE

The objective of this procedure is to determine the indicated statewide advisory loss cost level change for UM and UIM. 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?

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### DESCRIPTION

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 five combined years of experience. This experience ratio is the indicated statewide advisory loss cost level change in decimal form.

For robustness, a single UIM loss cost level change is calculated for Private Passenger Types and Other Than Private Passenger Types. To reflect that UIM property damage (if applicable at all) comprises a small portion of UIM losses, the loss cost level change is applied only to UIM bodily injury loss costs.

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### EXPERIENCE BASE

The experience used in this review is the latest available UM and UIM data as reported under the ISO Commercial Statistical Plan. Five fiscal accident years are used with the most recent spanning April 1, 2017 through March 31, 2018 and reported losses evaluated as of June 30, 2018 for UM. The most recent accident year for UIM spans January 1, 2017 through December 31, 2017 and reported losses are evaluated as of March 31, 2018.

The UM analysis is on a basic limits basis, capping the losses at the basic split limit for the state.

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**EXPERIENCE  
BASE (CONT'D)**

The UIM analysis is on a total limits basis, combining all valid combined single limit and split-limit-bodily injury UIM experience. Other analyses in this filing use capped losses to determine a loss cost for a basic limit. Such a procedure is less appropriate for UIM experience data. The UIM experience is qualitatively different than standard liability coverage, in that each incurred loss exists in an excess layer above the tortfeasor's liability limit. That lower limit is unreported on the loss record and varies for each incurred loss. Considering these limitations, it is impossible to ascertain the portion of losses within some ground up layer of liability. Considering this limitation, this review aims to ensure prospective adequacy of UIM loss costs for all limits combined, while maintaining the current UIM limit relationships.

The indications for Other Than Private Passenger Types are based on experience for Trucks and Truck-Tractors. Items corresponding to Trucks and Truck-Tractors experience are labeled as Trucks, Tractors, and Trailers for familiarity's sake, though do not include Trailers experience, for which UM and UIM are not always applicable.

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**AGGREGATE LOSS  
COSTS AT CURRENT  
LEVEL**

The aggregate loss costs at current ISO loss cost level are the loss-related revenue that would have been collected if the current ISO basic split limit loss cost was used during the experience period. It is calculated by extending the exposures by the current ISO loss cost. For states where a combined loss cost is used for Uninsured and Underinsured Motorists coverages, the ALCCCL reflects only the appropriate UM or UIM component that was determined when current loss costs were implemented.

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**LOSSES AND LOSS  
ADJUSTMENT  
EXPENSES**

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

The reported incurred losses and allocated loss adjustment expenses are subject to the following adjustments:

- Placed on the prospective cost levels by the application of severity trend factors;
- Developed to an ultimate settlement basis by the application of the chain ladder method of loss development for UM and by the application of the Stanard-Buhlmann method of loss development (also known as the Cape Cod method) for UIM;
- Loaded for unallocated loss adjustment expenses.

These adjustments are discussed in further depth in this section.

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EXPERIENCE RATIO	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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AVERAGE ANNUAL CHANGE IN LOSSES (TREND)	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 levels continue to change from those underlying the historical data.
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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.

Due to the lack of UM and UIM volume and the nature of the coverages, it is unlikely that UM and UIM data would yield any useful trend information. Instead, this review uses standard Bodily Injury claim cost trend information as a proxy for changes in UM and UIM claim costs over time.

Prospective average annual changes for claim cost have been selected based on the historical multistate Bodily Injury Liability data. These changes are used to adjust the losses to a prospective level. The trend factors are shown in Exhibit 3 of this section.

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UM LOSS DEVELOPMENT FACTORS
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The UM loss development factors are based on multistate data capped at this state's basic split limit, separately for Private Passenger Types and Trucks, Tractors & Trailers. Three-year averages 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. Losses are developed up to 75 months and beyond 75 months the loss development is assumed to be unity. The loss development factors are shown in Exhibit 2 of this section.
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OVERVIEW OF  
STANARD-  
BUHLMANN  
LOSS  
DEVELOPMENT  
METHODOLOGY  
FOR UIM

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.

For standard Commercial Auto liability coverages, ISO typically uses a chain ladder approach to loss development. The UIM experience is qualitatively different than standard liability coverage:

- each incurred loss exists in an excess layer above the tortfeasor's liability limit;
- the lower limit is unreported on the loss record and varies for each incurred loss;
- losses occur less frequently but tend to be more severe (as they must eclipse the tortfeasor's limit), which can result in highly leveraged losses at immature evaluations.

In light of these characteristics, this analysis uses the Stanard-Buhlmann method (also known as the Cape Cod method) to determine the ultimate level of losses in the experience period. The Stanard-Buhlmann method was conceived with an eye toward reinsurance data, which shares the described traits. The procedure is as follows:

1. First, the method uses the losses reported to date to determine a common, ultimate expected level of losses relative to ALCCL.
2. In order to do this, typical loss development factors are determined. Using these factors, an implied portion of ultimate losses that are reported to date is determined. For instance, a loss development factor of 3.000 implies that 1/3 of ultimate losses are expected to be reported to date.
3. Using this calculation, the ALCCL for each year is apportioned into two pieces: the portion corresponding to losses that have been incurred and reported (the apportioned ALCCL), and the portion corresponding to losses that have been incurred but not reported.
4. The sum of the reported losses to date from each year is compared to the sum of the apportioned ALCCL, and this ratio is the ultimate expected level of losses relative to ALCCL for the historic period.
5. This expected experience ratio is applied to the ALCCL that has yet to be apportioned. The result is the expected unreported loss that is added to the loss reported to date to determine the total (developed) incurred loss and allocated loss adjustment expense.

The benefit of using this method is that for each accident year, the unreported loss reflects a common, overall expected level of adequacy (or inadequacy) rather than leveraging a single immature accident year's results; but each year's results to date still play a role in the computation of the historical expected experience ratio for the ALCCL not yet apportioned.

To calculate this ratio in this filing, ALCCL is apportioned separately for Trucks, Tractors and Trailers and Private Passenger Types, but then combined to determine the overall level.



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**DETERMINATION  
OF UIM LOSS  
DEVELOPMENT  
FACTORS TO  
APPORTION THE  
ALCCL**

To calculate the ALCCL apportioned to losses reported to date, a typical chain ladder approach is taken to determine loss development factors to ultimate (LDFs). In turn, the LDFs are used to determine the portion of ultimate losses expected to be reported to date.

Separately for Trucks, Tractors, and Trailers and Private Passenger Types, UIM LDFs are calculated by accumulating the statewide credibility-weighted 15-to-27-month factor and 27-to-39-month factor, and the multistate average to-ultimate factors at subsequent maturities. Losses are developed up to 123 months and are on an all limits combined basis. Three-year averages 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.

In light of countrywide variations in financial responsibility limits and UIM coverage triggers, the 15-to-27-month and 27-to-39-month link ratios are based on a credibility weighting of state specific data with multistate data. 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 link ratio. K is a constant, for which 20,000,000 is selected for all UIM calculations. A state must have losses in all three years at the earlier evaluation to receive credibility for a given link ratio.

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**UNALLOCATED  
LOSS ADJUSTMENT  
EXPENSES**

Reported losses include loss adjustment expenses that can be allocated to individual claims (ALAE), but do not include unallocated loss adjustment expenses (ULAE). To account for the expected ULAE costs, a load of 8% is selected, consistent with the selection for bodily injury loss costs throughout this filing.

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MISSOURI  
UNINSURED MOTORISTS

Trucks, Tractors & Trailers

Accident Year Ending	(1) Aggregate Loss Cost at Current Level (A)	(2) 25/50 Incurred Losses (B)	(3) Experience Ratio (2) / (1)	(4) Number of Incurred Claims
3/31/2014	245,778	126,007	0.513	7
3/31/2015	241,596	183,798	0.761	8
3/31/2016	235,518	351,633	1.493	8
3/31/2017	240,086	159,196	0.663	8
3/31/2018	243,405	169,717	0.697	8
Total	1,206,384	990,351	0.821	

(5) Indicated change based on experience data [Column (3) Total]	-17.9%
(6) Selected change	-17.9%

(A) The Aggregate Loss Cost at Current Level (ALCCL) is calculated by extending earned exposures by the current ISO loss costs.

(B) Losses reflect trend and development and include all Loss Adjustment Expenses (LAE) for Uninsured Motorists. See following exhibits.

**MISSOURI  
UNINSURED MOTORISTS  
Derivation of Experience Ratio**

**Trucks, Tractors & Trailers**

Accident Year Ending	(1a) Reported Incurred Loss And ALAE*	(2a) Loss Development Factor	(3a) Developed Losses And All LAE
3/31/2014	115,256	1.017	126,007
3/31/2015	161,145	1.061	183,798
3/31/2016	282,470	1.158	351,633
3/31/2017	108,253	1.368	159,196
3/31/2018	81,716	1.932	169,717
Total	748,841		990,351

(4a) Unallocated loss adjustment factor	1.075
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Accident Year Ending	(5a) Average Accident Date	(6a) Trend Period (A)	(7a) Trended Loss And ALAE (B)
3/31/2014	10/01/13	7.000	126,007
3/31/2015	10/01/14	6.000	183,798
3/31/2016	10/01/15	5.000	351,633
3/31/2017	10/01/16	4.000	159,196
3/31/2018	10/01/17	3.000	169,717
Total			990,351

(8a) Selected annual loss trend	+0.0%**
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(A) Trend period is equal to the number of years from the average accident date to one year beyond the anticipated implementation date of 10/01/19.

(B) Trended losses are equal to the developed loss in column (3a) multiplied by a trend factor of  $[1.0 + (8a)]^{(6a)}$ .

\* To arrive at the incurred losses presented in (1a), ISO applied a +3.6% claim cost trend factor and then capped the trended losses on a per claim/per occurrence basis at MISSOURI's minimum split limit of 25/50.

\*\* The loss trend shown in (8a) represents only the frequency trend component and has been applied after the losses were trended and capped at 25/50.

MISSOURI  
UNINSURED MOTORISTS

Private Passenger Types

Accident Year Ending	(1) Aggregate Loss Cost at Current Level (A)	(2) 25/50 Incurred Losses (B)	(3) Experience Ratio (2) / (1)	(4) Number of Incurred Claims
3/31/2014	96,694	53,638	0.555	2
3/31/2015	93,728	113,294	1.209	7
3/31/2016	88,764	125,369	1.412	7
3/31/2017	85,395	0	0.000	0
3/31/2018	85,585	234,320	2.738	7
Total	450,166	526,621	1.170	

(5) Indicated change based on experience data [Column (3) Total]	17.0%
(6) Selected change	17.0%

(A) The Aggregate Loss Cost at Current Level (ALCCL) is calculated by extending earned exposures by the current ISO loss costs.

(B) Losses reflect trend and development and include all Loss Adjustment Expenses (LAE) for Uninsured Motorists. See following exhibits.

**MISSOURI  
UNINSURED MOTORISTS  
Derivation of Experience Ratio**

**Private Passenger Types**

Accident Year Ending	(1a) Reported Incurred Loss And ALAE*	(2a) Loss Development Factor	(3a) Developed Losses And All LAE
3/31/2014	49,599	1.006	53,638
3/31/2015	100,180	1.052	113,294
3/31/2016	103,388	1.128	125,369
3/31/2017	0	1.341	0
3/31/2018	113,350	1.923	234,320
Total	366,518		526,621

(4a) Unallocated loss adjustment factor	1.075
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Accident Year Ending	(5a) Average Accident Date	(6a) Trend Period (A)	(7a) Trended Loss And ALAE (B)
3/31/2014	10/01/13	7.000	53,638
3/31/2015	10/01/14	6.000	113,294
3/31/2016	10/01/15	5.000	125,369
3/31/2017	10/01/16	4.000	0
3/31/2018	10/01/17	3.000	234,320
Total			526,621

(8a) Selected annual loss trend	+0.0%**
---------------------------------	---------

(A) Trend period is equal to the number of years from the average accident date to one year beyond the anticipated implementation date of 10/01/19.

(B) Trended losses are equal to the developed loss in column (3a) multiplied by a trend factor of  $[1.0 + (8a)]^{(6a)}$ .

\* To arrive at the incurred losses presented in (1a), ISO applied a +3.6% claim cost trend factor and then capped the trended losses on a per claim/per occurrence basis at MISSOURI's minimum split limit of 25/50.

\*\* The loss trend shown in (8a) represents only the frequency trend component and has been applied after the losses were trended and capped at 25/50.

MISSOURI  
UNDERINSURED MOTORISTS  
Summary

Trucks, Tractors, and Trailers and Private Passenger Types Combined

Accident Year Ending	(1) Aggregate Loss Cost at Current Level (A)	(2) Total Limits Incurred Losses (B)	(3) Experience Ratio (2) / (1)	(4) Number of Incurred Claims
12/31/2013	2,366,519	3,377,165	1.427	13
12/31/2014	2,426,973	2,606,415	1.074	8
12/31/2015	2,529,678	2,091,234	0.827	10
12/31/2016	2,594,989	2,982,776	1.149	9
12/31/2017	2,606,524	3,034,729	1.164	13
Total	12,524,683	14,092,318	1.125	

(5) Indicated change based on experience data [Column (3) Total]	+ 12.5%
(6) Selected change	+ 12.5%

(A) The Aggregate Loss Cost at Current Level (ALCCL) is calculated by extending earned exposures by the current ISO loss costs.

(B) Losses reflect trend and development and include all Loss Adjustment Expenses (LAE) for Underinsured Motorists. See following exhibits.

MISSOURI  
UNDERINSURED MOTORISTS  
Derivation of Experience Ratio

Trucks, Tractors, and Trailers

Accident Year Ending	(1a) Aggregate Loss Cost at Current Level	(2a) Reported Incurred Loss And ALAE	(3a) Number of Incurred Claims
12/31/2013	1,661,923	1,391,727	8
12/31/2014	1,699,462	1,652,654	8
12/31/2015	1,771,893	613,230	6
12/31/2016	1,837,993	325,598	5
12/31/2017	1,867,084	447,127	9
Total	8,838,355	4,430,336	

(4a) Selected annual loss trend (see Exhibit 3)	+ 4.0%
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Accident Year Ending	(5a) Average Accident Date	(6a) Trend Period (A)	(7a) Trended Loss And ALAE (B)
12/31/2013	6/30/2013	7.25	1,849,463
12/31/2014	6/30/2014	6.25	2,111,739
12/31/2015	6/30/2015	5.25	753,440
12/31/2016	6/30/2016	4.25	384,657
12/31/2017	6/30/2017	3.25	507,913
Total			5,607,212

(A) Trend period is equal to the number of years from the average accident date to one year beyond the anticipated implementation date of 10/01/2019.

(B) Trended losses are equal to the reported loss in column (2a) multiplied by a trend factor of  $[1.0 + (4a)]^{(6a)}$ .

MISSOURI  
UNDERINSURED MOTORISTS  
Derivation of Experience Ratio

Private Passenger Types

Accident Year Ending	(1b) Aggregate Loss Cost at Current Level	(2b) Reported Incurred Loss And ALAE	(3b) Number of Incurred Claims
12/31/2013	704,596	861,308	5
12/31/2014	727,511	0	0
12/31/2015	757,786	409,887	4
12/31/2016	756,996	975,016	4
12/31/2017	739,440	309,704	4
Total	3,686,328	2,555,915	

(4b) Selected annual loss trend (see Exhibit 3)	+ 4.0%
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Accident Year Ending	(5b) Average Accident Date	(6b) Trend Period (C)	(7b) Trended Loss And ALAE (D)
12/31/2013	6/30/2013	7.25	1,144,591
12/31/2014	6/30/2014	6.25	0
12/31/2015	6/30/2015	5.25	503,604
12/31/2016	6/30/2016	4.25	1,151,870
12/31/2017	6/30/2017	3.25	351,808
Total			3,151,872

(C) Trend period is equal to the number of years from the average accident date to one year beyond the anticipated implementation date of 10/01/2019.

(D) Trended losses are equal to the reported loss in column (2b) multiplied by a trend factor of  $[1.0 + (4b)]^{(6b)}$ .



MISSOURI  
UNDERINSURED MOTORISTS  
Derivation of Experience Ratio

Trucks, Tractors, and Trailers

Accident Year Ending	(8a)  Loss Development Factor (E)	(9a)  Implied Portion of Loss Reported 1.0 / (8a)	(10a)  Apportioned ALCCL (1a) * (9a)
12/31/2013	1.052	0.951	1,579,775
12/31/2014	1.122	0.891	1,514,672
12/31/2015	1.328	0.753	1,334,256
12/31/2016	1.803	0.555	1,019,408
12/31/2017	3.589	0.279	520,224
Total			5,968,335

Private Passenger Types

Accident Year Ending	(8b)  Loss Development Factor (E)	(9b)  Implied Portion of Loss Reported 1.0 / (8b)	(10b)  Apportioned ALCCL (1b) * (9b)
12/31/2013	1.091	0.917	645,826
12/31/2014	1.186	0.843	613,416
12/31/2015	1.409	0.710	537,818
12/31/2016	1.928	0.519	392,633
12/31/2017	3.512	0.285	210,547
Total			2,400,239

(E) See Exhibit 2 for Loss Development.

MISSOURI  
UNDERINSURED MOTORISTS  
Derivation of Experience Ratio

Trucks, Tractors, and Trails and Private Passenger Types Combined

(11) Historical expected experience ratio, equal to the trended reported losses divided by the apportioned ALCCL [Total (7a) + (7b)] / [Total (10a) + (10b)]	1.047
(12) Unallocated Loss Adjustment Expense (ULAE) Factor	1.075

Accident Year Ending	(13)  Ultimate Loss And ALAE (F)	(14)  Ultimate Loss And All LAE (13) * (12)
12/31/2013	3,141,548	3,377,165
12/31/2014	2,424,572	2,606,415
12/31/2015	1,945,334	2,091,234
12/31/2016	2,774,676	2,982,776
12/31/2017	2,823,003	3,034,729
Total	13,109,133	14,092,318

(F) Ultimate Loss and ALAE equals the reported incurred loss and ALAE plus the historical expected losses on ALCCL not yet apportioned, which is defined as the total ALCCL less the apportioned ALCCL.

$$(2a) + (2b) + [(1a) + (1b) - (10a) - (10b)] * (11)$$

**UNINSURED MOTORISTS  
Loss Development**

**Trucks, Tractors & Trailers**

**Multistate 25/50 Incurred Losses and ALAE**

(includes District of Columbia and excludes Massachusetts and Puerto Rico)

<b>Year Ending</b>	<b>15 months</b>	<b>27 months</b>	<b>39 months</b>	<b>51 months</b>	<b>63 months</b>	<b>75 months</b>
2009Q1	9,025,547	12,369,189	15,102,598	16,536,806	17,826,264	17,856,308
2010Q1	9,308,047	12,638,094	14,802,135	15,559,151	16,353,350	16,713,969
2011Q1	8,574,856	11,741,874	14,541,144	15,707,864	16,616,607	16,886,898
2012Q1	9,122,142	14,304,657	16,534,754	18,183,506	18,336,199	18,542,512
2013Q1	10,005,821	12,952,413	15,749,955	17,015,075	17,991,357	18,416,963
2014Q1	8,867,105	12,142,548	13,801,692	15,103,201	15,400,089	
2015Q1	8,829,703	12,261,788	15,014,176	16,714,455		
2016Q1	8,207,351	13,511,797	15,827,683			
2017Q1	9,663,544	14,276,968				
2018Q1	9,885,240					

**Multistate 25/50 Link Ratios**

<b>Year Ending</b>		<b>27:15</b>	<b>39:27</b>	<b>51:39</b>	<b>63:51</b>	<b>75:63</b>
2009Q1		1.370	1.221	1.095	1.078	1.002
2010Q1		1.358	1.171	1.051	1.051	1.022
2011Q1		1.369	1.238	1.080	1.058	1.016
2012Q1		1.568	1.156	1.100	1.008	1.011
2013Q1		1.294	1.216	1.080	1.057	1.024
2014Q1		1.369	1.137	1.094	1.020	
2015Q1		1.389	1.224	1.113		
2016Q1		1.646	1.171			
2017Q1		1.477				
Average Factor	(Best 3 of 5)	1.412	1.181	1.091	1.043	1.017
Average Factor	(Latest 3)	1.504	1.178	1.096	1.028	1.017
Average Factor	(Latest 5)	1.435	1.181	1.094	1.039	1.015
Selected Factor		1.412	1.181	1.091	1.043	1.017

\*Losses are assumed to reach their ultimate settlement level at 75 months.

**Multistate Loss Development Factors to Ultimate**

<b>Age</b>	<b>15 months</b>	<b>27 months</b>	<b>39 months</b>	<b>51 months</b>	<b>63 months</b>
LDF to Ultimate	1.932	1.368	1.158	1.061	1.017

**UNINSURED MOTORISTS  
Loss Development**

**Private Passenger Types**

**Multistate 25/50 Incurred Losses and ALAE**

(includes District of Columbia and excludes Massachusetts and Puerto Rico)

<b>Year Ending</b>	<b>15 months</b>	<b>27 months</b>	<b>39 months</b>	<b>51 months</b>	<b>63 months</b>	<b>75 months</b>
2009Q1	3,505,176	5,352,975	6,258,067	6,594,743	7,339,680	7,551,920
2010Q1	4,036,424	5,827,877	6,451,759	7,169,153	7,588,956	7,542,780
2011Q1	3,292,424	5,489,957	6,394,166	6,714,951	7,024,637	7,026,043
2012Q1	4,186,679	5,744,494	6,684,975	7,399,815	7,111,606	7,122,183
2013Q1	4,076,499	5,751,087	7,406,171	8,091,911	8,372,492	8,497,898
2014Q1	4,520,784	5,984,903	7,316,342	7,850,103	8,391,288	
2015Q1	3,798,515	6,368,818	7,248,523	7,401,059		
2016Q1	3,794,258	5,776,948	6,823,046			
2017Q1	4,309,194	5,904,068				
2018Q1	3,715,668					

**Multistate 25/50 Link Ratios**

<b>Year Ending</b>		<b>27:15</b>	<b>39:27</b>	<b>51:39</b>	<b>63:51</b>	<b>75:63</b>
2009Q1		1.527	1.169	1.054	1.113	1.029
2010Q1		1.444	1.107	1.111	1.059	0.994
2011Q1		1.667	1.165	1.050	1.046	1.000
2012Q1		1.372	1.164	1.107	0.961	1.001
2013Q1		1.411	1.288	1.093	1.035	1.015
2014Q1		1.324	1.222	1.073	1.069	
2015Q1		1.677	1.138	1.021		
2016Q1		1.523	1.181			
2017Q1		1.370				
Average Factor	(Best 3 of 5)	1.434	1.189	1.072	1.046	1.006
Average Factor	(Latest 3)	1.523	1.181	1.062	1.022	1.006
Average Factor	(Latest 5)	1.461	1.199	1.069	1.034	1.008
Selected Factor		1.434	1.189	1.072	1.046	1.006

\*Losses are assumed to reach their ultimate settlement level at 75 months.

**Multistate Loss Development Factors to Ultimate**

<b>Age</b>	<b>15 months</b>	<b>27 months</b>	<b>39 months</b>	<b>51 months</b>	<b>63 months</b>
LDF to Ultimate	1.923	1.341	1.128	1.052	1.006

MISSOURI  
UNDERINSURED MOTORISTS  
Loss Development

Trucks, Tractors, and Trailers

Multistate Total Limits Incurred Losses and ALAE

(includes District of Columbia and all states except Massachusetts)

Year Ending	15 months	27 months	39 months	51 months	63 months	75 months	87 months	99 months	111 months	123 months
2004Q4	22,530,422	36,845,163	51,331,955	63,901,556	69,862,877	72,987,705	73,378,533	74,613,140	74,390,857	74,400,459
2005Q4	18,392,464	38,016,265	54,404,477	65,918,944	70,554,385	74,515,698	75,392,784	76,468,105	76,811,085	75,786,169
2006Q4	31,575,992	51,426,470	62,255,134	74,142,843	80,492,340	84,941,203	85,153,205	86,264,799	85,219,739	84,960,433
2007Q4	27,961,501	44,738,402	65,103,523	81,178,272	85,582,687	88,571,709	89,729,861	91,121,250	90,400,099	90,282,533
2008Q4	37,061,338	61,124,059	79,106,093	91,571,102	99,034,064	102,066,482	103,712,289	104,697,829	105,018,374	105,560,742
2009Q4	36,299,276	64,443,015	84,147,098	94,902,202	100,872,729	102,314,373	102,821,451	104,102,566	103,950,572	
2010Q4	32,625,217	66,090,096	83,440,880	98,653,306	104,753,382	111,636,156	111,428,680	112,436,729		
2011Q4	34,437,921	55,833,889	74,553,318	88,350,227	94,597,239	98,924,755	101,294,368			
2012Q4	41,722,554	65,598,209	84,128,510	99,599,399	106,217,478	108,128,454				
2013Q4	29,417,448	54,265,070	76,575,561	88,122,930	99,140,766					
2014Q4	37,798,661	68,988,239	100,260,719	118,715,537						
2015Q4	34,913,745	67,715,405	91,520,273							
2016Q4	48,669,389	81,928,155								
2017Q4	51,022,086									

MISSOURI  
UNDERINSURED MOTORISTS  
Loss Development

Trucks, Tractors, and Trailers

Multistate Link Ratios

Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123*:111
2004Q4	1.635	1.393	1.245	1.093	1.045	1.005	1.017	0.997	1.000
2005Q4	2.067	1.431	1.212	1.070	1.056	1.012	1.014	1.004	0.987
2006Q4	1.629	1.211	1.191	1.086	1.055	1.002	1.013	0.988	0.997
2007Q4	1.600	1.455	1.247	1.054	1.035	1.013	1.016	0.992	0.999
2008Q4	1.649	1.294	1.158	1.081	1.031	1.016	1.010	1.003	1.005
2009Q4	1.775	1.306	1.128	1.063	1.014	1.005	1.012	0.999	
2010Q4	2.026	1.263	1.182	1.062	1.066	0.998	1.009		
2011Q4	1.621	1.335	1.185	1.071	1.046	1.024			
2012Q4	1.572	1.282	1.184	1.066	1.018				
2013Q4	1.845	1.411	1.151	1.125					
2014Q4	1.825	1.453	1.184						
2015Q4	1.940	1.352							
2016Q4	1.683								
Average Factor (Best 3 of 5)	1.784	1.366	1.183	1.067	1.031	1.011	1.012	0.998	0.999

\*Losses are assumed to reach their ultimate settlement level at 123 months.

Multistate Loss Development Factors to Ultimate

Age	15 months	27 months	39 months	51 months	63 months	75 months	87 months	99 months	111 months
LDF to Ultimate	3.236	1.813	1.328	1.122	1.052	1.020	1.008	0.996	0.999

MISSOURI  
UNDERINSURED MOTORISTS  
Loss Development

Trucks, Tractors, and Trailers

MISSOURI Loss Development

Total Limits Incurred Losses and ALAE				Link Ratios		
Year Ending	15 months	27 months	39 months	Year Ending	27:15	39:27
2011Q4	54,000	593,028	203,033	2011Q4	10.982	0.342
2012Q4	126,600	1,186,516	1,992,982	2012Q4	9.372	1.680
2013Q4	196,537	1,112,052	1,255,339	2013Q4	5.658	1.129
2014Q4	88,501	1,085,063	1,415,366	2014Q4	12.260	1.304
2015Q4	166,829	442,231	613,230	2015Q4	2.651	1.387
2016Q4	443,554	325,598		2016Q4	0.734	
2017Q4	447,127			2017Q4		
3-Yr Volume (A)	1,057,510	1,852,892		Average Factor:	5.894	1.273
State Credibility (B)	0.050	0.085		(Best 3 of 5)		

Credibility Weighted Loss Development Factors to Ultimate

Age	15 months	27 months	39 months	51 months	63 months
Credibility Weighted Link (C)	1.991	1.358			
Multistate LDF to Ultimate			1.328	1.122	1.052
Credibility Wtd. LDF to Ult.	3.589	1.803	1.328	1.122	1.052

(B) Credibility is calculated as  $(A) / [(A) + 20,000,000]$  where the credibility constant of 20,000,000 was selected judgmentally. State must have losses in all years at the earlier evaluation to receive credibility for a given link ratio.

(C) Credibility weighted link ratio is calculated as (B) times the state link ratio +  $[1 - (B)]$  times the multistate link ratio for that evaluation month.

MISSOURI  
UNDERINSURED MOTORISTS  
Loss Development

Private Passenger Types

Multistate Total Limits Incurred Losses and ALAE  
(includes District of Columbia and all states except Massachusetts)

Year Ending	15 months	27 months	39 months	51 months	63 months	75 months	87 months	99 months	111 months	123 months
2004Q4	6,300,905	12,925,560	15,977,199	18,946,522	20,078,631	19,338,812	20,057,181	20,020,213	20,129,499	21,129,973
2005Q4	5,474,241	10,012,046	14,871,677	17,697,510	19,364,571	20,040,019	19,969,643	21,382,211	21,371,122	21,314,199
2006Q4	6,994,468	13,963,329	15,882,288	18,930,215	19,539,103	20,306,960	20,930,711	21,555,723	20,419,273	20,508,588
2007Q4	10,722,380	16,513,849	19,198,870	25,639,815	26,147,648	26,601,682	27,717,959	28,432,823	28,588,166	28,801,689
2008Q4	13,865,094	21,109,243	29,106,626	32,391,347	34,520,288	35,434,776	35,404,725	35,120,123	35,366,863	35,391,282
2009Q4	11,179,688	23,495,203	30,267,935	33,813,800	35,111,646	37,139,969	37,716,498	38,501,790	38,467,033	
2010Q4	8,467,272	15,948,569	20,471,881	26,598,632	28,460,555	28,863,695	29,993,414	30,709,918		
2011Q4	12,188,852	19,529,785	25,569,555	30,023,469	32,649,876	35,013,858	35,912,848			
2012Q4	11,128,118	19,466,122	28,406,593	31,482,205	35,857,330	36,173,972				
2013Q4	12,623,739	20,828,361	28,156,040	33,955,969	37,429,197					
2014Q4	10,544,502	20,111,450	26,853,668	31,796,672						
2015Q4	14,340,780	27,418,840	38,762,386							
2016Q4	15,340,507	27,064,601								
2017Q4	15,027,822									



MISSOURI  
UNDERINSURED MOTORISTS  
Loss Development

Private Passenger Types

Multistate Link Ratios

Year Ending	27:15	39:27	51:39	63:51	75:63	87:75	99:87	111:99	123*:111
2004Q4	2.051	1.236	1.186	1.060	0.963	1.037	0.998	1.005	1.050
2005Q4	1.829	1.485	1.190	1.094	1.035	0.996	1.071	0.999	0.997
2006Q4	1.996	1.137	1.192	1.032	1.039	1.031	1.030	0.947	1.004
2007Q4	1.540	1.163	1.335	1.020	1.017	1.042	1.026	1.005	1.007
2008Q4	1.522	1.379	1.113	1.066	1.026	0.999	0.992	1.007	1.001
2009Q4	2.102	1.288	1.117	1.038	1.058	1.016	1.021	0.999	
2010Q4	1.884	1.284	1.299	1.070	1.014	1.039	1.024		
2011Q4	1.602	1.309	1.174	1.087	1.072	1.026			
2012Q4	1.749	1.459	1.108	1.139	1.009				
2013Q4	1.650	1.352	1.206	1.102					
2014Q4	1.907	1.335	1.184						
2015Q4	1.912	1.414							
2016Q4	1.764								
Average Factor (Best 3 of 5)	1.807	1.367	1.188	1.087	1.033	1.027	1.024	1.001	1.004

\*Losses are assumed to reach their ultimate settlement level at 123 months.

Multistate Loss Development Factors to Ultimate

Age	15 months	27 months	39 months	51 months	63 months	75 months	87 months	99 months	111 months
LDF to Ultimate	3.480	1.926	1.409	1.186	1.091	1.057	1.029	1.006	1.004

MISSOURI  
UNDERINSURED MOTORISTS  
Loss Development

Private Passenger Types

MISSOURI Loss Development

Total Limits Incurred Losses and ALAE				Link Ratios		
Year Ending	15 months	27 months	39 months	Year Ending	27:15	39:27
2011Q4	70,000	203,283	315,227	2011Q4	2.904	1.551
2012Q4	90,000	176,115	634,864	2012Q4	1.957	3.605
2013Q4	35,036	90,065	145,682	2013Q4	2.571	1.618
2014Q4	7,500	7,500	7,500	2014Q4	1.000	1.000
2015Q4	168,455	412,558	309,559	2015Q4	2.449	0.750
2016Q4	101,070	975,016		2016Q4	9.647	
2017Q4	309,704			2017Q4		
3-Yr Volume (A)	579,229	1,395,074		Average Factor:	2.326	1.389
State Credibility (B)	0.028	0.065		(Best 3 of 5)		

Credibility Weighted Loss Development Factors to Ultimate

Age	15 months	27 months	39 months	51 months	63 months
Credibility Weighted Link (C)	1.822	1.368			
Multistate LDF to Ultimate			1.409	1.186	1.091
Credibility Wtd. LDF to Ult.	3.512	1.928	1.409	1.186	1.091

(B) Credibility is calculated as  $(A) / [(A) + 20,000,000]$  where the credibility constant of 20,000,000 was selected judgmentally. State must have losses in all years at the earlier evaluation to receive credibility for a given link ratio.

(C) Credibility weighted link ratio is calculated as (B) times the state link ratio +  $[1.0 - (B)]$  times the multistate link ratio for that evaluation month.

UNINSURED MOTORISTS  
Trend Selection

Multistate Average Claim Cost\*

Calendar Year Paid

Year Ended		\$50,000 Bodily Injury
3/31/2012		14,266.49
6/30/2012		14,379.37
9/30/2012		14,329.95
12/31/2012		14,367.18
3/31/2013		14,480.14
6/30/2013		14,539.23
9/30/2013		14,607.25
12/31/2013		14,914.28
3/31/2014		15,087.30
6/30/2014		15,206.72
9/30/2014		15,401.84
12/31/2014		15,365.95
3/31/2015		15,426.99
6/30/2015		15,454.26
9/30/2015		15,526.28
12/31/2015		15,590.49
3/31/2016		15,630.14
6/30/2016		15,881.85
9/30/2016		16,108.47
12/31/2016		16,331.73
3/31/2017		16,496.08
6/30/2017		16,563.59
9/30/2017		16,580.02
12/31/2017		16,891.81
Average Annual	24 PT:	3.0%
Change	12 PT:	3.6%
Coefficient of	24 PT:	0.9761
Determination R <sup>2</sup>	12 PT:	0.9614

**Trend Selection: + 3.6%**

\*Data excludes Massachusetts and is based on standard bodily injury coverage (and not UM/UIM) for Commercial Auto Trucks, Tractors, and Trailers; Private Passenger Types; Buses; Publics; and Zone-Rated.

**UNDERINSURED MOTORISTS**  
Trend Selection

Multistate Average Claim Cost\*

<b>Year Ended</b>		<b>\$1,000,000 Bodily Injury</b>	<b>Total Limits Bodily Injury</b>
3/31/2012		35,403.51	35,519.54
6/30/2012		36,259.99	36,355.94
9/30/2012		36,209.01	36,322.54
12/31/2012		36,315.43	36,352.31
3/31/2013		36,575.76	36,635.95
6/30/2013		36,080.17	36,181.88
9/30/2013		36,622.76	36,707.62
12/31/2013		37,771.04	37,887.46
3/31/2014		38,701.25	38,793.45
6/30/2014		40,037.28	40,217.06
9/30/2014		40,628.65	40,800.80
12/31/2014		41,116.94	41,274.51
3/31/2015		41,688.10	41,862.16
6/30/2015		41,862.26	42,035.65
9/30/2015		41,992.90	42,233.00
12/31/2015		42,006.96	42,287.48
3/31/2016		42,067.14	42,337.78
6/30/2016		42,904.13	43,080.62
9/30/2016		44,040.49	44,169.77
12/31/2016		44,463.57	44,536.68
3/31/2017		44,820.41	44,925.63
6/30/2017		44,615.83	44,699.92
9/30/2017		44,801.04	44,952.67
12/31/2017		45,674.80	45,874.49
Average Annual	24 PT:	4.8%	4.8%
Change	12 PT:	3.6%	3.5%
Coefficient of	24 PT:	0.9593	0.9579
Determination R <sup>2</sup>	12 PT:	0.9213	0.9330

**Trend Selection: + 4.0%**

\*Data excludes Massachusetts and is based on standard bodily injury coverage (and not UM/UIM) for Commercial Auto Trucks, Tractors, and Trailers; Private Passenger Types; Buses; Publics; and Zone-Rated.

## INSURANCE SERVICES OFFICE, INC.

MISSOURI  
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	\$ 46,764,746	6.6%
Medical Payments	2,307,570	-82.2%
Uninsured (Includes Underinsured) Motorists	2,375,800	6.0%
Combined	51,448,116	2.6%
Physical Damage		
Other Than Collision	5,123,350	16.0%
Collision	12,439,103	N.C.
Combined	17,562,453	4.7%
Total Trucks, Tractors & Trailers	69,010,569	3.1%
<b>PRIVATE PASSENGER TYPES</b>		
Liability		
Single Limit Liability	8,860,771	N.C.
Medical Payments	347,213	-50.1%
Uninsured (Includes Underinsured) Motorists	928,582	13.4%
Combined	10,136,566	-0.5%
Physical Damage		
Other Than Collision	1,461,941	6.8%
Collision	3,123,417	N.C.
Combined	4,585,358	2.2%
Total Private Passenger Types	14,721,924	0.3%
<b>PUBLIC AUTOMOBILE CLASSES</b>		
Medical Payments	145,496	-26.1%
<b>NON-OWNERSHIP LIABILITY</b>		
	783,972	97.5%
<b>GRAND TOTAL ALL COVERAGES</b>	84,661,961	3.5%
TOTAL LIABILITY	62,514,150	3.2%
TOTAL PHYSICAL DAMAGE	22,147,811	4.2%

(A) An implementation date of 10/01/2019 is assumed for purposes of trending.

(B) Accident Year ending 03/31/2018 Aggregate Loss Cost at Current Level for Liability, Uninsured, and Physical Damage coverages. Accident Year ending 12/31/2017 Aggregate Loss Cost at Current Level for Underinsured Motorists. Accident Year ending 12/31/2016 Aggregate Loss Cost at Current Level for Medical Payments and Non-ownership Liability 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.

MISSOURI  
COMMERCIAL AUTOMOBILE INSURANCE

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

FOR TRUCKS, TRACTORS, AND TRAILERS POLICY COVERAGES

Territory Code	\$100,000 CSL Liability	\$500 Med Pay
102	8.1%	-85.7%
104	10.0%	-83.3%
105	5.3%	-85.7%
106	6.5%	-88.9%
108	8.5%	-83.3%
109	5.2%	-81.8%
110	6.4%	-83.3%
112	6.1%	-85.7%
116	5.8%	-83.3%
117	7.4%	-85.7%
125	5.5%	-88.2%
126	4.7%	-84.6%
127	3.9%	-87.5%
128	4.8%	-85.7%
129	8.0%	-85.7%
131	14.4%	-85.0%
132	3.8%	-85.7%
133	8.5%	-85.7%
134	4.4%	-88.2%
135	10.5%	-87.5%
136	3.8%	-92.3%
137	3.0%	-90.0%
138	7.0%	-85.7%

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
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 (a)	
102	13.7%		14.2%
104	15.0%		15.2%
105	17.6%		17.6%
106	14.4%		14.0%
108	16.3%		16.2%
109	15.3%		16.1%
110	15.3%		15.6%
112	10.7%		10.3%
116	17.1%		17.2%
117	12.4%		12.4%
125	15.3%		15.0%
126	17.2%		17.6%
127	11.7%		11.7%
128	17.4%		17.7%
129	20.2%		19.9%
131	15.1%		14.6%
132	15.4%		15.8%
133	15.2%		14.0%
134	15.3%		15.7%
135	18.6%		18.9%
136	16.8%		16.7%
137	16.1%		15.9%
138	13.4%		12.7%

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

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
COMMERCIAL AUTOMOBILE INSURANCE

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

FOR TRUCKS, TRACTORS, AND TRAILERS POLICY COVERAGES

Territory	Liability	\$500	Physical Damage		Specified Causes
Code	\$100,000 CSL	Med Pay (a)	Comprehensive (b)	Collision (c)	of Loss (d)
102	413	2	158	234	137
104	364	2	123	236	106
105	200	1	147	191	127
106	279	1	151	220	130
108	369	2	157	235	136
109	326	2	158	214	137
110	347	2	128	277	111
112	419	2	124	244	107
116	367	2	205	230	177
117	202	1	136	211	118
125	503	2	204	278	176
126	379	2	170	239	147
127	239	1	143	240	124
128	198	1	169	229	146
129	216	1	196	248	169
131	644	3	137	288	118
132	411	2	135	217	117
133	410	2	114	213	98
134	494	2	136	238	118
135	484	2	153	184	132
136	382	1	146	232	126
137	273	1	144	217	124
138	215	1	144	185	124

(a) The loss costs for medical payments have been calculated by multiplying a relativity by the Trucks, Tractors, and Trailers CSL Liability loss costs. The relativities differ by territory and are listed in [EXHIBIT C17](#).

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

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

(d) The loss costs for Specified Causes of Loss have been calculated by a relativity of 0.864 to the Trucks, Tractors, and Trailers Comprehensive base loss costs.



INSURANCE SERVICES OFFICE, INC.

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

FOR PRIVATE PASSENGER TYPES POLICY COVERAGES

Territory Code	\$100,000 CSL Liability (a)	\$500 Med Pay
102		-71.4%
104		-66.7%
105		-71.4%
106		-66.7%
108		-75.0%
109		-66.7%
110		-70.0%
112		-75.0%
116		-71.4%
117		-66.7%
125		-71.4%
126		-71.4%
127		-60.0%
128		-60.0%
129		-60.0%
131		-66.7%
132		-75.0%
133		-71.4%
134		-75.0%
135		-66.7%
136		-75.0%
137		-71.4%
138		-75.0%

(a) For Private Passenger Types Liability, No Change (N.C.) was selected due to the modest indication.

INSURANCE SERVICES OFFICE, INC.

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COMMERCIAL AUTOMOBILE INSURANCE

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

FOR PRIVATE PASSENGER TYPES POLICY COVERAGES

Territory Code	Physical Damage	
	Comprehensive	Collision (a)
102	4.5%	
104	8.9%	
105	6.2%	
106	6.0%	
108	3.7%	
109	5.0%	
110	5.8%	
112	2.0%	
116	7.3%	
117	2.1%	
125	7.5%	
126	6.0%	
127	9.3%	
128	5.0%	
129	8.9%	
131	6.0%	
132	5.3%	
133	7.5%	
134	5.8%	
135	3.8%	
136	4.1%	
137	7.0%	
138	7.2%	

(a) For Private Passenger Types Collision, No Change (N.C.) was selected due to the modest indication.

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
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	\$500	Physical Damage	
	\$100,000 CSL	Med Pay (a)	Comprehensive (b)	Collision (c)
102	337	2	138	366
104	265	2	110	282
105	310	2	103	254
106	274	2	106	249
108	368	2	111	319
109	268	2	125	311
110	480	3	110	358
112	372	2	150	393
116	315	2	117	309
117	273	2	147	272
125	345	2	144	342
126	327	2	124	284
127	252	2	129	250
128	254	2	148	255
129	241	2	147	239
131	308	2	124	295
132	361	2	120	339
133	325	2	100	332
134	382	2	127	348
135	410	3	109	414
136	361	2	127	320
137	318	2	122	253
138	178	1	119	214

(a) The loss costs for medical payments have been calculated by multiplying a relativity by the Private Passenger Types CSL Liability loss costs. The relativities differ by territory and are listed in [EXHIBIT C17](#).

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

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

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

FOR VAN POOLS POLICY COVERAGES

Territory Code	\$100,000 CSL Liability	\$500 Med Pay
102	8.2%	-87.8%
104	9.9%	-88.6%
105	5.3%	-90.0%
106	6.6%	-89.3%
108	8.6%	-88.9%
109	5.2%	-87.9%
110	6.5%	-88.6%
112	6.1%	-88.1%
116	5.8%	-89.2%
117	7.4%	-90.0%
125	5.4%	-88.2%
126	4.8%	-89.7%
127	4.1%	-87.5%
128	4.6%	-90.0%
129	8.0%	-85.7%
131	14.3%	-86.7%
132	3.9%	-88.1%
133	8.5%	-87.5%
134	4.4%	-88.0%
135	10.5%	-87.2%
136	3.8%	-89.7%
137	3.0%	-89.3%
138	7.0%	-85.7%

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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 (a)	
102	13.4%		14.8%
104	14.7%		14.9%
105	17.2%		18.2%
106	14.1%		14.7%
108	15.9%		16.8%
109	15.0%		16.7%
110	15.9%		15.3%
112	10.5%		10.1%
116	16.8%		17.5%
117	13.0%		12.1%
125	14.9%		15.4%
126	16.9%		17.2%
127	11.5%		11.5%
128	17.0%		18.3%
129	20.5%		19.4%
131	15.7%		14.3%
132	16.0%		15.5%
133	14.9%		13.6%
134	15.8%		15.4%
135	18.2%		19.5%
136	16.4%		17.3%
137	16.7%		15.6%
138	13.1%		12.5%

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

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
COMMERCIAL AUTOMOBILE INSURANCE

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

FOR VAN POOLS POLICY COVERAGES

Territory	Liability	\$500	Physical Damage		Specified Causes
Code	\$100,000 CSL (a)	Med Pay (b)	Comprehensive (c)	Collision (d)	of Loss (e)
102	620	5	161	297	140
104	546	4	125	300	108
105	300	2	150	243	130
106	419	3	154	279	133
108	554	4	160	298	139
109	489	4	161	272	140
110	521	4	131	352	113
112	629	5	126	310	109
116	551	4	209	292	181
117	303	2	139	268	120
125	755	6	208	353	180
126	569	4	173	304	150
127	359	3	146	305	126
128	297	2	172	291	149
129	324	3	200	315	172
131	966	8	140	366	120
132	617	5	138	276	119
133	615	5	116	271	100
134	741	6	139	302	120
135	726	6	156	234	135
136	573	4	149	295	129
137	410	3	147	276	126
138	323	3	147	235	126

- (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 medical payments have been calculated by multiplying a relativity by the Van Pools CSL liability loss costs. The relativities differ by territory and are listed in [EXHIBIT C17](#).
- (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.

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

FOR TAXIS AND LIMOUSINES POLICY COVERAGES

Territory Code	\$100,000 CSL Liability	\$500 Med Pay
102	8.2%	-76.5%
104	10.0%	-75.7%
105	5.3%	-76.2%
106	6.5%	-77.6%
108	8.5%	-76.3%
109	5.2%	-76.8%
110	6.4%	-76.7%
112	6.1%	-77.3%
116	5.8%	-76.6%
117	7.4%	-76.2%
125	5.5%	-77.4%
126	4.7%	-77.8%
127	3.9%	-76.5%
128	4.8%	-76.2%
129	8.0%	-77.8%
131	14.4%	-75.4%
132	3.8%	-77.3%
133	8.4%	-76.2%
134	4.4%	-77.4%
135	10.5%	-76.5%
136	3.8%	-78.0%
137	3.0%	-78.0%
138	7.0%	-77.8%

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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 (a)	
102	13.4%		14.8%
104	14.7%		14.9%
105	17.2%		18.2%
106	14.1%		14.7%
108	15.9%		16.8%
109	15.0%		16.7%
110	15.9%		15.3%
112	10.5%		10.1%
116	16.8%		17.5%
117	13.0%		12.1%
125	14.9%		15.4%
126	16.9%		17.2%
127	11.5%		11.5%
128	17.0%		18.3%
129	20.5%		19.4%
131	15.7%		14.3%
132	16.0%		15.5%
133	14.9%		13.6%
134	15.8%		15.4%
135	18.2%		19.5%
136	16.4%		17.3%
137	16.7%		15.6%
138	13.1%		12.5%

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



INSURANCE SERVICES OFFICE, INC.

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COMMERCIAL AUTOMOBILE INSURANCE

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

FOR TAXIS AND LIMOUSINES POLICY COVERAGES

Territory	Liability	\$500	Physical Damage		Specified Causes
Code	\$100,000 CSL (a)	Med Pay (b)	Comprehensive (c)	Collision (d)	of Loss (e)
102	2561	20	161	297	140
104	2257	18	125	300	108
105	1240	10	150	243	130
106	1730	13	154	279	133
108	2288	18	160	298	139
109	2021	16	161	272	140
110	2151	17	131	352	113
112	2598	20	126	310	109
116	2275	18	209	292	181
117	1252	10	139	268	120
125	3119	24	208	353	180
126	2350	18	173	304	150
127	1482	12	146	305	126
128	1228	10	172	291	149
129	1339	10	200	315	172
131	3993	31	140	366	120
132	2548	20	138	276	119
133	2542	20	116	271	100
134	3063	24	139	302	120
135	3001	23	156	234	135
136	2368	18	149	295	129
137	1693	13	147	276	126
138	1333	10	147	235	126

- (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 medical payments have been calculated by multiplying a relativity by the Taxis and Limousines CSL liability loss costs. The relativities differ by territory and are listed in [EXHIBIT C17](#).
- (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.

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COMMERCIAL AUTOMOBILE INSURANCE

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

FOR SCHOOL AND CHURCH BUSES POLICY COVERAGES

Territory Code	\$100,000 CSL Liability	\$500 Med Pay
102	8.1%	-66.7%
104	9.9%	-62.5%
105	4.8%	-60.0%
106	6.3%	-50.0%
108	8.6%	-62.5%
109	4.7%	-57.1%
110	6.7%	-62.5%
112	6.0%	-66.7%
116	5.8%	-62.5%
117	7.8%	-50.0%
125	5.7%	-72.7%
126	4.5%	-66.7%
127	3.1%	-60.0%
128	4.8%	-50.0%
129	8.2%	-60.0%
131	14.2%	-53.8%
132	3.7%	-55.6%
133	8.7%	-66.7%
134	4.6%	-72.7%
135	10.4%	-70.0%
136	4.0%	-55.6%
137	2.7%	-50.0%
138	6.3%	-60.0%

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
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 (a)	
102	14.4%		14.3%
104	14.7%		15.6%
105	17.0%		17.1%
106	15.2%		13.8%
108	15.8%		15.9%
109	15.6%		15.7%
110	15.4%		16.4%
112	11.5%		10.3%
116	17.1%		17.0%
117	11.8%		12.2%
125	15.3%		15.0%
126	16.7%		17.0%
127	11.1%		11.5%
128	16.8%		17.2%
129	20.2%		19.2%
131	15.7%		15.3%
132	15.9%		15.5%
133	15.9%		15.0%
134	14.5%		16.9%
135	18.9%		17.9%
136	15.9%		15.8%
137	16.1%		16.0%
138	13.5%		13.0%

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

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
COMMERCIAL AUTOMOBILE INSURANCE

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

FOR SCHOOL AND CHURCH BUSES POLICY COVERAGES

Territory	Liability	\$500	Physical Damage		Specified Causes
Code	\$100,000 CSL (a)	Med Pay (b)	Comprehensive (c)	Collision (d)	of Loss (e)
102	227	3	111	152	96
104	200	3	86	153	74
105	110	2	103	124	89
106	153	3	106	143	91
108	203	3	110	153	95
109	179	3	111	139	96
110	191	3	90	180	78
112	230	3	87	159	75
116	202	3	144	150	124
117	111	2	95	137	83
125	277	3	143	181	123
126	208	3	119	155	103
127	131	2	100	156	87
128	109	2	118	149	102
129	119	2	137	161	118
131	354	6	96	187	83
132	226	4	95	141	82
133	226	3	80	138	69
134	272	3	95	155	83
135	266	3	107	120	92
136	210	4	102	151	88
137	150	3	101	141	87
138	118	2	101	120	87

- (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 medical payments have been calculated by multiplying a relativity by the School and Church Buses CSL liability loss costs. The relativities differ by territory and are listed in [EXHIBIT C17](#).
- (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.

MISSOURI  
COMMERCIAL AUTOMOBILE INSURANCE

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

FOR ALL OTHER BUSES POLICY COVERAGES

Territory Code	\$100,000 CSL Liability	\$500 Med Pay
102	8.1%	-67.4%
104	9.9%	-62.5%
105	5.3%	-47.8%
106	6.4%	-59.4%
108	8.5%	-68.3%
109	5.2%	-63.2%
110	6.5%	-62.5%
112	6.1%	-68.7%
116	5.8%	-66.7%
117	7.6%	-47.8%
125	5.4%	-62.1%
126	4.7%	-68.2%
127	3.9%	-57.1%
128	4.7%	-52.2%
129	8.0%	-50.0%
131	14.4%	-58.8%
132	3.8%	-79.2%
133	8.5%	-67.4%
134	4.5%	-62.1%
135	10.5%	-69.8%
136	3.9%	-68.9%
137	3.0%	-62.5%
138	6.9%	-50.0%

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
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 (a)	
102	14.4%		14.3%
104	14.7%		15.6%
105	17.0%		17.1%
106	15.2%		13.8%
108	15.8%		15.9%
109	15.6%		15.7%
110	15.4%		16.4%
112	11.5%		10.3%
116	17.1%		17.0%
117	11.8%		12.2%
125	15.3%		15.0%
126	16.7%		17.0%
127	11.1%		11.5%
128	16.8%		17.2%
129	20.2%		19.2%
131	15.7%		15.3%
132	15.9%		15.5%
133	15.9%		15.0%
134	14.5%		16.9%
135	18.9%		17.9%
136	15.9%		15.8%
137	16.1%		16.0%
138	13.5%		13.0%

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

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
COMMERCIAL AUTOMOBILE INSURANCE

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

FOR ALL OTHER BUSES POLICY COVERAGES

Territory	Liability	\$500	Physical Damage		Specified Causes
Code	\$100,000 CSL (a)	Med Pay (b)	Comprehensive (c)	Collision (d)	of Loss (e)
102	1569	15	111	152	96
104	1383	15	86	153	74
105	760	12	103	124	89
106	1060	13	106	143	91
108	1402	13	110	153	95
109	1239	14	111	139	96
110	1319	15	90	180	78
112	1592	15	87	159	75
116	1395	14	144	150	124
117	768	12	95	137	83
125	1911	22	143	181	123
126	1440	14	119	155	103
127	908	12	100	156	87
128	752	11	118	149	102
129	821	12	137	161	118
131	2447	28	96	187	83
132	1562	10	95	141	82
133	1558	15	80	138	69
134	1877	22	95	155	83
135	1839	16	107	120	92
136	1452	14	102	151	88
137	1037	12	101	141	87
138	817	12	101	120	87

- (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 medical payments have been calculated by multiplying a relativity by the All Other Buses CSL liability loss costs. The relativities differ by territory and are listed in [EXHIBIT C17](#).
- (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.

MISSOURI  
 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
03/31/16	\$25,043,502	\$24,861,119	0.993	20%	2,449
03/31/17	\$25,157,024	\$28,765,134	1.143	30%	2,550
03/31/18	\$25,779,904	\$27,323,245	1.060	50%	2,485
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).				1.072
(7)	EXPECTED EXPERIENCE RATIO (D).				1.043
(8)	CREDIBILITY (E).				0.80
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000- (8)) ).				1.066
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).				6.6%
(11)	FILED CHANGE.				6.6%
(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 10/01/19 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 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.

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

	ACC. YEAR ENDING	BODILY INJURY	PROPERTY DAMAGE	COMBINED
(1) INCURRED LOSSES AND	03/31/16	\$9,838,840	\$7,826,153	
ALLOCATED LOSS	03/31/17	\$11,540,983	\$8,869,368	
ADJUSTMENT EXPENSES	03/31/18	\$9,971,652	\$8,375,711	
 (2) DEVELOPED LOSSES AND	03/31/16	\$11,422,893	\$8,634,595	
ALL LOSS ADJUSTMENT	03/31/17	\$14,404,012	\$9,863,624	
EXPENSES (A)	03/31/18	\$14,471,360	\$9,591,027	
 (3) SELECTED ANNUAL LOSS TREND (SEE TREND EXHIBIT IN SECTION C)		3.6%	5.4%	4.3%
 (4) TRENDED LOSSES AND	03/31/16	\$13,627,511	\$11,233,608	\$24,861,119
ALL LOSS ADJUSTMENT	03/31/17	\$16,593,422	\$12,171,712	\$28,765,134
EXPENSES (B)	03/31/18	\$16,092,152	\$11,231,093	\$27,323,245

(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.
03/31/16	1.080	1.003
03/31/17	1.161	1.011
03/31/18	1.350	1.041

(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 10/01/19  
WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD
03/31/16	10/1/15	5.000
03/31/17	10/1/16	4.000
03/31/18	10/1/17	3.000

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
AUTOMOBILE PHYSICAL DAMAGE INSURANCE - TRUCKS, TRACTORS AND TRAILERS (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
	03/31/14	\$5,109,316	\$5,471,284	1.071	10%	884
	03/31/15	\$5,059,476	\$5,727,814	1.132	15%	905
	03/31/16	\$4,942,549	\$5,635,457	1.140	20%	905
	03/31/17	\$4,889,855	\$5,429,770	1.110	25%	926
	03/31/18	\$5,123,350	\$7,358,993	1.436	30%	1,050
COLL.	03/31/16	\$11,851,655	\$10,831,099	0.914	20%	1,140
	03/31/17	\$11,835,147	\$13,061,938	1.104	30%	1,220
	03/31/18	\$12,439,103	\$11,363,821	0.914	50%	1,167

		O.T.C.	COLLISION
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).	1.214	0.971
(7)	EXPECTED EXPERIENCE RATIO (D).	1.059	1.033
(8)	CREDIBILITY (E).	0.65	0.85
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000- (8)) ).	1.160	0.980
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).	16.0%	-2.0%
(11)	FILED CHANGE.	16.0%	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.		
(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 10/01/19 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 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.

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

	ACC. YEAR ENDING	O.T.C	COLLISION
(1) PAID LOSSES	03/31/14	\$3,014,847	----
	03/31/15	\$3,376,990	----
	03/31/16	\$3,554,619	\$7,519,309
	03/31/17	\$3,661,561	\$9,572,962
	03/31/18	\$5,186,567	\$8,934,518
(2) DEVELOPED LOSSES AND	03/31/14	\$3,406,777	----
ALL LOSS ADJUSTMENT	03/31/15	\$3,815,999	----
EXPENSES (A)	03/31/16	\$4,016,719	\$8,488,322
	03/31/17	\$4,141,701	\$10,741,725
	03/31/18	\$6,007,341	\$9,813,317
(3) SELECTED ANNUAL LOSS TREND (SEE TREND EXHIBIT IN SECTION C)		7.0%	5.0%
(4) TRENDED LOSSES AND	03/31/14	\$5,471,284	----
ALL LOSS ADJUSTMENT	03/31/15	\$5,727,814	----
EXPENSES (B)	03/31/16	\$5,635,457	\$10,831,099
	03/31/17	\$5,429,770	\$13,061,938
	03/31/18	\$7,358,993	\$11,363,821
(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.
	03/31/14	1.000	----
	03/31/15	1.000	----
	03/31/16	1.000	0.999
	03/31/17	1.001	0.993
	03/31/18	1.025	0.972

(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 10/01/19 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING BOTH OTC AND COLLISION.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD OTC	PROJECTION PERIOD COLL
03/31/14	10/1/13	7.000	----
03/31/15	10/1/14	6.000	----
03/31/16	10/1/15	5.000	5.000
03/31/17	10/1/16	4.000	4.000
03/31/18	10/1/17	3.000	3.000

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
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	03/31/14	\$4,766,153	----
AT CURRENT LEVEL	03/31/15	\$4,764,102	----
	03/31/16	\$4,702,711	\$10,943,356
	03/31/17	\$4,697,267	\$11,102,389
	03/31/18	\$4,974,126	\$11,858,058
(2) SELECTED ANNUAL OCN			
TREND (SEE TREND		1.0%	1.6%
EXHIBIT IN SECTION C)			
(3) TRENDED AGGREGATE	03/31/14	\$5,109,316	----
LOSS COSTS AT	03/31/15	\$5,059,476	----
CURRENT LEVEL (A)	03/31/16	\$4,942,549	\$11,851,655
	03/31/17	\$4,889,855	\$11,835,147
	03/31/18	\$5,123,350	\$12,439,103

(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  
10/01/19 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING BOTH OTC  
AND COLLISION.

YEAR ENDING	AVERAGE DATE OF WRITING	PROJECTION PERIOD OTC	PROJECTION PERIOD COLL
03/31/14	4/1/13	7.000	-----
03/31/15	4/1/14	6.000	-----
03/31/16	4/1/15	5.000	5.000
03/31/17	4/1/16	4.000	4.000
03/31/18	4/1/17	3.000	3.000

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
 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
03/31/14	\$5,151,569	\$6,350,399	1.233	10%	665
03/31/15	\$5,105,202	\$4,958,668	0.971	15%	590
03/31/16	\$4,964,350	\$5,455,365	1.099	20%	605
03/31/17	\$4,853,789	\$4,649,369	0.958	25%	538
03/31/18	\$4,898,160	\$4,385,654	0.895	30%	493
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3) * (4)).				0.998
(7)	EXPECTED EXPERIENCE RATIO (D).				1.044
(8)	CREDIBILITY (E).				0.50
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000 - (8)) ).				1.021
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).				2.1%
(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.				
(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 10/01/19 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.

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

	ACC. YEAR ENDING	BODILY INJURY	PROPERTY DAMAGE	COMBINED
(1) INCURRED LOSSES AND	03/31/14	\$2,958,815	\$1,425,275	
ALLOCATED LOSS	03/31/15	\$2,043,793	\$1,448,093	
ADJUSTMENT EXPENSES	03/31/16	\$2,270,592	\$1,630,304	
	03/31/17	\$1,811,119	\$1,542,845	
	03/31/18	\$1,476,891	\$1,492,950	
(2) DEVELOPED LOSSES AND	03/31/14	\$3,187,088	\$1,569,370	
ALL LOSS ADJUSTMENT	03/31/15	\$2,243,216	\$1,594,495	
EXPENSES (A)	03/31/16	\$2,609,308	\$1,800,508	
	03/31/17	\$2,196,163	\$1,717,495	
	03/31/18	\$2,159,215	\$1,694,797	
(3) SELECTED ANNUAL LOSS				
TREND (SEE TREND		3.6%	5.4%	4.4%
EXHIBIT IN SECTION C)				
(4) TRENDING LOSSES AND	03/31/14	\$4,082,660	\$2,267,740	\$6,350,399
ALL LOSS ADJUSTMENT	03/31/15	\$2,772,615	\$2,186,053	\$4,958,668
EXPENSES (B)	03/31/16	\$3,112,904	\$2,342,461	\$5,455,365
	03/31/17	\$2,529,980	\$2,119,389	\$4,649,369
	03/31/18	\$2,401,047	\$1,984,607	\$4,385,654
(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.	
	03/31/14	1.002	1.001	
	03/31/15	1.021	1.001	
	03/31/16	1.069	1.004	
	03/31/17	1.128	1.012	
	03/31/18	1.360	1.032	

(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 10/01/19 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD
03/31/14	10/1/13	7.000
03/31/15	10/1/14	6.000
03/31/16	10/1/15	5.000
03/31/17	10/1/16	4.000
03/31/18	10/1/17	3.000

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
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
	03/31/14	\$1,713,612	\$1,661,807	0.970	10%	460
	03/31/15	\$1,662,873	\$1,659,493	0.998	15%	452
	03/31/16	\$1,622,753	\$2,097,785	1.293	20%	570
	03/31/17	\$1,517,500	\$1,808,594	1.192	25%	455
	03/31/18	\$1,461,941	\$1,354,495	0.927	30%	424
COLL.	03/31/16	\$3,364,390	\$3,814,993	1.134	20%	588
	03/31/17	\$3,159,188	\$3,141,400	0.994	30%	543
	03/31/18	\$3,123,417	\$2,969,948	0.951	50%	479

		O.T.C.	COLLISION
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).	1.082	1.001
(7)	EXPECTED EXPERIENCE RATIO (D).	1.053	1.039
(8)	CREDIBILITY (E).	0.50	0.65
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000- (8)) ).	1.068	1.014
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).	6.8%	1.4%
(11)	FILED CHANGE.	6.8%	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 10/01/19 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 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.

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

	ACC. YEAR ENDING	O.T.C	COLLISION
(1) PAID LOSSES	03/31/14	\$946,349	----
	03/31/15	\$1,006,565	----
	03/31/16	\$1,355,071	\$2,712,263
	03/31/17	\$1,244,577	\$2,344,326
	03/31/18	\$982,451	\$2,424,717
(2) DEVELOPED LOSSES AND	03/31/14	\$1,069,374	----
ALL LOSS ADJUSTMENT	03/31/15	\$1,137,418	----
EXPENSES (A)	03/31/16	\$1,531,230	\$3,061,792
	03/31/17	\$1,406,372	\$2,633,194
	03/31/18	\$1,121,271	\$2,602,934
(3) SELECTED ANNUAL LOSS TREND (SEE TREND EXHIBIT IN SECTION C)		6.5%	4.5%
(4) TRENDED LOSSES AND	03/31/14	\$1,661,807	----
ALL LOSS ADJUSTMENT	03/31/15	\$1,659,493	----
EXPENSES (B)	03/31/16	\$2,097,785	\$3,814,993
	03/31/17	\$1,808,594	\$3,141,400
	03/31/18	\$1,354,495	\$2,969,948

## (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.
03/31/14	1.000	-----
03/31/15	1.000	-----
03/31/16	1.000	0.999
03/31/17	1.000	0.994
03/31/18	1.010	0.950

(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 10/01/19 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING BOTH OTC AND COLLISION.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD OTC	PROJECTION PERIOD COLL
03/31/14	10/1/13	7.000	-----
03/31/15	10/1/14	6.000	-----
03/31/16	10/1/15	5.000	5.000
03/31/17	10/1/16	4.000	4.000
03/31/18	10/1/17	3.000	3.000



INSURANCE SERVICES OFFICE, INC.

MISSOURI  
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	03/31/14	\$1,586,678	----
AT CURRENT LEVEL	03/31/15	\$1,556,997	----
	03/31/16	\$1,536,698	\$3,266,398
	03/31/17	\$1,452,153	\$3,085,145
	03/31/18	\$1,415,238	\$3,068,190
(2) SELECTED ANNUAL OCN			
TREND (SEE TREND		1.1%	0.6%
EXHIBIT IN SECTION C)			
(3) TRENDED AGGREGATE	03/31/14	\$1,713,612	----
LOSS COSTS AT	03/31/15	\$1,662,873	----
CURRENT LEVEL (A)	03/31/16	\$1,622,753	\$3,364,390
	03/31/17	\$1,517,500	\$3,159,188
	03/31/18	\$1,461,941	\$3,123,417

(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  
10/01/19 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING BOTH OTC  
AND COLLISION.

YEAR ENDING	AVERAGE DATE OF WRITING	PROJECTION PERIOD OTC	PROJECTION PERIOD COLL
03/31/14	4/1/13	7.000	-----
03/31/15	4/1/14	6.000	-----
03/31/16	4/1/15	5.000	5.000
03/31/17	4/1/16	4.000	4.000
03/31/18	4/1/17	3.000	3.000

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
COMMERCIAL AUTOMOBILE INSURANCE  
SINGLE LIMIT LIABILITY

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	03/31/2018	COST	03/31/2018	RATIO	CRED	RATIO	STATE	COST	COST	COST	COST
								PRES	IND*	REV	CHG**
102	2137	449.95	509.93	1.133	0.20	1.063	1.014	382	413	413	8.1%
104	3534	331.00	409.04	1.236	0.20	1.083	1.033	331	364	364	10.0%
105	1302	193.95	187.82	0.968	0.10	1.037	0.990	190	200	200	5.3%
106	3964	268.31	280.73	1.046	0.20	1.045	0.997	262	279	279	6.5%
108	2334	344.79	411.38	1.193	0.15	1.067	1.018	340	369	369	8.5%
109	1463	336.83	312.78	0.929	0.10	1.033	0.986	310	326	326	5.2%
110	305	259.68	102.44	0.394	0.00	1.045	0.997	326	347	347	6.4%
112	2850	406.36	418.49	1.030	0.20	1.042	0.994	395	419	419	6.1%
116	3345	342.67	351.63	1.026	0.20	1.041	0.993	347	367	367	5.8%
117	5372	186.89	206.73	1.106	0.15	1.054	1.006	188	202	202	7.4%
125	1957	491.37	484.37	0.986	0.15	1.036	0.989	477	503	503	5.5%
126	925	407.56	360.72	0.885	0.10	1.029	0.982	362	379	379	4.7%
127	15666	230.23	224.86	0.977	0.35	1.021	0.974	230	239	239	3.9%
128	8369	177.67	173.55	0.977	0.25	1.028	0.981	189	198	198	4.8%
129	20774	189.95	205.74	1.083	0.40	1.060	1.011	200	216	216	8.0%
131	94	535.01	1393.65	2.605	0.05	1.123	1.072	563	644	644	14.4%
132	442	437.24	244.34	0.559	0.05	1.021	0.974	396	411	411	3.8%
133	11091	386.55	421.63	1.091	0.45	1.066	1.017	378	410	410	8.5%
134	670	507.73	439.35	0.865	0.10	1.027	0.980	473	494	494	4.4%
135	1126	479.34	632.57	1.320	0.15	1.086	1.036	438	484	484	10.5%
136	1221	405.36	327.94	0.809	0.10	1.021	0.974	368	382	382	3.8%
137	2457	236.04	171.53	0.727	0.10	1.013	0.967	265	273	273	3.0%
138	1788	200.10	222.53	1.112	0.10	1.052	1.004	201	215	215	7.0%
SW	93186	272.08	284.31	1.045		1.048					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 6.6 PERCENT.

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

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
COMMERCIAL AUTOMOBILE INSURANCE  
SINGLE LIMIT LIABILITY

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

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
T	EARNED CAR	\$100000	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	03/31/2018	COST	03/31/2018	RATIO	CRED	RATIO	STATE	COST	COST
								PRES	IND*
102	624	345.00	302.57	0.877	0.05	1.030	0.988	337	340
104	646	272.25	387.50	1.423	0.10	1.077	1.034	265	280
105	252	317.50	611.26	1.925	0.05	1.082	1.038	310	329
106	1034	276.26	341.89	1.238	0.10	1.058	1.015	274	284
108	287	372.93	358.78	0.962	0.05	1.034	0.992	368	373
109	322	275.65	274.25	0.995	0.05	1.036	0.994	268	272
110	5	536.40	0.00	0.000	0.00	1.038	0.996	480	488
112	873	381.87	357.66	0.937	0.10	1.028	0.987	372	375
116	508	323.66	232.23	0.718	0.05	1.022	0.981	315	316
117	719	274.61	298.07	1.085	0.05	1.040	0.998	273	278
125	278	349.76	297.36	0.850	0.05	1.029	0.988	345	348
126	123	333.88	200.21	0.600	0.00	1.038	0.996	327	333
127	2306	252.84	302.66	1.197	0.15	1.062	1.019	252	262
128	910	255.97	285.81	1.117	0.10	1.046	1.004	254	260
129	2803	245.40	256.53	1.045	0.15	1.039	0.997	241	245
131	36	300.25	630.88	2.101	0.00	1.038	0.996	308	313
132	306	371.16	250.85	0.676	0.05	1.020	0.979	361	361
133	3304	329.72	336.71	1.021	0.20	1.035	0.993	325	330
134	117	384.94	241.73	0.628	0.00	1.038	0.996	382	388
135	236	411.47	501.70	1.219	0.05	1.047	1.005	410	421
136	208	372.73	389.12	1.044	0.05	1.038	0.996	361	367
137	335	312.71	88.81	0.284	0.00	1.038	0.996	318	323
138	372	180.87	127.34	0.704	0.05	1.021	0.980	178	178
SW	16604	295.00	306.16	1.038		1.042			

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 2.1 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.

MISSOURI  
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	LOSS
R	03/31/2018	COST	03/31/2018	RATIO	CRED	RATIO	STATE	COST	COST	COST	COST
								PRES	IND*	REV	CHG**
102	2079	90.86	89.28	0.983	0.10	1.147	0.978	139	158	158	13.7%
104	2282	71.89	79.77	1.110	0.10	1.160	0.989	107	123	123	15.0%
105	901	76.42	123.92	1.622	0.05	1.188	1.013	125	147	147	17.6%
106	2665	84.67	92.91	1.097	0.10	1.158	0.987	132	151	151	14.4%
108	1453	86.56	114.28	1.320	0.05	1.173	1.000	135	157	157	16.3%
109	1039	95.36	109.20	1.145	0.05	1.164	0.992	137	158	158	15.3%
110	110	59.10	129.27	2.187	0.00	1.165	0.993	111	128	128	15.3%
112	2193	78.69	56.24	0.715	0.10	1.120	0.955	112	124	124	10.7%
116	2405	115.11	153.88	1.337	0.10	1.182	1.008	175	205	205	17.1%
117	3333	69.72	36.17	0.519	0.05	1.133	0.966	121	136	136	12.4%
125	1114	108.47	130.68	1.205	0.05	1.167	0.995	177	204	204	15.3%
126	549	97.27	146.68	1.508	0.05	1.182	1.008	145	170	170	17.2%
127	9172	77.63	77.28	0.995	0.20	1.131	0.964	128	143	143	11.7%
128	4661	90.69	119.46	1.317	0.15	1.188	1.013	144	169	169	17.4%
129	12734	99.16	133.38	1.345	0.30	1.219	1.039	163	196	196	20.2%
131	78	63.85	0.57	0.009	0.00	1.165	0.993	119	137	137	15.1%
132	289	93.34	24.79	0.266	0.00	1.165	0.993	117	135	135	15.4%
133	8687	63.40	72.87	1.149	0.20	1.162	0.991	99	114	114	15.2%
134	561	72.71	47.79	0.657	0.00	1.165	0.993	118	136	136	15.3%
135	1034	94.26	144.36	1.532	0.10	1.202	1.025	129	153	153	18.6%
136	799	81.50	116.11	1.425	0.05	1.178	1.004	125	146	146	16.8%
137	1302	77.38	100.89	1.304	0.05	1.172	0.999	124	144	144	16.1%
138	1248	83.54	84.83	1.015	0.10	1.150	0.980	127	144	144	13.4%
SW	60688	84.42	98.39	1.165		1.173					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 16.0 PERCENT.

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

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
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)
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	03/31/2018	COST	03/31/2018	RATIO	CRED	RATIO	STATE	COST	COST
								PRES	IND*
102	2115	208.38	172.81	0.829	0.20	0.920	0.973	234	223
104	2511	205.05	218.91	1.068	0.25	0.974	1.030	236	238
105	989	166.10	151.13	0.910	0.10	0.940	0.994	191	186
106	2870	178.51	199.04	1.115	0.20	0.977	1.033	220	223
108	1665	188.62	183.49	0.973	0.15	0.948	1.002	235	231
109	1260	196.95	167.04	0.848	0.15	0.929	0.982	214	206
110	113	191.90	203.63	1.061	0.00	0.943	0.997	277	271
112	2135	218.72	190.95	0.873	0.20	0.929	0.982	244	235
116	2573	195.40	183.37	0.938	0.20	0.942	0.996	230	224
117	3560	161.31	144.26	0.894	0.20	0.933	0.986	211	204
125	1204	239.10	196.58	0.822	0.15	0.925	0.978	278	266
126	709	220.61	201.33	0.913	0.10	0.940	0.994	239	233
127	10064	187.03	176.67	0.945	0.40	0.944	0.998	240	235
128	5160	180.54	155.85	0.863	0.25	0.923	0.976	229	219
129	12920	197.59	184.20	0.932	0.45	0.938	0.992	248	241
131	81	168.27	632.58	3.759	0.05	1.084	1.146	288	323
132	313	239.78	192.23	0.802	0.05	0.936	0.989	217	210
133	8634	176.92	184.02	1.040	0.45	0.987	1.043	213	218
134	539	182.19	175.79	0.965	0.10	0.945	0.999	238	233
135	1006	175.37	198.11	1.130	0.15	0.971	1.026	184	185
136	907	203.17	182.50	0.898	0.10	0.939	0.993	232	226
137	1283	184.22	114.29	0.620	0.10	0.911	0.963	217	205
138	1249	156.41	140.53	0.898	0.15	0.936	0.989	185	179
SW	63860	189.13	178.38	0.943		0.946			

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF -2.0 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.

MISSOURI  
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	03/31/2018	COST	03/31/2018	RATIO	CRED	RATIO	STATE	COST	COST	COST	COST
								PRES	IND*	REV	CHG**
102	409	149.83	124.05	0.828	0.05	1.069	0.978	132	138	138	4.5%
104	486	114.29	165.16	1.445	0.10	1.118	1.023	101	110	110	8.9%
105	205	106.45	68.82	0.647	0.00	1.082	0.990	97	103	103	6.2%
106	629	101.77	116.49	1.145	0.10	1.088	0.995	100	106	106	6.0%
108	233	112.77	65.29	0.579	0.05	1.057	0.967	107	111	111	3.7%
109	218	131.89	121.11	0.918	0.05	1.074	0.983	119	125	125	5.0%
110	2	159.08	0.00	0.000	0.00	1.082	0.990	104	110	110	5.8%
112	693	161.77	118.76	0.734	0.10	1.047	0.958	147	150	150	2.0%
116	335	129.21	180.55	1.397	0.05	1.098	1.005	109	117	117	7.3%
117	474	159.08	59.71	0.375	0.05	1.047	0.958	144	147	147	2.1%
125	167	128.77	189.78	1.474	0.05	1.102	1.008	134	144	144	7.5%
126	86	119.59	94.55	0.791	0.00	1.082	0.990	117	124	124	6.0%
127	1317	117.60	159.23	1.354	0.15	1.123	1.027	118	129	129	9.3%
128	524	139.89	136.21	0.974	0.10	1.071	0.980	141	148	148	5.0%
129	1814	140.68	176.12	1.252	0.20	1.116	1.021	135	147	147	8.9%
131	27	107.78	0.73	0.007	0.00	1.082	0.990	117	124	124	6.0%
132	240	146.94	136.45	0.929	0.05	1.074	0.983	114	120	120	5.3%
133	2595	108.45	127.40	1.175	0.25	1.105	1.011	93	100	100	7.5%
134	96	121.08	98.74	0.815	0.00	1.082	0.990	120	127	127	5.8%
135	194	111.18	79.44	0.715	0.05	1.064	0.973	105	109	109	3.8%
136	140	139.57	107.29	0.769	0.05	1.066	0.975	122	127	127	4.1%
137	171	116.01	156.29	1.347	0.05	1.095	1.002	114	122	122	7.0%
138	250	116.79	162.52	1.392	0.05	1.098	1.005	111	119	119	7.2%
SW	11305	126.08	136.41	1.082		1.093					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 6.8 PERCENT.

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

INSURANCE SERVICES OFFICE, INC.

MISSOURI  
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	03/31/2018	COST	03/31/2018	RATIO	CRED	RATIO	STATE	COST	COST
								PRES	IND*
102	466	316.64	290.49	0.917	0.15	0.998	0.979	366	363
104	490	242.51	320.86	1.323	0.15	1.059	1.039	282	297
105	228	218.15	194.49	0.892	0.05	1.006	0.987	254	254
106	831	195.60	201.47	1.030	0.15	1.015	0.996	249	251
108	262	255.88	204.35	0.799	0.10	0.991	0.973	319	315
109	233	265.89	203.22	0.764	0.10	0.987	0.969	311	306
110	7	367.79	0.00	0.000	0.00	1.012	0.993	358	361
112	713	332.00	302.90	0.912	0.25	0.987	0.969	393	386
116	389	267.13	306.04	1.146	0.15	1.032	1.013	309	317
117	527	223.62	242.47	1.084	0.15	1.023	1.004	272	277
125	193	254.77	319.06	1.252	0.10	1.036	1.017	342	353
126	102	228.09	141.72	0.621	0.05	0.992	0.974	284	281
127	1484	193.96	182.65	0.942	0.25	0.995	0.976	250	248
128	606	199.72	155.45	0.778	0.15	0.977	0.959	255	248
129	1968	194.96	200.77	1.030	0.30	1.017	0.998	239	242
131	19	199.58	467.36	2.342	0.00	1.012	0.993	295	297
132	248	331.74	333.68	1.006	0.15	1.011	0.992	339	341
133	2680	293.80	321.62	1.095	0.45	1.049	1.029	332	346
134	107	264.76	323.51	1.222	0.05	1.023	1.004	348	354
135	195	341.60	433.48	1.269	0.10	1.038	1.019	414	428
136	170	273.42	238.68	0.873	0.10	0.998	0.979	320	318
137	204	211.32	96.72	0.458	0.05	0.984	0.966	253	248
138	284	174.20	139.28	0.800	0.10	0.991	0.973	214	211
SW	12406	245.14	248.03	1.012		1.019			

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 1.4 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>ITEM</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>AVG</u>	<u>AVG</u>
(1)	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

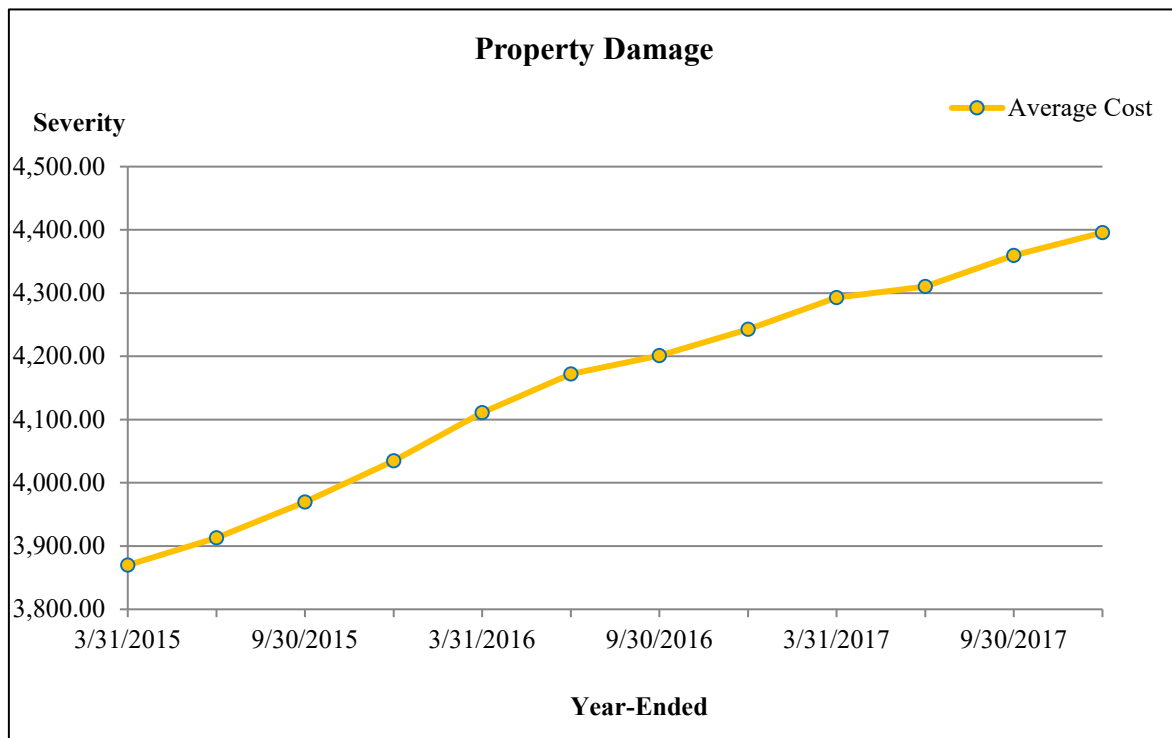
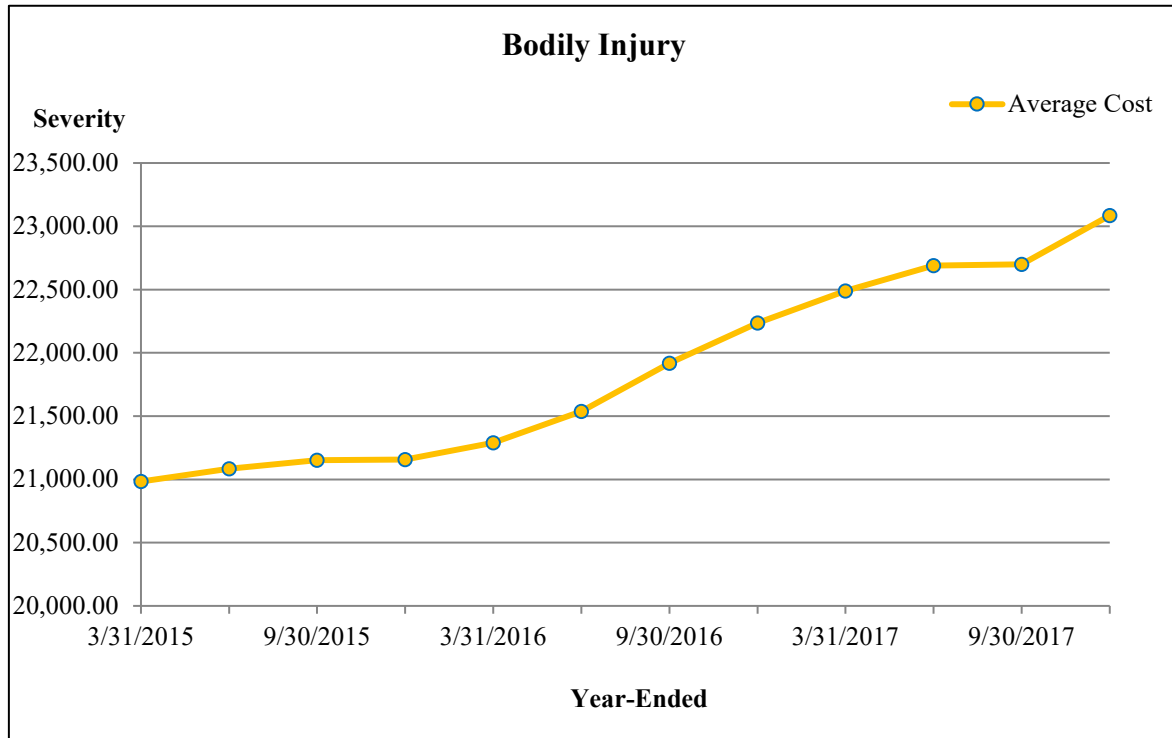
YEAR ENDED	MISSOURI				MULTISTATE*			
	BODILY INJURY		PROPERTY DAMAGE		BODILY INJURY		PROPERTY DAMAGE	
	(\$100000 LIMITS)		(\$100000 LIMITS)		(\$100000 LIMITS)		(\$100000 LIMITS)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	ACTUAL	EXPONENTIAL FIT	ACTUAL	EXPONENTIAL FIT	ACTUAL	EXPONENTIAL FIT	ACTUAL	EXPONENTIAL FIT
3/31/2015	20505.77	19440.30	3624.34	3641.75	20982.98	20758.42	3869.85	3892.57
6/30/2015	20357.65	19426.96	3679.34	3711.87	21083.55	20952.41	3913.02	3938.60
9/30/2015	18663.06	19413.63	3810.81	3783.35	21151.16	21148.21	3969.44	3985.17
12/31/2015	18931.16	19400.31	3823.42	3856.20	21157.58	21345.84	4034.82	4032.29
3/31/2016	18745.70	19387.00	3905.56	3930.46	21288.08	21545.32	4110.84	4079.97
6/30/2016	19036.52	19373.70	4027.71	4006.15	21536.65	21746.66	4172.07	4128.22
9/30/2016	19411.18	19360.40	4105.05	4083.29	21916.91	21949.88	4201.21	4177.03
12/31/2016	18899.52	19347.12	4292.09	4161.92	22237.05	22155.00	4242.98	4226.43
3/31/2017	18530.14	19333.84	4271.40	4242.07	22488.61	22362.04	4292.85	4276.40
6/30/2017	19486.28	19320.58	4312.62	4323.76	22690.73	22571.02	4310.18	4326.97
9/30/2017	19844.55	19307.32	4367.39	4407.02	22699.79	22781.94	4359.46	4378.14
12/31/2017	20125.95	19294.07	4422.79	4491.88	23085.19	22994.84	4395.65	4429.91

		BODILY INJURY	PROPERTY DAMAGE
(9)	AVERAGE ANNUAL PERCENT CHANGE IN PAID CLAIM COST (12TH POINT / 8TH POINT)		
	(A) MISSOURI	-0.3%	7.9%
	(B) MULTISTATE	3.8%	4.8%
(10)	CREDIBILITY	0.05	0.20
(11)	WEIGHTED AVERAGE ANNUAL PERCENT CHANGE IN PAID CLAIM COSTS { (10) * (9A) } + { (1.0 - (10)) * (9B) }	3.6%	5.4%
(12)	AVERAGE ANNUAL PERCENT CHANGE IN CLAIM FREQUENCY	0.0%	0.0%
(13)	AVERAGE ANNUAL PERCENT CHANGE IN LIABILITY LOSS RATIO (11) * (12)	3.6%	5.4%

\* 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>
12/31/2011	0.7566		2.8239	
3/31/2012	0.7569		2.7273	
6/30/2012	0.7581		2.7208	
9/30/2012	0.7489		2.6835	
12/31/2012	0.7522	-0.6% &	2.6652	-5.6% &
3/31/2013	0.7498		2.7000	
6/30/2013	0.7617		2.7359	
9/30/2013	0.7732	3.2%	2.7756	3.4%
12/31/2013	0.7743		2.7955	
3/31/2014	0.7883		2.8776	
6/30/2014	0.7791		2.8728	
9/30/2014	0.7733	0.0%	2.8730	3.5%
12/31/2014	0.7760		2.8711	
3/31/2015	0.7647		2.8347	
6/30/2015	0.7663		2.8327	
9/30/2015	0.7727	-0.1%	2.8460	-0.9%
12/31/2015	0.7838		2.8531	
3/31/2016	0.7926		2.8185	
6/30/2016	0.7979		2.8157	
9/30/2016	0.8019	3.8%	2.8134	-1.1%
12/31/2016	0.7964		2.8001	
3/31/2017	0.7959		2.7872	
6/30/2017	0.7980		2.7762	
9/30/2017	0.7936	-1.0%	2.7202	-3.3%

\* EXCLUDES MASSACHUSETTS

@ CHANGE BASED ON YEARS ENDING 9/30/XXXX

&amp; CHANGE BASED ON YEAR ENDING 12/31/2012 divided by 12/31/2011

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>
12/31/2011	0.9093		3.2801	
3/31/2012	0.9276		3.2644	
6/30/2012	0.9200		3.2804	
9/30/2012	0.9015		3.2598	
12/31/2012	0.8771	-3.5% &	3.2192	-1.9% &
3/31/2013	0.8634		3.1904	
6/30/2013	0.8584		3.1458	
9/30/2013	0.8722	-3.3%	3.1541	-3.2%
12/31/2013	0.8779		3.1812	
3/31/2014	0.8798		3.2183	
6/30/2014	0.8797		3.2164	
9/30/2014	0.8738	0.2%	3.1875	1.1%
12/31/2014	0.8689		3.1599	
3/31/2015	0.8457		3.1288	
6/30/2015	0.8300		3.0990	
9/30/2015	0.8162	-6.6%	3.1118	-2.4%
12/31/2015	0.8141		3.1202	
3/31/2016	0.8290		3.1054	
6/30/2016	0.8320		3.1162	
9/30/2016	0.8529	4.5%	3.1150	0.1%
12/31/2016	0.8396		3.0864	
3/31/2017	0.8328		3.0297	
6/30/2017	0.8287		2.9899	
9/30/2017	0.8031	-5.8%	2.8859	-7.4%

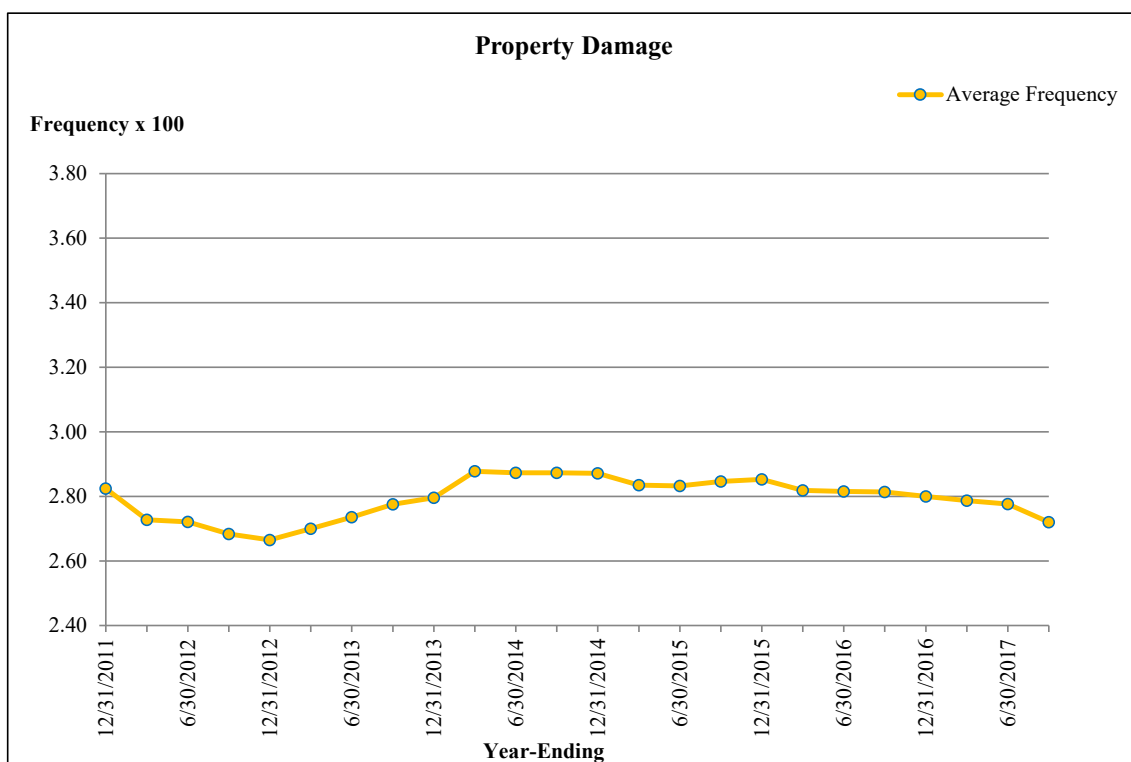
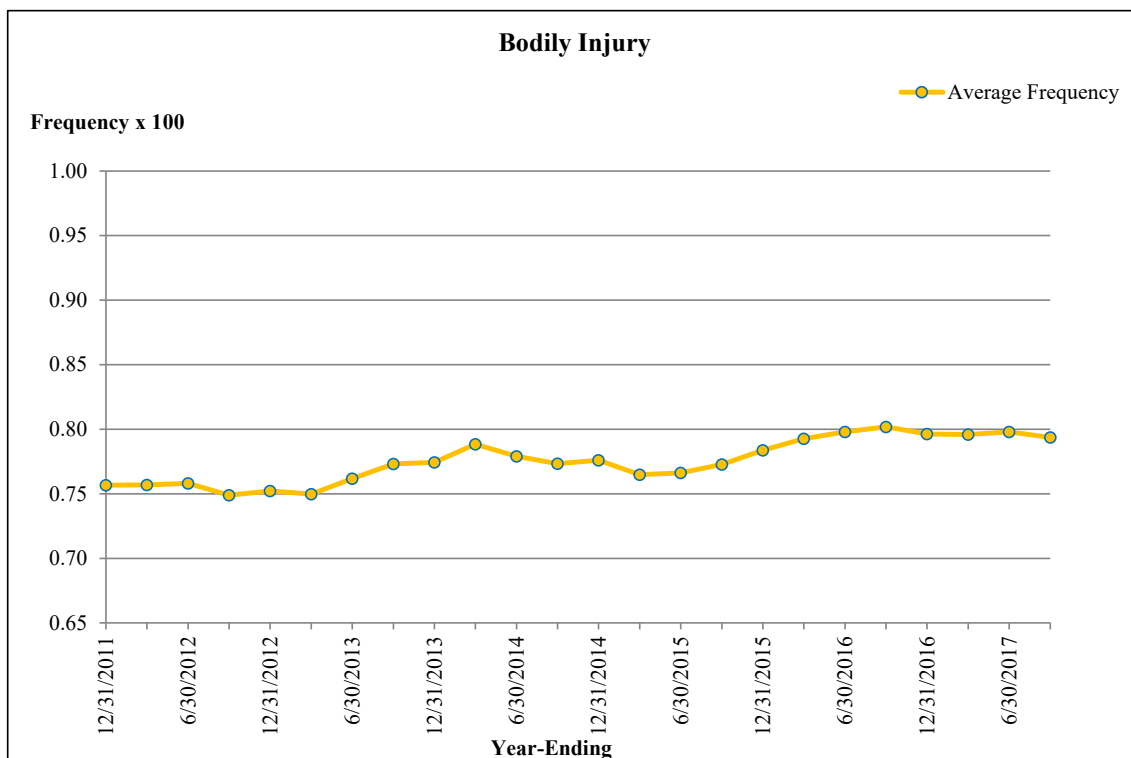
\* EXCLUDES MASSACHUSETTS

@ CHANGE BASED ON YEARS ENDING 9/30/XXXX

&amp; CHANGE BASED ON YEAR ENDING 12/31/2012 divided by 12/31/2011

INSURANCE SERVICES OFFICE, INC.

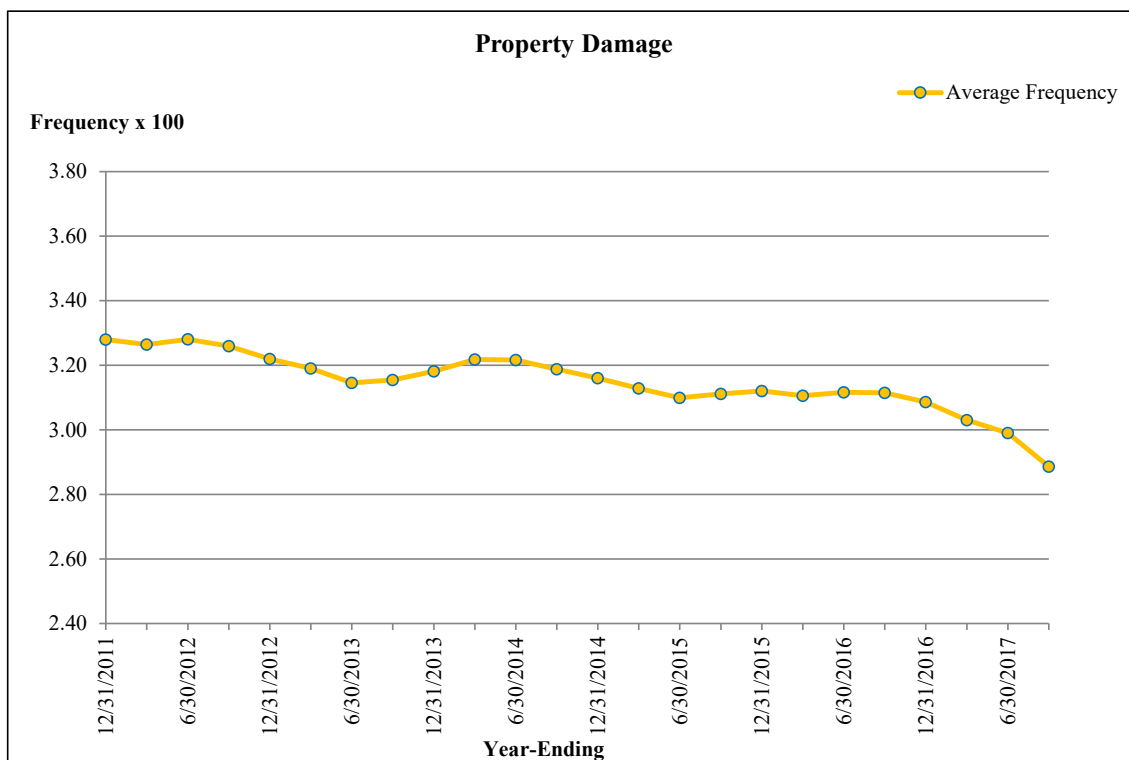
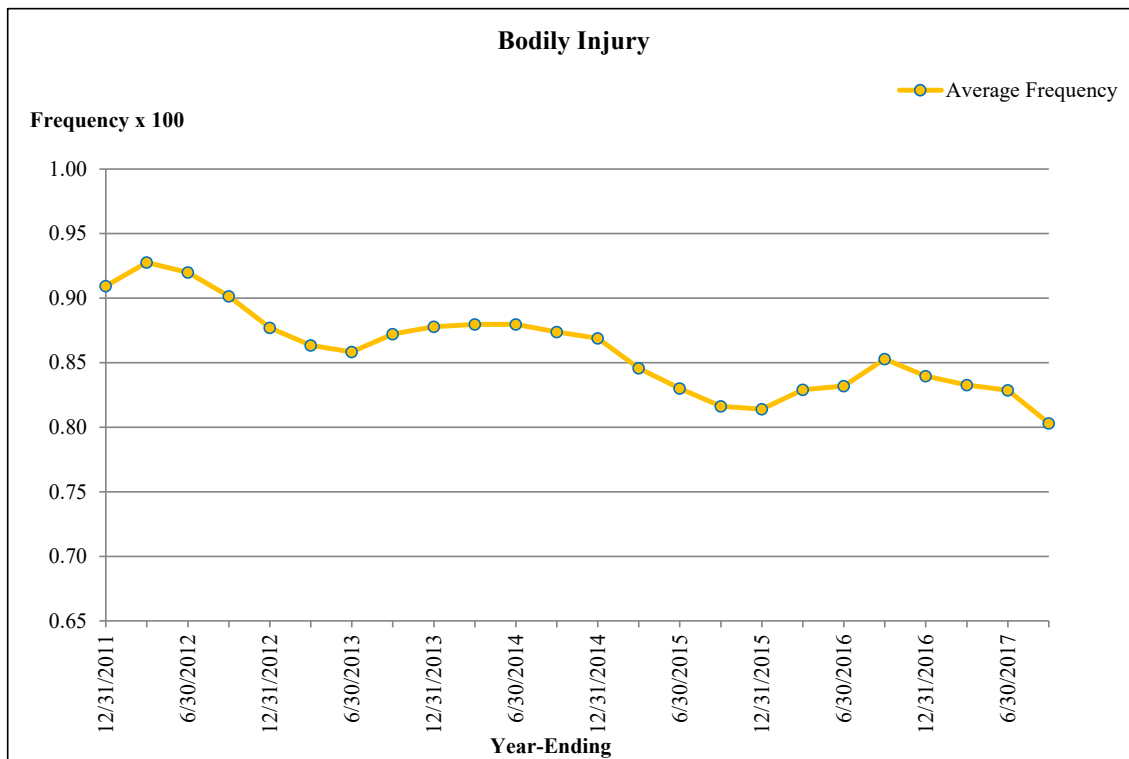
Commercial Automobile Liability  
Incurred Claim Frequency Experience  
Trucks, Tractors, and Trailers  
Multistate\*



\*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**
6/30/2013	2.44		1.44		0.95	
12/31/2013	2.37		1.42		0.93	
6/30/2014	2.44		1.41		0.92	
12/31/2014	2.39	0.8%	1.37	-3.5%	0.90	-3.2%
6/30/2015	2.28		1.35		0.89	
12/31/2015	2.19	-8.4%	1.35	-1.5%	0.91	1.1%
6/30/2016	2.13		1.35		0.92	
12/31/2016	2.15	-1.8%	1.35	0.0%	0.91	0.0%
6/30/2017	2.15		1.35		0.89	
12/31/2017	2.13	-0.9%	1.38	2.2%	0.90	-1.1%

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

Deductible:	Percent of Losses
Full	0.2%
\$50	0.8%
\$100	2.3%
\$200	0.2%
\$250	10.0%
\$500	37.0%
\$1,000	43.0%
\$2,000	3.4%
\$3,000	0.5%
\$5,000	2.4%

\* Multistate data excludes Massachusetts

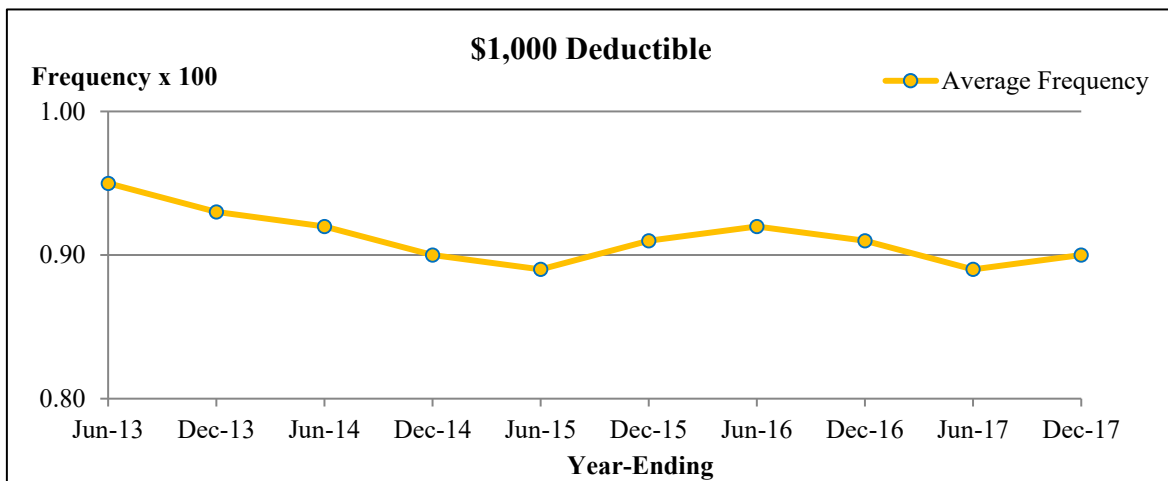
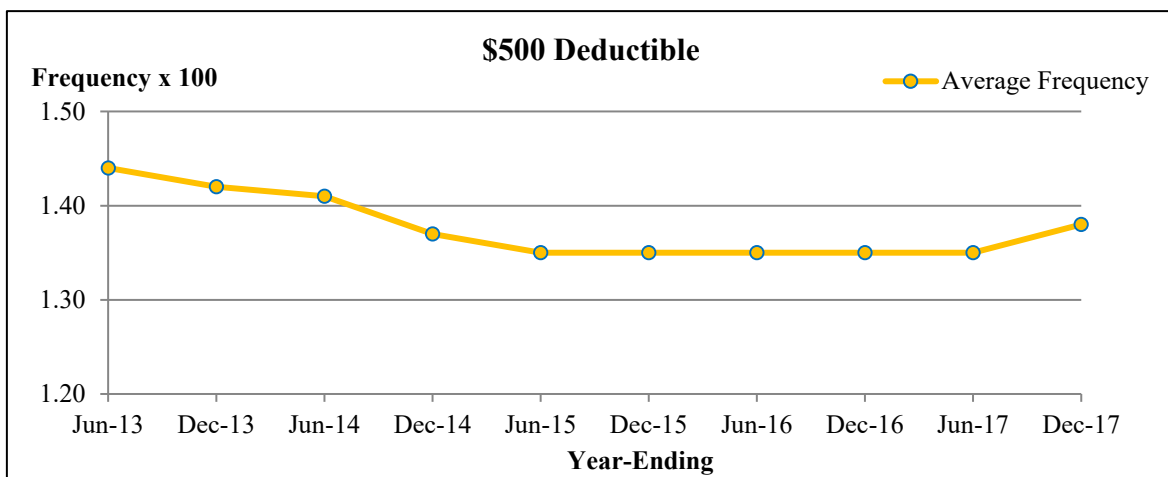
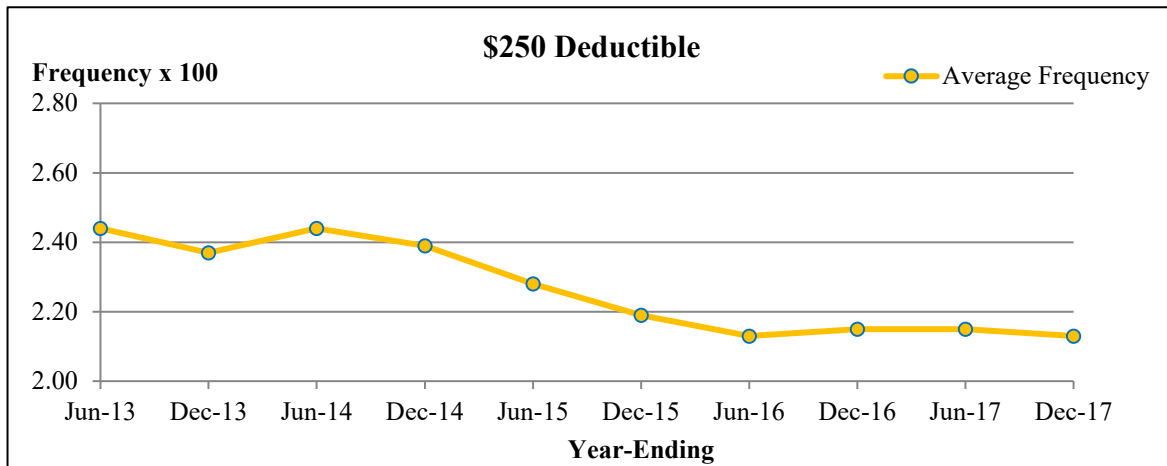
\*\* Change based on years ending 12/31/xxxx

\*\*\* Deductibles above \$1,000, totaling 6.3% 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
6/30/2013	2,844.12	4,851.33	7,115.38
12/31/2013	2,905.68	4,839.25	7,148.95
6/30/2014	2,979.30	5,034.75	7,440.11
12/31/2014	3,109.20	5,247.75	7,623.44
6/30/2015	3,226.45	5,392.36	7,698.60
12/31/2015	3,352.74	5,666.25	7,975.68
6/30/2016	3,601.45	5,807.85	8,258.97
12/31/2016	3,688.31	5,852.68	8,647.65
6/30/2017	3,819.42	6,214.98	9,103.87
12/31/2017	4,096.01	6,551.62	9,551.12

Average Annual Change Using Exponential Fits:

10 point fit:	8.5%	7.0%	6.7%
8 point fit:	9.3%	7.3%	7.5%
6 point fit:	9.6%	7.5%	9.1%

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**
6/30/2013	2.24		1.90		1.50	
12/31/2013	2.24		1.91		1.52	
6/30/2014	2.30		1.96		1.56	
12/31/2014	2.28	1.8%	1.96	2.6%	1.57	3.3%
6/30/2015	2.25		1.94		1.57	
12/31/2015	2.27	-0.4%	1.97	0.5%	1.60	1.9%
6/30/2016	2.26		1.97		1.61	
12/31/2016	2.35	3.5%	2.05	4.1%	1.67	4.4%
6/30/2017	2.37		2.04		1.67	
12/31/2017	2.30	-2.1%	1.98	-3.4%	1.65	-1.2%

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

Deductible:	Percent of Losses
\$100	0.1%
\$200	0.0%
\$250	1.9%
\$500	35.8%
\$1,000	51.6%
\$2,000	5.7%
\$3,000	1.6%
\$5,000	3.2%

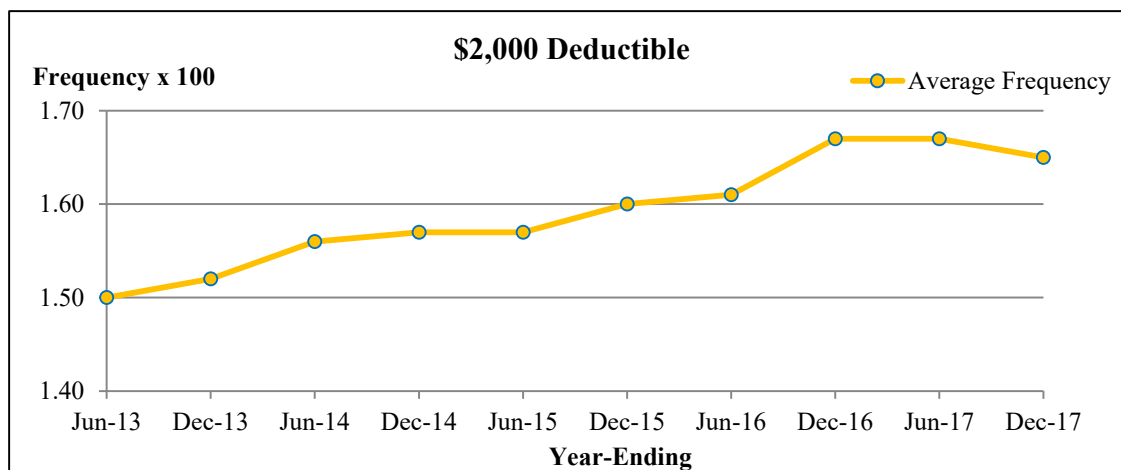
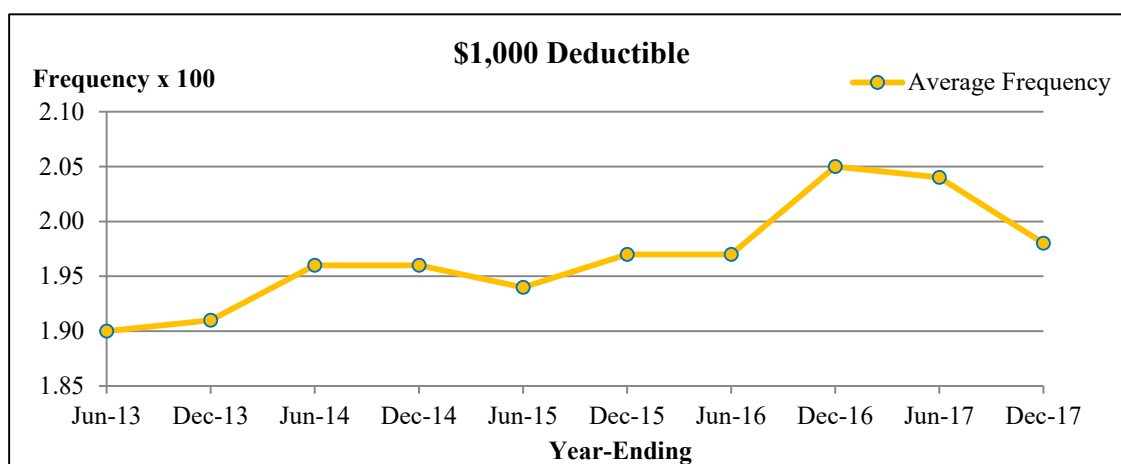
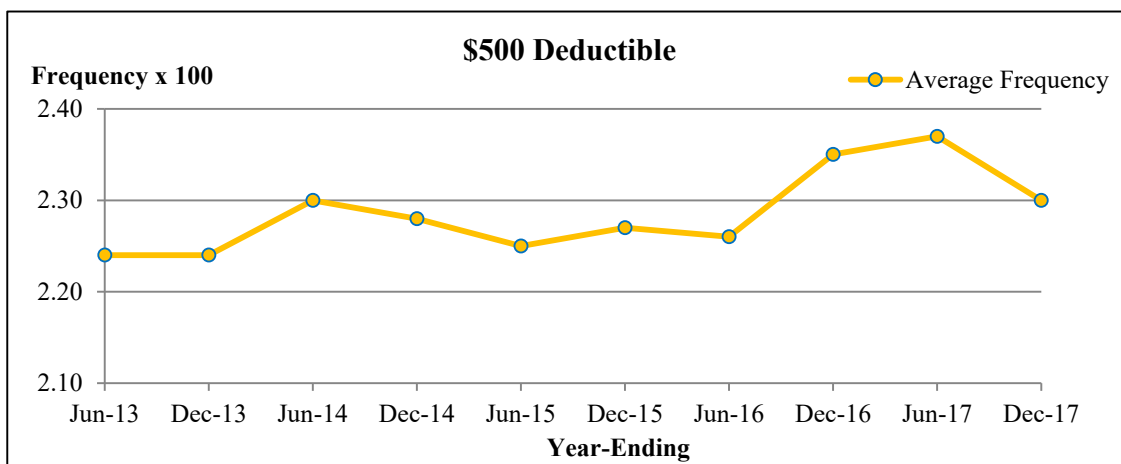
\* Multistate data excludes Massachusetts

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

\*\*\* Deductibles above \$2,000, totaling 4.8% 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
6/30/2013	7,665.05	9,351.17	10,145.59
12/31/2013	7,856.13	9,502.58	10,293.38
6/30/2014	8,039.53	9,820.66	10,730.61
12/31/2014	8,346.04	10,180.04	11,160.55
6/30/2015	8,627.97	10,370.96	11,274.52
12/31/2015	8,756.51	10,524.74	11,426.52
6/30/2016	9,123.83	10,833.89	11,764.37
12/31/2016	9,325.85	11,094.48	12,039.59
6/30/2017	9,380.35	11,186.20	12,090.00
12/31/2017	9,888.11	11,621.24	12,501.51

Average Annual Change Using Exponential Fits:

10 point fit:	5.7%	4.9%	4.7%
8 point fit:	5.6%	4.6%	4.1%
6 point fit:	5.3%	4.5%	4.1%

Selected severity trend:	5.0%
Selected frequency trend:	0.0%
Selected pure premium trend:	5.0%

\* 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**
6/30/2013	5.05		3.10		1.89	
12/31/2013	5.10		3.10		1.87	
6/30/2014	5.39		3.23		1.92	
12/31/2014	5.26	3.1%	3.20	3.2%	1.92	2.7%
6/30/2015	4.90		3.08		1.90	
12/31/2015	4.95	-5.9%	3.15	-1.6%	1.95	1.6%
6/30/2016	4.97		3.20		1.98	
12/31/2016	4.96	0.2%	3.10	-1.6%	1.92	-1.5%
6/30/2017	4.81		3.01		1.88	
12/31/2017	4.69	-5.4%	2.99	-3.5%	1.90	-1.0%

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

Deductible:	Percent of Losses
Full	0.5%
\$50	0.4%
\$100	3.3%
\$200	0.4%
\$250	12.3%
\$500	43.3%
\$1,000	37.3%
\$2,000	2.0%
\$3,000	0.2%
\$5,000	0.3%

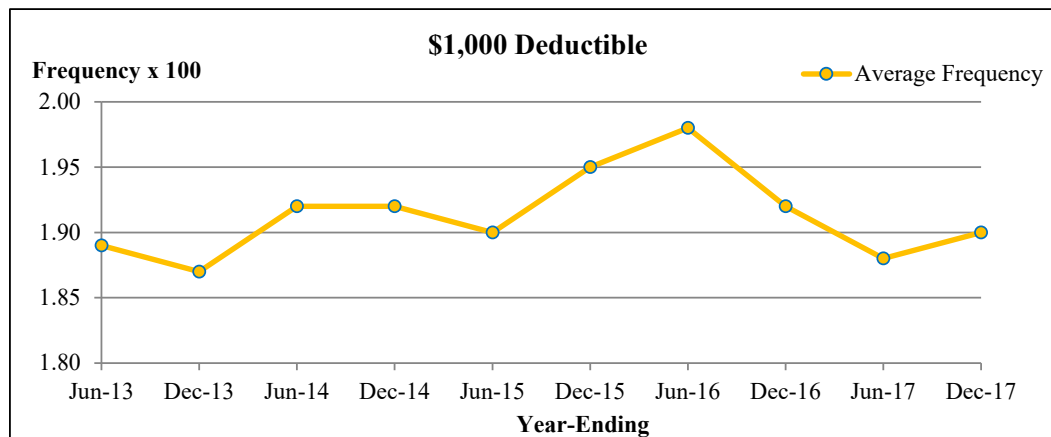
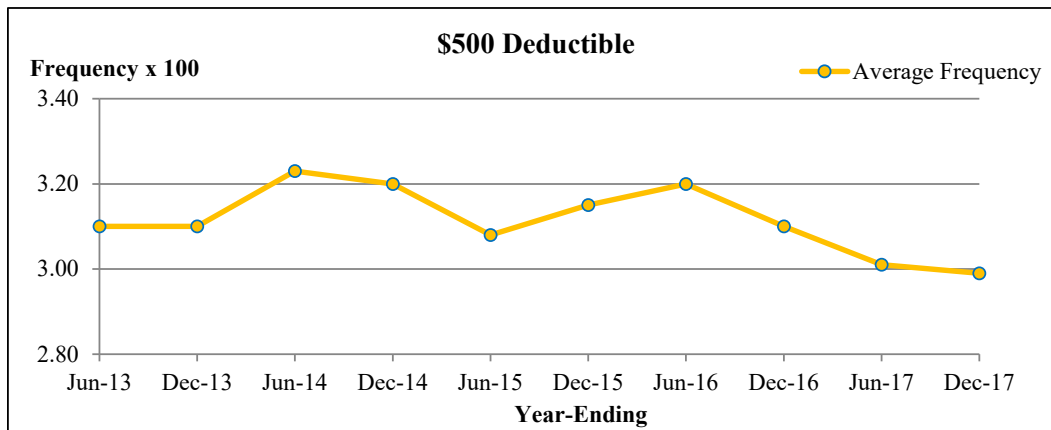
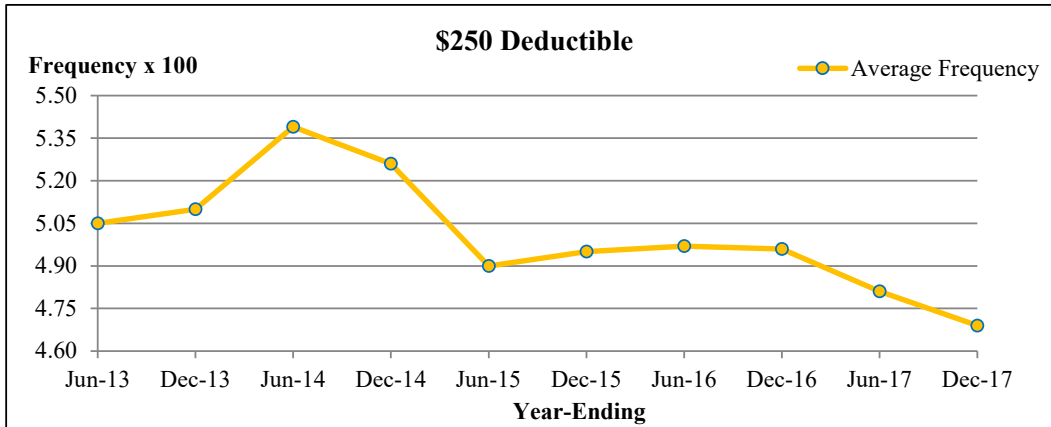
\* Multistate data excludes Massachusetts

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

\*\*\* Deductibles above \$1,000, totaling 2.5% 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
6/30/2013	1,407.86	1,902.22	2,552.17
12/31/2013	1,390.80	1,914.04	2,592.50
6/30/2014	1,365.35	1,965.25	2,676.48
12/31/2014	1,474.68	2,056.42	2,807.17
6/30/2015	1,596.66	2,123.44	2,847.42
12/31/2015	1,694.77	2,244.03	2,934.74
6/30/2016	1,773.75	2,347.14	3,048.42
12/31/2016	1,784.50	2,354.08	3,060.45
6/30/2017	1,830.08	2,399.63	3,111.16
12/31/2017	1,936.01	2,575.17	3,401.89

## Average Annual Change Using Exponential Fits:

10 point fit:	8.5%	7.1%	6.0%
8 point fit:	9.7%	7.5%	6.0%
6 point fit:	7.1%	6.9%	6.3%

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**
6/30/2013	5.09		4.16		2.98	
12/31/2013	5.09		4.18		2.99	
6/30/2014	5.25		4.34		3.13	
12/31/2014	5.28	3.7%	4.41	5.5%	3.21	7.4%
6/30/2015	5.25		4.36		3.20	
12/31/2015	5.26	-0.4%	4.41	0.0%	3.25	1.2%
6/30/2016	5.15		4.36		3.23	
12/31/2016	5.21	-1.0%	4.42	0.2%	3.30	1.5%
6/30/2017	5.21		4.41		3.32	
12/31/2017	5.16	-1.0%	4.35	-1.6%	3.33	0.9%

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

Deductible:	Percent of Losses
\$100	0.4%
\$200	0.2%
\$250	2.4%
\$500	46.1%
\$1,000	48.7%
\$2,000	1.4%
\$3,000	0.3%
\$5,000	0.4%

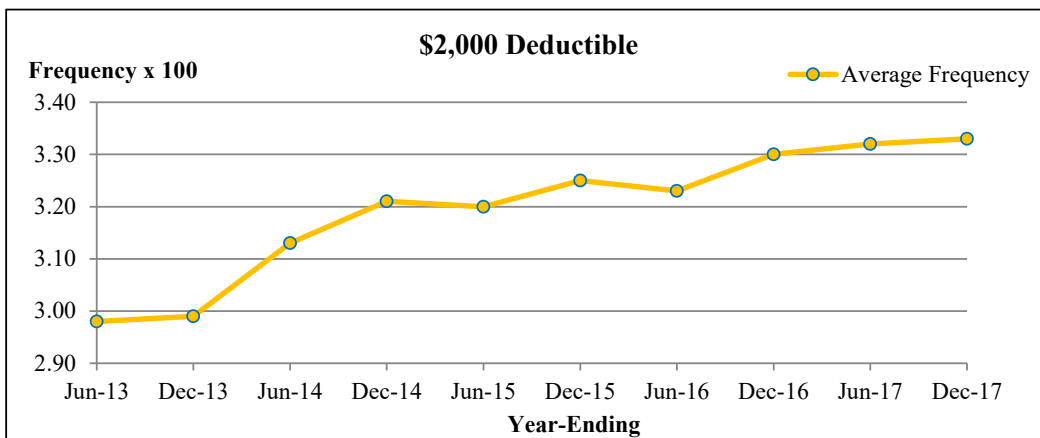
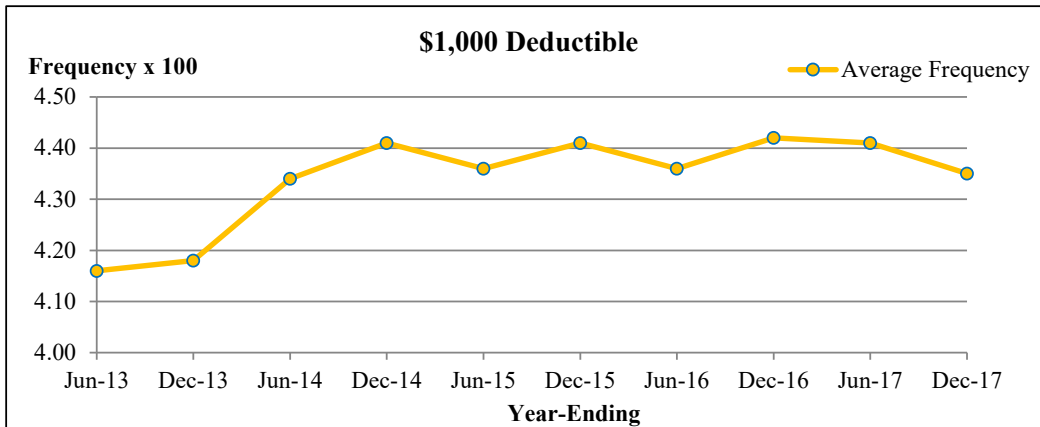
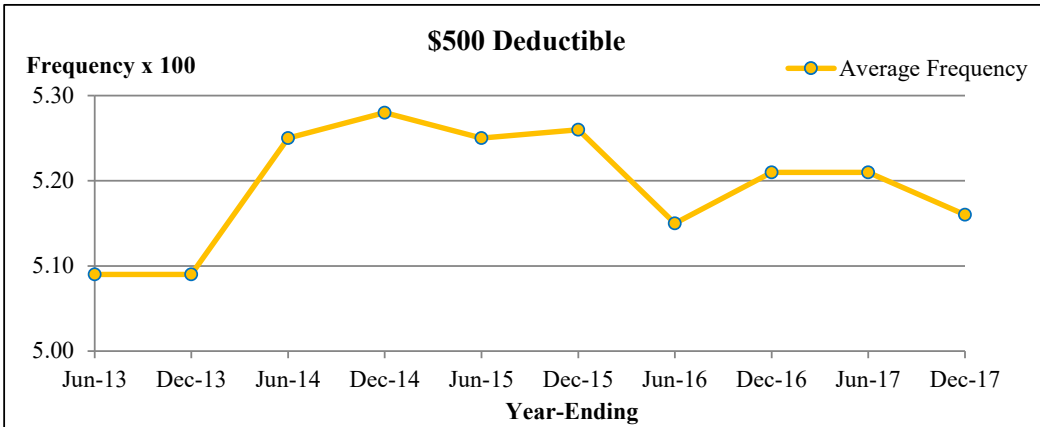
\* Multistate data excludes Massachusetts

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

\*\*\* Deductibles above \$2,000, totaling 0.7% 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
6/30/2013	4,986.00	5,440.45	6,008.58
12/31/2013	5,038.04	5,483.74	6,065.42
6/30/2014	5,157.20	5,584.49	6,149.04
12/31/2014	5,375.95	5,738.26	6,322.13
6/30/2015	5,510.30	5,898.47	6,467.83
12/31/2015	5,619.47	6,052.85	6,600.82
6/30/2016	5,767.11	6,169.07	6,740.12
12/31/2016	5,949.38	6,247.28	6,818.68
6/30/2017	5,978.49	6,290.73	6,810.32
12/31/2017	6,229.69	6,606.29	7,072.99

Average Annual Change Using Exponential Fits:

10 point fit:	5.2%	4.3%	3.7%
8 point fit:	5.2%	4.4%	3.7%
6 point fit:	4.9%	4.1%	3.2%

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  
TRUCKS, TRACTORS & TRAILERS  
PHYSICAL DAMAGE  
OCN TREND CALCULATION

AVERAGE OCN RELATIVITIES

YEAR ENDING	OTHER THAN COLLISION	COLLISION
6/30/2013	1.224	1.359
12/31/2013	1.230	1.368
6/30/2014	1.237	1.377
12/31/2014	1.242	1.385
6/30/2015	1.248	1.394
12/31/2015	1.254	1.402
6/30/2016	1.260	1.413
12/31/2016	1.266	1.424
6/30/2017	1.272	1.435
12/31/2017	1.278	1.447

EXPONENTIAL TREND (AVERAGE ANNUAL CHANGE)

9 POINTS	0.9%	1.4%
7 POINTS	1.0%	1.5%
5 POINTS	1.0%	1.6%
Selected Other Than Collision Physical Damage Annual OCN Trend:		1.0%
Selected Collision Physical Damage Annual OCN Trend:		1.6%

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
6/30/2013	1.304	1.150
12/31/2013	1.309	1.153
6/30/2014	1.314	1.155
12/31/2014	1.320	1.158
6/30/2015	1.325	1.161
12/31/2015	1.332	1.165
6/30/2016	1.340	1.170
12/31/2016	1.347	1.173
6/30/2017	1.355	1.177
12/31/2017	1.361	1.180

EXPONENTIAL TREND (AVERAGE ANNUAL CHANGE)

9 POINTS	1.0%	0.6%
7 POINTS	1.1%	0.7%
5 POINTS	1.1%	0.6%
Selected Other Than Collision Physical Damage Annual OCN Trend:		1.1%
Selected Collision Physical Damage Annual OCN Trend:		0.6%

Data excludes the following state: Massachusetts

## INSURANCE SERVICES OFFICE, INC.

MISSOURI  
Automobile Liability Insurance - Trucks, Tractors and Trailers  
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
12/31/2006	7,366,270	8,299,630	8,730,702	1.127	1.052
12/31/2007	6,859,686	8,096,982	8,660,434	1.180	1.070
12/31/2008	6,049,949	7,505,871	8,257,152	1.241	1.100
12/31/2009	5,121,319	5,959,450	6,248,388	1.164	1.048
12/31/2010	5,968,868	7,273,388	7,647,517	1.219	1.051
12/31/2011	7,500,709	9,410,761	10,633,549	1.255	1.130
12/31/2012	6,622,911	7,397,781	7,688,427	1.117	1.039
12/31/2013	6,748,864	7,918,160	8,437,848	1.173	1.066
12/31/2014	7,368,745	8,214,942	8,578,573	1.115	1.044
12/31/2015	7,695,074	8,993,742	9,555,257	1.169	1.062
12/31/2016	8,704,729	10,350,702		1.189	
12/31/2017	9,075,849				
(1) Average Factor (Best 3 of 5) :					
		(A) State		1.153	1.057
		(B) Multistate		1.251	1.118
(2) Credibility					
				0.900	0.700
(3) Credibility Weighted Factors					
				1.163	1.075

## 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
12/31/2006	7,349,683	7,257,688	7,242,975	0.987	0.998
12/31/2007	7,544,307	7,492,971	7,478,469	0.993	0.998
12/31/2008	6,428,927	6,488,741	6,454,541	1.009	0.995
12/31/2009	5,717,228	5,773,332	5,756,607	1.010	0.997
12/31/2010	5,967,296	6,272,613	6,252,488	1.051	0.997
12/31/2011	6,980,169	7,159,249	7,217,591	1.026	1.008
12/31/2012	6,146,075	6,261,026	6,211,682	1.019	0.992
12/31/2013	6,710,353	6,742,233	6,898,068	1.005	1.023
12/31/2014	6,784,044	7,047,660	7,023,651	1.039	0.997
12/31/2015	6,302,219	6,542,173	6,589,688	1.038	1.007
12/31/2016	7,458,320	7,679,228		1.030	
12/31/2017	7,077,754				
(1) Average Factor (Best 3 of 5) :					
		(A) State		1.029	1.004
		(B) Multistate		1.043	1.008
(2) Credibility					
				0.930	0.000
(3) Credibility Weighted Factors					
				1.030	1.008

## Summary of Factors

	Bodily Injury	Property Damage
39 to Ultimate **	1.080	1.003
27 to Ultimate	1.161	1.011
15 to Ultimate	1.350	1.041

\*\* Multistate factors

## INSURANCE SERVICES OFFICE, INC.

Basic Limits Loss Development  
Trucks, Tractors and Trailers - Bodily Injury  
Tort 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>
12/31/2006	338,716,185	415,360,126	460,071,909	483,338,710	487,290,412
12/31/2007	338,900,551	415,544,173	463,077,637	481,498,373	489,585,922
12/31/2008	309,918,313	383,086,664	423,424,630	440,199,809	445,824,070
12/31/2009	275,729,529	343,149,891	380,288,849	399,761,446	404,042,869
12/31/2010	294,947,505	355,946,897	391,281,845	412,775,887	420,382,271
12/31/2011	309,048,767	374,457,890	418,476,708	433,714,920	441,257,262
12/31/2012	313,582,906	383,616,162	423,722,686	445,981,671	454,852,278
12/31/2013	325,021,431	403,589,478	448,404,834	476,353,019	484,276,814
12/31/2014	353,346,657	436,752,997	499,806,461	530,383,221	
12/31/2015	374,877,496	485,844,115	546,600,741		
12/31/2016	428,504,966	546,853,511			
12/31/2017	448,737,245				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2006	1.226	1.108	1.051	1.008
12/31/2007	1.226	1.114	1.040	1.017
12/31/2008	1.236	1.105	1.040	1.013
12/31/2009	1.245	1.108	1.051	1.011
12/31/2010	1.207	1.099	1.055	1.018
12/31/2011	1.212	1.118	1.036	1.017
12/31/2012	1.223	1.105	1.053	1.020
12/31/2013	1.242	1.111	1.062	1.017
12/31/2014	1.236	1.144	1.061	
12/31/2015	1.296	1.125		
12/31/2016	1.276			
Average Factor: ( Best 3 of 5 )	1.251	1.118	1.056	1.017

## Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.006
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.023
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.080
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.208
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.511

## INSURANCE SERVICES OFFICE, INC.

Basic Limits Loss Development  
Trucks, Tractors and Trailers - Bodily Injury  
Tort 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>
12/31/2006	490,058,694	489,802,533	490,384,766	490,757,057	490,632,728
12/31/2007	490,685,281	491,658,068	490,994,241	491,185,361	491,192,689
12/31/2008	448,240,650	448,379,946	448,990,006	448,980,507	449,101,876
12/31/2009	406,009,326	406,103,011	405,941,503	406,009,455	
12/31/2010	422,145,349	422,185,643	422,592,478		
12/31/2011	444,818,996	445,473,929			
12/31/2012	455,825,805				

## 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>
12/31/2006	1.006	0.999	1.001	1.001	1.000
12/31/2007	1.002	1.002	0.999	1.000	1.000
12/31/2008	1.005	1.000	1.001	1.000	1.000
12/31/2009	1.005	1.000	1.000	1.000	
12/31/2010	1.004	1.000	1.001		
12/31/2011	1.008	1.001			
12/31/2012	1.002				
Average Factor: ( Best 3 of 5 )	1.005	1.000	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)	=	1.001



## 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>
12/31/2006	426,685,903	442,508,886	446,352,170	446,901,301	446,946,208
12/31/2007	445,289,641	463,368,134	467,006,304	467,142,586	467,577,558
12/31/2008	408,253,583	420,588,294	423,441,605	423,974,144	424,615,591
12/31/2009	350,188,776	360,034,935	362,397,748	362,951,296	362,659,837
12/31/2010	365,494,039	378,293,032	380,657,119	381,717,371	381,696,803
12/31/2011	401,475,726	414,910,343	417,945,898	418,894,494	419,566,297
12/31/2012	398,788,654	413,387,116	416,702,156	417,648,901	418,351,369
12/31/2013	421,156,332	437,289,076	441,783,902	442,212,153	442,101,148
12/31/2014	447,664,663	467,955,962	470,969,784	472,182,557	
12/31/2015	481,815,312	504,031,511	508,743,785		
12/31/2016	508,219,343	531,003,018			
12/31/2017	516,293,566				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2006	1.037	1.009	1.001	1.000
12/31/2007	1.041	1.008	1.000	1.001
12/31/2008	1.030	1.007	1.001	1.002
12/31/2009	1.028	1.007	1.002	0.999
12/31/2010	1.035	1.006	1.003	1.000
12/31/2011	1.033	1.007	1.002	1.002
12/31/2012	1.037	1.008	1.002	1.002
12/31/2013	1.038	1.010	1.001	1.000
12/31/2014	1.045	1.006	1.003	
12/31/2015	1.046	1.009		
12/31/2016	1.045			
Average Factor:	1.043	1.008	1.002	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) =	1.003
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.011
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.055

## 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>
12/31/2006	447,036,334	446,902,077	446,872,092	446,880,176
12/31/2007	468,131,651	467,920,604	467,934,653	467,945,287
12/31/2008	424,525,358	424,530,085	424,480,801	424,439,981
12/31/2009	362,717,859	362,756,062	362,876,892	362,967,835
12/31/2010	382,004,219	382,140,727	382,104,416	
12/31/2011	419,760,436	419,750,841		
12/31/2012	418,629,721			

## Ratios

Accident Year <u>Ending</u>	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>
12/31/2006	1.000	1.000	1.000	1.000
12/31/2007	1.001	1.000	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	1.001	1.000	1.000	
12/31/2011	1.000	1.000		
12/31/2012	1.001			
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.

MISSOURI  
Automobile Liability Insurance - Private Passenger Types  
Loss Development  
Incurred Losses and Expenses  
Bodily Injury

Accident	\$100,000 Basic Limit			Loss Development Factors	
Year				15 to 27	27 to 39
Ending	15 Months	27 Months	39 Months	Months	Months
12/31/2006	1,124,443	1,782,449	1,985,878	1.585	1.114
12/31/2007	1,561,190	1,759,665	1,752,695	1.127	0.996
12/31/2008	1,321,780	1,404,981	1,426,920	1.063	1.016
12/31/2009	1,108,814	1,137,301	1,125,813	1.026	0.990
12/31/2010	1,731,318	2,055,269	1,993,959	1.187	0.970
12/31/2011	2,192,730	2,529,583	2,535,519	1.154	1.002
12/31/2012	1,909,768	2,553,354	2,738,600	1.337	1.073
12/31/2013	2,527,591	3,026,014	3,440,774	1.197	1.137
12/31/2014	1,847,170	2,233,466	2,221,711	1.209	0.995
12/31/2015	2,049,240	2,196,013	2,224,565	1.072	1.013
12/31/2016	1,779,163	2,117,362		1.190	
12/31/2017	1,596,417				
(1) Average Factor (Best 3 of 5) :			(A) State	1.199	1.029
			(B) Multistate	1.233	1.103
(2) Credibility				0.790	0.650
(3) Credibility Weighted Factors				1.206	1.055

## Property Damage

Accident	\$100,000 Basic Limit			Loss Development Factors	
Year				15 to 27	27 to 39
Ending	15 Months	27 Months	39 Months	Months	Months
12/31/2006	1,172,106	1,183,042	1,174,250	1.009	0.993
12/31/2007	1,484,992	1,495,742	1,496,093	1.007	1.000
12/31/2008	1,430,440	1,436,813	1,438,211	1.004	1.001
12/31/2009	1,245,908	1,295,452	1,297,313	1.040	1.001
12/31/2010	1,445,467	1,443,582	1,443,456	0.999	1.000
12/31/2011	1,585,119	1,627,253	1,623,632	1.027	0.998
12/31/2012	1,527,999	1,517,652	1,510,593	0.993	0.995
12/31/2013	1,430,290	1,468,345	1,442,700	1.027	0.983
12/31/2014	1,398,836	1,465,695	1,469,600	1.048	1.003
12/31/2015	1,505,257	1,494,194	1,495,216	0.993	1.001
12/31/2016	1,576,452	1,619,988		1.028	
12/31/2017	1,336,553				
(1) Average Factor (Best 3 of 5) :			(A) State	1.016	0.998
			(B) Multistate	1.047	1.008
(2) Credibility				0.880	0.000
(3) Credibility Weighted Factors				1.020	1.008

## Summary of Factors

	Bodily Injury	Property Damage
39 to Ultimate **	1.069	1.004
27 to Ultimate	1.128	1.012
15 to Ultimate	1.360	1.032

\*\* Multistate factors

## INSURANCE SERVICES OFFICE, INC.

Basic Limits Loss Development  
Private Passenger Types - Bodily Injury  
Tort 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>
12/31/2006	62,348,916	77,528,774	86,296,736	89,761,791	90,597,846
12/31/2007	62,831,794	76,145,431	85,197,857	88,552,118	89,804,512
12/31/2008	62,622,188	76,936,381	83,677,835	85,820,333	86,555,922
12/31/2009	60,764,108	74,535,824	81,624,150	82,853,553	84,865,458
12/31/2010	67,134,095	79,104,595	86,511,423	90,492,555	92,192,908
12/31/2011	71,611,280	87,562,114	96,014,323	99,764,985	100,798,334
12/31/2012	70,751,423	87,121,407	94,007,867	97,799,397	99,642,973
12/31/2013	73,376,677	87,416,471	96,586,013	101,912,999	103,767,711
12/31/2014	68,483,916	83,527,139	94,484,364	99,886,007	
12/31/2015	70,125,727	87,537,705	97,026,597		
12/31/2016	72,138,230	90,115,122			
12/31/2017	72,004,477				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2006	1.243	1.113	1.040	1.009
12/31/2007	1.212	1.119	1.039	1.014
12/31/2008	1.229	1.088	1.026	1.009
12/31/2009	1.227	1.095	1.015	1.024
12/31/2010	1.178	1.094	1.046	1.019
12/31/2011	1.223	1.097	1.039	1.010
12/31/2012	1.231	1.079	1.040	1.019
12/31/2013	1.191	1.105	1.055	1.018
12/31/2014	1.220	1.131	1.057	
12/31/2015	1.248	1.108		
12/31/2016	1.249			
Average Factor: ( Best 3 of 5 )	1.233	1.103	1.047	1.019

## Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.002
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.021
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.069
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.179
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.454

## INSURANCE SERVICES OFFICE, INC.

Basic Limits Loss Development  
Private Passenger Types - Bodily Injury  
Tort 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>
12/31/2006	91,334,336	91,445,973	91,625,757	91,511,899	91,462,973
12/31/2007	90,142,684	90,221,494	90,418,909	90,358,834	90,392,437
12/31/2008	86,301,725	86,377,242	86,464,084	86,658,424	86,715,095
12/31/2009	84,760,040	84,595,276	84,714,192	84,723,981	
12/31/2010	92,074,135	91,807,439	91,818,848		
12/31/2011	101,399,034	101,663,602			
12/31/2012	100,028,389				

## 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>
12/31/2006	1.008	1.001	1.002	0.999	0.999
12/31/2007	1.004	1.001	1.002	0.999	1.000
12/31/2008	0.997	1.001	1.001	1.002	1.001
12/31/2009	0.999	0.998	1.001	1.000	
12/31/2010	0.999	0.997	1.000		
12/31/2011	1.006	1.003			
12/31/2012	1.004				
Average Factor: ( Best 3 of 5 )	1.001	1.000	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)	=	1.001

## 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>
12/31/2006	83,098,790	85,907,146	86,598,960	86,547,522	86,576,693
12/31/2007	89,099,727	91,221,074	91,698,455	92,014,965	92,058,892
12/31/2008	84,278,908	87,080,906	87,473,802	87,660,113	87,752,268
12/31/2009	79,051,900	81,631,511	82,050,225	82,310,601	82,362,550
12/31/2010	80,406,512	83,289,682	83,783,075	83,992,012	84,033,169
12/31/2011	85,300,807	87,910,015	88,722,316	89,128,522	89,633,747
12/31/2012	87,837,873	91,484,939	92,117,338	92,413,659	92,377,080
12/31/2013	88,910,315	92,951,898	93,707,131	93,998,146	94,030,889
12/31/2014	88,647,590	93,300,822	94,021,732	94,246,537	
12/31/2015	92,584,198	97,159,581	98,129,539		
12/31/2016	96,111,659	100,515,211			
12/31/2017	90,654,520				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2006	1.034	1.008	0.999	1.000
12/31/2007	1.024	1.005	1.003	1.000
12/31/2008	1.033	1.005	1.002	1.001
12/31/2009	1.033	1.005	1.003	1.001
12/31/2010	1.036	1.006	1.002	1.000
12/31/2011	1.031	1.009	1.005	1.006
12/31/2012	1.042	1.007	1.003	1.000
12/31/2013	1.045	1.008	1.003	1.000
12/31/2014	1.052	1.008	1.002	
12/31/2015	1.049	1.010		
12/31/2016	1.046			
Average Factor: ( Best 3 of 5 )	1.047	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) =	1.060

## 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>
12/31/2006	86,516,087	86,628,897	86,642,601	86,645,287
12/31/2007	92,150,595	92,043,515	92,044,457	92,045,346
12/31/2008	87,716,947	87,688,303	87,691,521	87,704,468
12/31/2009	82,400,605	82,442,958	82,435,669	82,426,862
12/31/2010	84,404,563	84,315,784	84,446,019	
12/31/2011	89,772,919	89,895,004		
12/31/2012	92,497,494			

## Ratios

Accident Year <u>Ending</u>	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>
12/31/2006	0.999	1.001	1.000	1.000
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	1.001	1.000	1.000
12/31/2010	1.004	0.999	1.002	
12/31/2011	1.002	1.001		
12/31/2012	1.001			
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>
12/31/2006	98,082,141	99,570,826	99,675,876	99,664,223	99,583,503
12/31/2007	107,638,162	110,454,261	110,361,829	110,260,923	110,208,181
12/31/2008	137,122,373	139,908,087	139,866,459	139,813,877	139,779,849
12/31/2009	114,660,398	116,504,959	116,757,149	116,756,042	116,776,150
12/31/2010	135,128,533	137,634,833	137,794,964	137,585,300	137,721,236
12/31/2011	155,314,049	157,824,117	157,904,335	158,001,294	157,953,547
12/31/2012	180,363,644	184,498,422	184,490,013	184,589,660	184,837,405
12/31/2013	143,423,767	146,941,713	147,170,848	147,524,413	147,490,867
12/31/2014	152,832,576	156,631,466	156,718,406	156,584,392	
12/31/2015	151,825,756	155,301,171	155,401,626		
12/31/2016	197,225,418	201,436,790			
12/31/2017	210,656,303				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2006	1.015	1.001	1.000	0.999
12/31/2007	1.026	0.999	0.999	1.000
12/31/2008	1.020	1.000	1.000	1.000
12/31/2009	1.016	1.002	1.000	1.000
12/31/2010	1.019	1.001	0.998	1.001
12/31/2011	1.016	1.001	1.001	1.000
12/31/2012	1.023	1.000	1.001	1.001
12/31/2013	1.025	1.002	1.002	1.000
12/31/2014	1.025	1.001	0.999	
12/31/2015	1.023	1.001		
12/31/2016	1.021			
Average Factor: ( Best 3 of 5 )	1.024	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) =	1.025



## INSURANCE SERVICES OFFICE, INC.

Physical Damage Loss Development  
Trucks, Tractors and Trailers - 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>
12/31/2006	99,531,436	99,491,076	99,645,606	99,637,532	99,634,047
12/31/2007	110,295,675	110,239,335	110,231,195	110,143,735	110,146,525
12/31/2008	139,750,075	139,719,763	139,726,923	139,782,088	139,783,800
12/31/2009	116,622,376	116,624,245	116,628,016	116,705,263	
12/31/2010	137,813,090	137,861,438	137,853,760		
12/31/2011	157,928,691	157,925,614			
12/31/2012	184,812,760				

## Ratios

Accident Year Ending	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>	<u>123:111</u>
12/31/2006	0.999	1.000	1.002	1.000	1.000
12/31/2007	1.001	0.999	1.000	0.999	1.000
12/31/2008	1.000	1.000	1.000	1.000	1.000
12/31/2009	0.999	1.000	1.000	1.001	
12/31/2010	1.001	1.000	1.000		
12/31/2011	1.000	1.000			
12/31/2012	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  
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>
12/31/2006	302,645,818	296,798,485	295,222,795	294,284,201	294,561,691
12/31/2007	340,453,072	333,909,574	332,185,435	331,893,438	331,664,028
12/31/2008	347,435,033	342,000,636	341,250,356	340,642,037	339,756,369
12/31/2009	294,402,025	289,371,339	288,570,906	288,200,387	288,337,661
12/31/2010	319,957,837	313,620,107	312,517,083	312,435,470	312,441,599
12/31/2011	347,553,934	340,912,188	339,125,243	338,785,261	338,872,521
12/31/2012	347,097,111	341,903,217	339,841,871	339,248,848	339,276,761
12/31/2013	367,238,812	360,936,623	359,658,365	360,407,015	359,176,393
12/31/2014	406,032,389	398,705,367	396,317,742	395,942,108	
12/31/2015	439,518,764	426,758,300	424,285,439		
12/31/2016	473,249,101	460,379,561			
12/31/2017	504,898,279				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2006	0.981	0.995	0.997	1.001
12/31/2007	0.981	0.995	0.999	0.999
12/31/2008	0.984	0.998	0.998	0.997
12/31/2009	0.983	0.997	0.999	1.000
12/31/2010	0.980	0.996	1.000	1.000
12/31/2011	0.981	0.995	0.999	1.000
12/31/2012	0.985	0.994	0.998	1.000
12/31/2013	0.983	0.996	1.002	0.997
12/31/2014	0.982	0.994	0.999	
12/31/2015	0.971	0.994		
12/31/2016	0.973			
Average Factor: ( Best 3 of 5 )	0.979	0.994	0.999	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) =	0.999
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	0.993
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	0.972

## INSURANCE SERVICES OFFICE, INC.

Physical Damage Loss Development  
Trucks, Tractors and Trailers - 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>
12/31/2006	294,561,462	294,537,764	294,504,170	294,498,489	294,480,227
12/31/2007	331,596,380	331,555,640	331,509,158	331,504,619	331,484,786
12/31/2008	339,801,367	339,689,840	339,665,150	339,637,143	339,620,971
12/31/2009	288,167,973	288,094,406	288,058,541	288,077,603	
12/31/2010	312,344,533	312,243,031	312,203,804		
12/31/2011	338,814,535	338,808,804			
12/31/2012	339,198,595				

## 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>
12/31/2006	1.000	1.000	1.000	1.000	1.000
12/31/2007	1.000	1.000	1.000	1.000	1.000
12/31/2008	1.000	1.000	1.000	1.000	1.000
12/31/2009	0.999	1.000	1.000	1.000	
12/31/2010	1.000	1.000	1.000		
12/31/2011	1.000	1.000			
12/31/2012	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 - 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>
12/31/2006	45,114,278	45,385,500	45,319,535	45,227,602	45,212,891
12/31/2007	42,128,856	42,864,766	42,700,321	42,732,392	42,854,370
12/31/2008	49,404,261	49,930,543	49,773,473	49,756,906	49,747,595
12/31/2009	45,494,807	45,557,731	45,554,037	45,481,046	45,471,729
12/31/2010	49,970,542	50,065,679	50,048,669	50,044,521	50,042,803
12/31/2011	65,579,947	65,685,728	65,561,570	65,609,177	65,605,889
12/31/2012	76,646,808	75,604,294	75,655,840	75,689,175	75,699,041
12/31/2013	52,392,978	52,776,253	52,990,791	52,995,210	52,987,388
12/31/2014	55,417,509	56,112,419	56,190,048	56,141,485	
12/31/2015	48,449,166	48,998,670	48,885,069		
12/31/2016	60,490,144	61,135,257			
12/31/2017	69,620,635				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2006	1.006	0.999	0.998	1.000
12/31/2007	1.017	0.996	1.001	1.003
12/31/2008	1.011	0.997	1.000	1.000
12/31/2009	1.001	1.000	0.998	1.000
12/31/2010	1.002	1.000	1.000	1.000
12/31/2011	1.002	0.998	1.001	1.000
12/31/2012	0.986	1.001	1.000	1.000
12/31/2013	1.007	1.004	1.000	1.000
12/31/2014	1.013	1.001	0.999	
12/31/2015	1.011	0.998		
12/31/2016	1.011			
Average Factor: ( Best 3 of 5 )	1.010	1.000	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) =	1.000
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.010

## INSURANCE SERVICES OFFICE, INC.

Physical Damage Loss Development  
 Private Passenger Types - 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>
12/31/2006	45,258,837	45,257,926	45,251,978	45,251,164	45,250,006
12/31/2007	42,786,448	42,784,413	42,783,337	42,781,970	42,789,006
12/31/2008	49,744,909	49,746,319	49,744,650	49,743,452	49,752,496
12/31/2009	45,472,774	45,472,791	45,474,947	45,480,910	
12/31/2010	50,022,081	50,021,144	50,049,267		
12/31/2011	65,614,001	65,620,616			
12/31/2012	75,705,383				

## 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>
12/31/2006	1.001	1.000	1.000	1.000	1.000
12/31/2007	0.998	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	
12/31/2010	1.000	1.000	1.001		
12/31/2011	1.000	1.000			
12/31/2012	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  
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>
12/31/2006	133,446,222	128,067,207	127,361,727	127,104,840	127,095,289
12/31/2007	140,082,730	135,466,447	134,924,052	134,629,930	134,625,922
12/31/2008	142,390,051	137,275,953	136,576,145	136,443,074	136,401,498
12/31/2009	134,239,533	129,513,409	128,927,299	128,851,382	128,796,720
12/31/2010	137,897,068	131,091,100	130,458,613	130,280,329	130,263,603
12/31/2011	147,518,654	141,059,573	140,588,934	140,371,170	140,330,647
12/31/2012	147,900,685	142,042,690	141,481,656	141,339,034	141,326,463
12/31/2013	149,039,642	142,479,239	141,538,708	141,540,704	141,483,316
12/31/2014	157,105,568	150,508,434	150,322,658	150,123,029	
12/31/2015	167,933,099	159,428,483	158,168,605		
12/31/2016	167,271,024	159,580,288			
12/31/2017	163,651,912				

## Ratios

Accident Year <u>Ending</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2006	0.960	0.994	0.998	1.000
12/31/2007	0.967	0.996	0.998	1.000
12/31/2008	0.964	0.995	0.999	1.000
12/31/2009	0.965	0.995	0.999	1.000
12/31/2010	0.951	0.995	0.999	1.000
12/31/2011	0.956	0.997	0.998	1.000
12/31/2012	0.960	0.996	0.999	1.000
12/31/2013	0.956	0.993	1.000	1.000
12/31/2014	0.958	0.999	0.999	
12/31/2015	0.949	0.992		
12/31/2016	0.954			
Average Factor: ( Best 3 of 5 )	0.956	0.995	0.999	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) =	0.999
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	0.994
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	0.950

## INSURANCE SERVICES OFFICE, INC.

Physical Damage Loss Development  
 Private Passenger Types - 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>
12/31/2006	127,163,010	127,128,284	127,110,487	127,094,829	127,071,833
12/31/2007	134,578,142	134,562,396	134,550,501	134,546,377	134,543,564
12/31/2008	136,368,351	136,328,521	136,319,717	136,314,095	136,306,539
12/31/2009	128,735,197	128,710,652	128,693,873	128,684,410	
12/31/2010	130,211,565	130,179,285	130,179,687		
12/31/2011	140,249,870	140,244,299			
12/31/2012	141,279,608				

## Ratios

Accident Year Ending	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>	<u>123:111</u>
12/31/2006	1.001	1.000	1.000	1.000	1.000
12/31/2007	1.000	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	
12/31/2010	1.000	1.000	1.000		
12/31/2011	0.999	1.000			
12/31/2012	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.

<b>(1)</b>	<b>Public Automobiles Liability</b>	Differentials to Base Loss Cost CSL Liab	
	Taxis & Limos		6.20
	School and Church Buses		0.55
	Other Buses		3.80
	Van Pools		1.50
<b>(2)</b>	<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
<b>(3)</b>	<b>Medical Payments Relativities</b>	<u><a href="#">EXHIBIT C17</a></u>	
<b>(4)</b>	<b>Specified Cause of Loss Relativity</b>		0.864
<b>(5)</b>	The loss cost for hired autos is set forth in Section G. 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.		



## INSURANCE SERVICES OFFICE, INC.

## (3) Medical Payments Relativities

Territory	Class of Business											
	Trucks, Tractors and Trailers				Private Passenger Types				Other Buses			
	500	1000	2000	5000	500	1000	2000	5000	500	1000	2000	5000
102	0.0037	0.0058	0.0088	0.0149	0.0063	0.0109	0.0180	0.0318	0.0098	0.0161	0.0253	0.0432
104	0.0049	0.0076	0.0116	0.0196	0.0063	0.0109	0.0180	0.0318	0.0105	0.0172	0.0270	0.0462
105	0.0058	0.0090	0.0138	0.0234	0.0063	0.0109	0.0180	0.0318	0.0155	0.0254	0.0398	0.0681
106	0.0051	0.0080	0.0122	0.0207	0.0063	0.0109	0.0180	0.0318	0.0121	0.0199	0.0312	0.0534
108	0.0056	0.0088	0.0133	0.0226	0.0063	0.0109	0.0180	0.0318	0.0094	0.0154	0.0242	0.0413
109	0.0048	0.0074	0.0113	0.0192	0.0063	0.0109	0.0180	0.0318	0.0110	0.0180	0.0282	0.0483
110	0.0047	0.0073	0.0111	0.0189	0.0063	0.0109	0.0180	0.0318	0.0115	0.0189	0.0296	0.0507
112	0.0038	0.0059	0.0090	0.0152	0.0063	0.0109	0.0180	0.0318	0.0092	0.0151	0.0237	0.0405
116	0.0045	0.0071	0.0107	0.0182	0.0063	0.0109	0.0180	0.0318	0.0099	0.0163	0.0256	0.0437
117	0.0049	0.0076	0.0116	0.0197	0.0063	0.0109	0.0180	0.0318	0.0156	0.0256	0.0402	0.0686
125	0.0035	0.0055	0.0083	0.0141	0.0063	0.0109	0.0180	0.0318	0.0115	0.0189	0.0296	0.0507
126	0.0045	0.0070	0.0107	0.0181	0.0063	0.0109	0.0180	0.0318	0.0099	0.0162	0.0255	0.0435
127	0.0052	0.0080	0.0122	0.0207	0.0063	0.0109	0.0180	0.0318	0.0134	0.0220	0.0345	0.0590
128	0.0047	0.0073	0.0111	0.0188	0.0063	0.0109	0.0180	0.0318	0.0148	0.0242	0.0380	0.0650
129	0.0055	0.0085	0.0129	0.0219	0.0063	0.0109	0.0180	0.0318	0.0142	0.0232	0.0364	0.0623
131	0.0047	0.0073	0.0111	0.0189	0.0063	0.0109	0.0180	0.0318	0.0115	0.0189	0.0296	0.0507
132	0.0040	0.0063	0.0095	0.0162	0.0063	0.0109	0.0180	0.0318	0.0067	0.0110	0.0173	0.0295
133	0.0045	0.0070	0.0106	0.0180	0.0063	0.0109	0.0180	0.0318	0.0097	0.0159	0.0250	0.0427
134	0.0036	0.0056	0.0085	0.0145	0.0063	0.0109	0.0180	0.0318	0.0115	0.0189	0.0296	0.0507
135	0.0039	0.0060	0.0091	0.0155	0.0063	0.0109	0.0180	0.0318	0.0088	0.0144	0.0226	0.0387
136	0.0037	0.0057	0.0087	0.0147	0.0063	0.0109	0.0180	0.0318	0.0099	0.0161	0.0254	0.0433
137	0.0051	0.0080	0.0121	0.0206	0.0063	0.0109	0.0180	0.0318	0.0115	0.0189	0.0296	0.0507
138	0.0044	0.0068	0.0103	0.0175	0.0063	0.0109	0.0180	0.0318	0.0147	0.0241	0.0378	0.0647

## INSURANCE SERVICES OFFICE, INC.

## (3) Medical Payments Relativities

Territory	Class of Business											
	School and Church Buses				Taxis and Limos				Van Pools			
	500	1000	2000	5000	500	1000	2000	5000	500	1000	2000	5000
102	0.0140	0.0233	0.0366	0.0585	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
104	0.0153	0.0255	0.0400	0.0639	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
105	0.0216	0.0358	0.0563	0.0899	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
106	0.0173	0.0287	0.0451	0.0720	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
108	0.0147	0.0244	0.0384	0.0614	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
109	0.0154	0.0256	0.0402	0.0643	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
110	0.0167	0.0278	0.0437	0.0698	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
112	0.0130	0.0216	0.0340	0.0543	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
116	0.0147	0.0243	0.0383	0.0611	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
117	0.0217	0.0360	0.0567	0.0905	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
125	0.0111	0.0185	0.0290	0.0464	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
126	0.0131	0.0217	0.0341	0.0544	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
127	0.0189	0.0314	0.0493	0.0787	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
128	0.0211	0.0351	0.0551	0.0880	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
129	0.0207	0.0343	0.0540	0.0862	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
131	0.0167	0.0278	0.0437	0.0698	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
132	0.0167	0.0278	0.0437	0.0698	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
133	0.0139	0.0231	0.0362	0.0579	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
134	0.0115	0.0191	0.0301	0.0481	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
135	0.0125	0.0208	0.0327	0.0522	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
136	0.0167	0.0278	0.0437	0.0698	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
137	0.0174	0.0289	0.0455	0.0727	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321
138	0.0208	0.0346	0.0543	0.0868	0.0078	0.0138	0.0228	0.0416	0.0078	0.0120	0.0185	0.0321

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**MISSOURI (24)  
TERRITORY 102**

LIABILITY	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 413	\$2	\$3	\$4	\$6	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 337	\$2	\$4	\$6	\$11	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 2561	\$20	\$35	\$58	\$107	N/A
– SCHOOL AND CHURCH BUSES					
\$ 227	\$3	\$5	\$8	\$13	N/A
– OTHER BUSES					
\$ 1569	\$15	\$25	\$40	\$68	N/A
– VAN POOLS					
\$ 620	\$5	\$7	\$11	\$20	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 569	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 364	\$2	\$3	\$4	\$7	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 265	\$2	\$3	\$5	\$8	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 2257	\$18	\$31	\$51	\$94	N/A
– SCHOOL AND CHURCH BUSES					
\$ 200	\$3	\$5	\$8	\$13	N/A
– OTHER BUSES					
\$ 1383	\$15	\$24	\$37	\$64	N/A
– VAN POOLS					
\$ 546	\$4	\$7	\$10	\$18	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 497	Refer to Rule 49.				N/A
<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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**MISSOURI (24)  
TERRITORY 105**

LIABILITY	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 200	\$1	\$2	\$3	\$5	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 310	\$2	\$3	\$6	\$10	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 1240	\$10	\$17	\$28	\$52	N/A
– SCHOOL AND CHURCH BUSES					
\$ 110	\$2	\$4	\$6	\$10	N/A
– OTHER BUSES					
\$ 760	\$12	\$19	\$30	\$52	N/A
– VAN POOLS					
\$ 300	\$2	\$4	\$6	\$10	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 292	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 279	\$1	\$2	\$3	\$6	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 274	\$2	\$3	\$5	\$9	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 1730	\$13	\$24	\$39	\$72	N/A
– SCHOOL AND CHURCH BUSES					
\$ 153	\$3	\$4	\$7	\$11	N/A
– OTHER BUSES					
\$ 1060	\$13	\$21	\$33	\$57	N/A
– VAN POOLS					
\$ 419	\$3	\$5	\$8	\$13	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 408	Refer to Rule 49.				N/A
<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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**MISSOURI (24)  
TERRITORY 108**

LIABILITY	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 369	\$2	\$3	\$5	\$8	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 368	\$2	\$4	\$7	\$12	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 2288	\$18	\$32	\$52	\$95	N/A
– SCHOOL AND CHURCH BUSES					
\$ 203	\$3	\$5	\$8	\$12	N/A
– OTHER BUSES					
\$ 1402	\$13	\$22	\$34	\$58	N/A
– VAN POOLS					
\$ 554	\$4	\$7	\$10	\$18	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 515	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 326	\$2	\$3	\$4	\$6	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 268	\$2	\$3	\$5	\$9	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 2021	\$16	\$28	\$46	\$84	N/A
– SCHOOL AND CHURCH BUSES					
\$ 179	\$3	\$5	\$7	\$12	N/A
– OTHER BUSES					
\$ 1239	\$14	\$22	\$35	\$60	N/A
– VAN POOLS					
\$ 489	\$4	\$6	\$9	\$16	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 485	Refer to Rule 49.				N/A
<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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**MISSOURI (24)  
TERRITORY 110**

LIABILITY	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 347	\$2	\$3	\$4	\$7	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 480	\$3	\$5	\$9	\$15	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 2151	\$17	\$30	\$49	\$89	N/A
– SCHOOL AND CHURCH BUSES					
\$ 191	\$3	\$5	\$8	\$13	N/A
– OTHER BUSES					
\$ 1319	\$15	\$25	\$39	\$67	N/A
– VAN POOLS					
\$ 521	\$4	\$6	\$10	\$17	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 503	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 419	\$2	\$3	\$4	\$6	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 372	\$2	\$4	\$7	\$12	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 2598	\$20	\$36	\$59	\$108	N/A
– SCHOOL AND CHURCH BUSES					
\$ 230	\$3	\$5	\$8	\$12	N/A
– OTHER BUSES					
\$ 1592	\$15	\$24	\$38	\$64	N/A
– VAN POOLS					
\$ 629	\$5	\$8	\$12	\$20	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 622	Refer to Rule 49.				N/A
<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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**MISSOURI (24)  
TERRITORY 116**

LIABILITY	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 367	\$2	\$3	\$4	\$7	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 315	\$2	\$3	\$6	\$10	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 2275	\$18	\$31	\$52	\$95	N/A
– SCHOOL AND CHURCH BUSES					
\$ 202	\$3	\$5	\$8	\$12	N/A
– OTHER BUSES					
\$ 1395	\$14	\$23	\$36	\$61	N/A
– VAN POOLS					
\$ 551	\$4	\$7	\$10	\$18	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 532	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 202	\$1	\$2	\$3	\$4	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 273	\$2	\$3	\$5	\$9	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 1252	\$10	\$17	\$29	\$52	N/A
– SCHOOL AND CHURCH BUSES					
\$ 111	\$2	\$4	\$6	\$10	N/A
– OTHER BUSES					
\$ 768	\$12	\$20	\$31	\$53	N/A
– VAN POOLS					
\$ 303	\$2	\$4	\$6	\$10	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 284	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 503	\$2	\$3	\$4	\$7	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 345	\$2	\$4	\$6	\$11	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 3119	\$24	\$43	\$71	\$130	N/A
– SCHOOL AND CHURCH BUSES					
\$ 277	\$3	\$5	\$8	\$13	N/A
– OTHER BUSES					
\$ 1911	\$22	\$36	\$57	\$97	N/A
– VAN POOLS					
\$ 755	\$6	\$9	\$14	\$24	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 720	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 379	\$2	\$3	\$4	\$7	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 327	\$2	\$4	\$6	\$10	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 2350	\$18	\$32	\$54	\$98	N/A
– SCHOOL AND CHURCH BUSES					
\$ 208	\$3	\$5	\$7	\$11	N/A
– OTHER BUSES					
\$ 1440	\$14	\$23	\$37	\$63	N/A
– VAN POOLS					
\$ 569	\$4	\$7	\$11	\$18	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 564	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 239	\$1	\$2	\$3	\$5	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 252	\$2	\$3	\$5	\$8	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 1482	\$12	\$20	\$34	\$62	N/A
– SCHOOL AND CHURCH BUSES					
\$ 131	\$2	\$4	\$6	\$10	N/A
– OTHER BUSES					
\$ 908	\$12	\$20	\$31	\$54	N/A
– VAN POOLS					
\$ 359	\$3	\$4	\$7	\$12	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 359	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 198	\$1	\$2	\$3	\$4	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 254	\$2	\$3	\$5	\$8	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 1228	\$10	\$17	\$28	\$51	N/A
– SCHOOL AND CHURCH BUSES					
\$ 109	\$2	\$4	\$6	\$10	N/A
– OTHER BUSES					
\$ 752	\$11	\$18	\$29	\$49	N/A
– VAN POOLS					
\$ 297	\$2	\$4	\$5	\$10	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 304	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 216	\$1	\$2	\$3	\$5	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 241	\$2	\$3	\$4	\$8	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 1339	\$10	\$18	\$31	\$56	N/A
– SCHOOL AND CHURCH BUSES					
\$ 119	\$2	\$4	\$6	\$10	N/A
– OTHER BUSES					
\$ 821	\$12	\$19	\$30	\$51	N/A
– VAN POOLS					
\$ 324	\$3	\$4	\$6	\$10	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 313	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 644	\$3	\$5	\$7	\$12	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 308	\$2	\$3	\$6	\$10	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 3993	\$31	\$55	\$91	\$166	N/A
– SCHOOL AND CHURCH BUSES					
\$ 354	\$6	\$10	\$15	\$25	N/A
– OTHER BUSES					
\$ 2447	\$28	\$46	\$72	\$124	N/A
– VAN POOLS					
\$ 966	\$8	\$12	\$18	\$31	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 797	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 411	\$2	\$3	\$4	\$7	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 361	\$2	\$4	\$6	\$11	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 2548	\$20	\$35	\$58	\$106	N/A
– SCHOOL AND CHURCH BUSES					
\$ 226	\$4	\$6	\$10	\$16	N/A
– OTHER BUSES					
\$ 1562	\$10	\$17	\$27	\$46	N/A
– VAN POOLS					
\$ 617	\$5	\$7	\$11	\$20	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 613	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 410	\$2	\$3	\$4	\$7	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 325	\$2	\$4	\$6	\$10	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 2542	\$20	\$35	\$58	\$106	N/A
– SCHOOL AND CHURCH BUSES					
\$ 226	\$3	\$5	\$8	\$13	N/A
– OTHER BUSES					
\$ 1558	\$15	\$25	\$39	\$67	N/A
– VAN POOLS					
\$ 615	\$5	\$7	\$11	\$20	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 576	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 494	\$2	\$3	\$4	\$7	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 382	\$2	\$4	\$7	\$12	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 3063	\$24	\$42	\$70	\$127	N/A
– SCHOOL AND CHURCH BUSES					
\$ 272	\$3	\$5	\$8	\$13	N/A
– OTHER BUSES					
\$ 1877	\$22	\$35	\$56	\$95	N/A
– VAN POOLS					
\$ 741	\$6	\$9	\$14	\$24	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 734	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 484	\$2	\$3	\$4	\$8	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 410	\$3	\$4	\$7	\$13	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 3001	\$23	\$41	\$68	\$125	N/A
– SCHOOL AND CHURCH BUSES					
\$ 266	\$3	\$6	\$9	\$14	N/A
– OTHER BUSES					
\$ 1839	\$16	\$26	\$42	\$71	N/A
– VAN POOLS					
\$ 726	\$6	\$9	\$13	\$23	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 663	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 382	\$1	\$2	\$3	\$6	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 361	\$2	\$4	\$6	\$11	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 2368	\$18	\$33	\$54	\$99	N/A
– SCHOOL AND CHURCH BUSES					
\$ 210	\$4	\$6	\$9	\$15	N/A
– OTHER BUSES					
\$ 1452	\$14	\$23	\$37	\$63	N/A
– VAN POOLS					
\$ 573	\$4	\$7	\$11	\$18	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 567	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 273	\$1	\$2	\$3	\$6	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 318	\$2	\$3	\$6	\$10	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 1693	\$13	\$23	\$39	\$70	N/A
– SCHOOL AND CHURCH BUSES					
\$ 150	\$3	\$4	\$7	\$11	N/A
– OTHER BUSES					
\$ 1037	\$12	\$20	\$31	\$53	N/A
– VAN POOLS					
\$ 410	\$3	\$5	\$8	\$13	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 409	Refer to Rule 49.				N/A
<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	MEDICAL PAYMENTS				PERSONAL INJURY PROTECTION
	Limit Per Person				
Limit Of Liab. \$100,000	500	1000	2000	5000	Basic Limits
RULE 23. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS					
\$ 215	\$1	\$2	\$3	\$4	N/A
RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS					
\$ 178	\$1	\$2	\$3	\$6	N/A
RULE 40. PUBLIC AUTO CLASSIFICATIONS –					
– TAXICABS AND LIMOUSINES					
\$ 1333	\$10	\$18	\$30	\$55	N/A
– SCHOOL AND CHURCH BUSES					
\$ 118	\$2	\$4	\$6	\$10	N/A
– OTHER BUSES					
\$ 817	\$12	\$20	\$31	\$53	N/A
– VAN POOLS					
\$ 323	\$3	\$4	\$6	\$10	N/A
RULE 49. AUTO DEALERS – PREMIUM DEVELOPMENT					
\$ 312	Refer to Rule 49.				N/A
<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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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	\$500 Ded. 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			
	\$ 137	\$ 158	\$ 234
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 138	\$ 366
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 140	\$ 161	\$ 297
– SCHOOL AND CHURCH BUSES			
	\$ 96	\$ 111	\$ 152
– OTHER BUSES			
	\$ 96	\$ 111	\$ 152
– VAN POOLS			
	\$ 140	\$ 161	\$ 297
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 106	\$ 123	\$ 236
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 110	\$ 282
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 108	\$ 125	\$ 300
– SCHOOL AND CHURCH BUSES			
	\$ 74	\$ 86	\$ 153
– OTHER BUSES			
	\$ 74	\$ 86	\$ 153
– VAN POOLS			
	\$ 108	\$ 125	\$ 300
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 127	\$ 147	\$ 191
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 103	\$ 254
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 130	\$ 150	\$ 243
– SCHOOL AND CHURCH BUSES			
	\$ 89	\$ 103	\$ 124
– OTHER BUSES			
	\$ 89	\$ 103	\$ 124
– VAN POOLS			
	\$ 130	\$ 150	\$ 243
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 130	\$ 151	\$ 220
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 106	\$ 249
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 133	\$ 154	\$ 279
– SCHOOL AND CHURCH BUSES			
	\$ 91	\$ 106	\$ 143
– OTHER BUSES			
	\$ 91	\$ 106	\$ 143
– VAN POOLS			
	\$ 133	\$ 154	\$ 279
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 136	\$ 157	\$ 235
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 111	\$ 319
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 139	\$ 160	\$ 298
– SCHOOL AND CHURCH BUSES			
	\$ 95	\$ 110	\$ 153
– OTHER BUSES			
	\$ 95	\$ 110	\$ 153
– VAN POOLS			
	\$ 139	\$ 160	\$ 298
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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**MISSOURI (24)  
TERRITORY 109**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 137	\$ 158	\$ 214
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 125	\$ 311
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 140	\$ 161	\$ 272
– SCHOOL AND CHURCH BUSES			
	\$ 96	\$ 111	\$ 139
– OTHER BUSES			
	\$ 96	\$ 111	\$ 139
– VAN POOLS			
	\$ 140	\$ 161	\$ 272
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	\$500 Ded. 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			
	\$ 111	\$ 128	\$ 277
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 110	\$ 358
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 113	\$ 131	\$ 352
– SCHOOL AND CHURCH BUSES			
	\$ 78	\$ 90	\$ 180
– OTHER BUSES			
	\$ 78	\$ 90	\$ 180
– VAN POOLS			
	\$ 113	\$ 131	\$ 352
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			



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**MISSOURI (24)  
TERRITORY 112**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 107	\$ 124	\$ 244
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 150	\$ 393
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 109	\$ 126	\$ 310
– SCHOOL AND CHURCH BUSES			
	\$ 75	\$ 87	\$ 159
– OTHER BUSES			
	\$ 75	\$ 87	\$ 159
– VAN POOLS			
	\$ 109	\$ 126	\$ 310
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 177	\$ 205	\$ 230
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 117	\$ 309
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 181	\$ 209	\$ 292
– SCHOOL AND CHURCH BUSES			
	\$ 124	\$ 144	\$ 150
– OTHER BUSES			
	\$ 124	\$ 144	\$ 150
– VAN POOLS			
	\$ 181	\$ 209	\$ 292
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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**MISSOURI (24)  
TERRITORY 117**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 118	\$ 136	\$ 211
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 147	\$ 272
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 120	\$ 139	\$ 268
– SCHOOL AND CHURCH BUSES			
	\$ 83	\$ 95	\$ 137
– OTHER BUSES			
	\$ 83	\$ 95	\$ 137
– VAN POOLS			
	\$ 120	\$ 139	\$ 268
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 176	\$ 204	\$ 278
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 144	\$ 342
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 180	\$ 208	\$ 353
– SCHOOL AND CHURCH BUSES			
	\$ 123	\$ 143	\$ 181
– OTHER BUSES			
	\$ 123	\$ 143	\$ 181
– VAN POOLS			
	\$ 180	\$ 208	\$ 353
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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**MISSOURI (24)  
TERRITORY 126**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 147	\$ 170	\$ 239
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 124	\$ 284
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 150	\$ 173	\$ 304
– SCHOOL AND CHURCH BUSES			
	\$ 103	\$ 119	\$ 155
– OTHER BUSES			
	\$ 103	\$ 119	\$ 155
– VAN POOLS			
	\$ 150	\$ 173	\$ 304
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	\$500 Ded. 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			
	\$ 124	\$ 143	\$ 240
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 129	\$ 250
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 126	\$ 146	\$ 305
– SCHOOL AND CHURCH BUSES			
	\$ 87	\$ 100	\$ 156
– OTHER BUSES			
	\$ 87	\$ 100	\$ 156
– VAN POOLS			
	\$ 126	\$ 146	\$ 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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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**MISSOURI (24)  
TERRITORY 128**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 146	\$ 169	\$ 229
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 148	\$ 255
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 149	\$ 172	\$ 291
– SCHOOL AND CHURCH BUSES			
	\$ 102	\$ 118	\$ 149
– OTHER BUSES			
	\$ 102	\$ 118	\$ 149
– VAN POOLS			
	\$ 149	\$ 172	\$ 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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 169	\$ 196	\$ 248
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 147	\$ 239
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 172	\$ 200	\$ 315
– SCHOOL AND CHURCH BUSES			
	\$ 118	\$ 137	\$ 161
– OTHER BUSES			
	\$ 118	\$ 137	\$ 161
– VAN POOLS			
	\$ 172	\$ 200	\$ 315
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			



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**MISSOURI (24)  
TERRITORY 131**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 118	\$ 137	\$ 288
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 124	\$ 295
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 120	\$ 140	\$ 366
– SCHOOL AND CHURCH BUSES			
	\$ 83	\$ 96	\$ 187
– OTHER BUSES			
	\$ 83	\$ 96	\$ 187
– VAN POOLS			
	\$ 120	\$ 140	\$ 366
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	\$500 Ded. 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			
	\$ 117	\$ 135	\$ 217
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 120	\$ 339
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 119	\$ 138	\$ 276
– SCHOOL AND CHURCH BUSES			
	\$ 82	\$ 95	\$ 141
– OTHER BUSES			
	\$ 82	\$ 95	\$ 141
– VAN POOLS			
	\$ 119	\$ 138	\$ 276
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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**MISSOURI (24)  
TERRITORY 133**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 98	\$ 114	\$ 213
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 100	\$ 332
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 100	\$ 116	\$ 271
– SCHOOL AND CHURCH BUSES			
	\$ 69	\$ 80	\$ 138
– OTHER BUSES			
	\$ 69	\$ 80	\$ 138
– VAN POOLS			
	\$ 100	\$ 116	\$ 271
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 118	\$ 136	\$ 238
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 127	\$ 348
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 120	\$ 139	\$ 302
– SCHOOL AND CHURCH BUSES			
	\$ 83	\$ 95	\$ 155
– OTHER BUSES			
	\$ 83	\$ 95	\$ 155
– VAN POOLS			
	\$ 120	\$ 139	\$ 302
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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**MISSOURI (24)  
TERRITORY 135**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 132	\$ 153	\$ 184
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 109	\$ 414
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 135	\$ 156	\$ 234
– SCHOOL AND CHURCH BUSES			
	\$ 92	\$ 107	\$ 120
– OTHER BUSES			
	\$ 92	\$ 107	\$ 120
– VAN POOLS			
	\$ 135	\$ 156	\$ 234
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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PHYSICAL DAMAGE Original Cost New Range \$15,001 – 20,000			
	Specified Causes Of Loss	\$500 Ded. 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			
	\$ 126	\$ 146	\$ 232
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 127	\$ 320
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 129	\$ 149	\$ 295
– SCHOOL AND CHURCH BUSES			
	\$ 88	\$ 102	\$ 151
– OTHER BUSES			
	\$ 88	\$ 102	\$ 151
– VAN POOLS			
	\$ 129	\$ 149	\$ 295
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

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**MISSOURI (24)  
TERRITORY 137**

<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 124	\$ 144	\$ 217
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 122	\$ 253
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 126	\$ 147	\$ 276
– SCHOOL AND CHURCH BUSES			
	\$ 87	\$ 101	\$ 141
– OTHER BUSES			
	\$ 87	\$ 101	\$ 141
– VAN POOLS			
	\$ 126	\$ 147	\$ 276
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			

COMMERCIAL LINES MANUAL  
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<b>PHYSICAL DAMAGE</b> <b>Original Cost New Range</b> <b>\$15,001 – 20,000</b>			
	<b>Specified Causes Of Loss</b>	<b>\$500 Ded. 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			
	\$ 124	\$ 144	\$ 185
<b>RULE 32. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	N/A	\$ 119	\$ 214
<b>RULE 40. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 126	\$ 147	\$ 235
– SCHOOL AND CHURCH BUSES			
	\$ 87	\$ 101	\$ 120
– OTHER BUSES			
	\$ 87	\$ 101	\$ 120
– VAN POOLS			
	\$ 126	\$ 147	\$ 235
<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 Towing and Labor Costs Coverage rating, refer to Rule <b>34.</b></li> </ul>			



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**89. NON-OWNERSHIP LIABILITY**

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Table **89.C.1.a.(1)(LC)** is replaced by the following:

<u>Class Code</u>	<u>Total Number Of Employees</u>	<u>Liability Base Loss Cost</u>
<u>6638</u>	<u>0 = 9</u>	<u>\$ 51</u>
<u>6639</u>	<u>10 = 19</u>	<u>109</u>
<u>6640</u>	<u>20 = 25</u>	<u>176</u>
<u>6602</u>	<u>26 = 100</u>	<u>297</u>
<u>6603</u>	<u>101 = 500</u>	<u>777</u>
<u>6604</u>	<u>501 = 1,000</u>	<u>1,787</u>
<u>6605</u>	<u>Over 1,000</u>	<u>3,767</u>

**Table 89.C.1.a.(1)(LC) Other Than Garage Service Operations Loss Costs**

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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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\$ 0.441
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**Table 90.B.3.b.(LC) Cost Of Hire Basis Liability Loss Cost**

## 97. UNINSURED MOTORISTS INSURANCE

Interpolicy Stacking Only – Bodily Injury – Other Than Individual Named Insureds		
Bodily Injury Limits	Private Passenger Types Per Exposure	Other Than Private Passenger Types Per Exposure
\$ 50,000	\$ 8.267.06	\$ 3.924.78
60,000	8.747.47	4.165.07
100,000	10.308.80	4.905.97
125,000	10.969.37	5.226.36
150,000	11.509.83	5.486.67
200,000	12.4410.63	5.927.21
250,000	13.1211.21	6.247.60
300,000	13.6411.66	6.497.90
350,000	14.0512.01	6.678.13
400,000	14.5112.40	6.908.40
500,000	15.0312.85	7.158.71
600,000	15.5113.26	7.378.98
750,000	16.0413.71	7.639.29
1,000,000	16.6414.22	7.919.63
1,500,000	17.4314.90	8.2910.10
2,000,000	17.8415.25	8.4810.33

Table 97.B.1.a.(1)(LC) Single Limits Uninsured Motorists Bodily Injury Coverage Loss Costs

Interpolicy Stacking – Bodily Injury – Other Than Individual Named Insureds		
Bodily Injury Limits	Private Passenger Types Per Exposure	Other Than Private Passenger Types Per Exposure
\$ 25,000/50,000	\$ 6.905.90	\$ 3.284.00
50,000/100,000	8.747.47	4.165.07
100,000/300,000	10.839.26	5.166.28
250,000/500,000	13.3711.43	6.357.74
500,000/1,000,000	15.1712.97	7.228.79

Table 97.B.1.a.(2)(LC) Split Limits Uninsured Motorists Bodily Injury Coverage Loss Costs

Interpolicy And Intrapolicy Stacking – Bodily Injury – Individual Named Insureds												
Bodily Injury Limits	Private Passenger Types Loss Costs Per Exposure						Other Than Private Passenger Types Loss Costs Per Exposure					
	Total Number Of Exposures						Total Number Of Exposures					
	1	2	3-4	5-9	10-30	> 30	1	2	3-4	5-9	10-30	> 30
\$ 50,000	\$ 9.728.31	11.754.04	13.444.49	15.514.326	18.104.547	19.3146.50	\$ 4.956.03	5.927.24	6.728.48	7.709.38	8.9310.88	9.5114.58
60,000	10.208.72	12.304.51	14.044.200	16.104.376	18.434.675	19.6246.77	5.196.32	6.187.53	7.008.53	7.999.73	9.1011.08	9.6611.77

100,000	<u>11.75</u> 10.04	<u>13.904</u> 1.88	<u>15.514</u> 3.26	<u>17.294</u> 4.78	<u>19.314</u> 6.50	<u>20.3647</u> .40	<u>5.927</u> 21	<u>6.958.4</u> 6	<u>7.709.3</u> 8	<u>8.5540.</u> 42	<u>9.5144.</u> 58	<u>10.0242</u> .20
125,000	<u>12.43</u> 10.62	<u>14.584</u> 2.46	<u>16.164</u> 3.84	<u>17.774</u> 5.19	<u>19.694</u> 6.83	<u>20.6347</u> .63	<u>6.257</u> 64	<u>7.278.8</u> 5	<u>8.029.7</u> 7	<u>8.7840.</u> 69	<u>9.7044.</u> 84	<u>10.1442</u> .35
150,000	<u>12.96</u> 11.08	<u>15.104</u> 2.94	<u>16.644</u> 4.22	<u>18.164</u> 5.52	<u>19.964</u> 7.06	<u>20.8347</u> .80	<u>6.507</u> 92	<u>7.519.4</u> 5	<u>8.2440.</u> 04	<u>8.9740.</u> 92	<u>9.8244.</u> 96	<u>10.2342</u> .46
200,000	<u>13.90</u> 11.88	<u>15.974</u> 3.65	<u>17.294</u> 4.78	<u>18.764</u> 6.03	<u>20.364</u> 7.40	<u>21.1448</u> .07	<u>6.958</u> 46	<u>7.929.6</u> 5	<u>8.5540.</u> 42	<u>9.2544.</u> 27	<u>10.024</u> 2.20	<u>10.3942</u> .65
250,000	<u>14.58</u> 12.46	<u>16.504</u> 4.10	<u>17.774</u> 5.19	<u>19.094</u> 6.32	<u>20.634</u> 7.63	*	<u>7.278</u> 85	<u>8.189.9</u> 6	<u>8.7840.</u> 69	<u>9.4244.</u> 47	<u>10.144</u> 2.35	*
300,000	<u>15.10</u> 12.94	<u>16.984</u> 4.54	<u>18.164</u> 5.52	<u>19.424</u> 6.60	<u>20.834</u> 7.80	*	<u>7.519</u> 45	<u>8.4040.</u> 23	<u>8.9740.</u> 92	<u>9.5644.</u> 65	<u>10.234</u> 2.46	*
350,000	<u>15.51</u> 13.26	<u>17.294</u> 4.78	<u>18.504</u> 5.84	<u>19.694</u> 6.83	<u>21.024</u> 7.97	*	<u>7.709</u> 38	<u>8.5540.</u> 42	<u>9.1244.</u> 44	<u>9.7044.</u> 84	<u>10.334</u> 2.58	*
400,000	<u>15.97</u> 13.65	<u>17.634</u> 5.07	<u>18.764</u> 6.03	<u>19.894</u> 7.00	<u>21.144</u> 8.07	*	<u>7.929</u> 65	<u>8.7240.</u> 62	<u>9.2544.</u> 27	<u>9.7944.</u> 93	<u>10.394</u> 2.65	*
500,000	<u>16.50</u> 14.10	<u>18.104</u> 5.47	<u>19.094</u> 6.32	<u>20.164</u> 7.23	*	*	<u>8.189</u> 96	<u>8.9340.</u> 88	<u>9.4244.</u> 47	<u>9.9242.</u> 08	*	*
600,000	<u>16.98</u> 14.54	<u>18.434</u> 5.75	<u>19.424</u> 6.60	<u>20.434</u> 7.46	*	*	<u>8.404</u> 0.23	<u>9.1044.</u> 08	<u>9.5644.</u> 65	<u>10.044</u> 2.23	*	*
750,000	<u>17.50</u> 14.96	<u>18.904</u> 6.15	<u>19.764</u> 6.89	<u>20.704</u> 7.69	*	*	<u>8.654</u> 0.54	<u>9.3244.</u> 35	<u>9.7344.</u> 85	<u>10.164</u> 2.38	*	*
1,000,000	<u>18.10</u> 15.47	<u>19.314</u> 6.50	<u>20.164</u> 7.23	<u>21.024</u> 7.97	*	*	<u>8.934</u> 0.88	<u>9.5144.</u> 58	<u>9.9242.</u> 08	<u>10.334</u> 2.58	*	*
1,500,000	<u>18.90</u> 16.15	<u>19.964</u> 7.06	<u>20.704</u> 7.69	*	*	*	<u>9.324</u> 4.35	<u>9.8244.</u> 96	<u>10.164</u> 2.38	*	*	*
2,000,000	<u>19.31</u> 16.50	<u>20.364</u> 7.40	<u>21.024</u> 7.97	*	*	*	<u>9.514</u> 4.58	<u>10.024</u> 2.20	<u>10.334</u> 2.58	*	*	*

\* Refer to company.

**Table 97.B.2.a.(1)(LC) Single Limits Uninsured Motorists Bodily Injury Coverage Loss Costs**

Interpolicy And Intrapolicy Stacking – Bodily Injury – Individual Named Insureds												
Bodily Injury Limits (000's)	Private Passenger Types Loss Costs Per Exposure						Other Than Private Passenger Types Loss Costs Per Exposure					
	Total Number Of Exposures						Total Number Of Exposures					
	1	2	3-4	5-9	10-30	> 30	1	2	3-4	5-9	10-30	> 30
\$ 25/50	\$ <u>8.377</u> .15	<u>10.208</u> 72	<u>11.894</u> 0.16	<u>13.774</u> 4.77	<u>16.644</u> 4.22	<u>18.1645</u> .52	\$ <u>4.315</u> 25	<u>5.196.3</u> 2	<u>5.997.2</u> 9	<u>6.888.3</u> 8	<u>8.2440.</u> 04	<u>8.9740.</u> 92
50/100	<u>10.20</u> 8.72	<u>12.034</u> 0.28	<u>13.774</u> 4.77	<u>15.834</u> 3.53	<u>18.164</u> 5.52	<u>19.4246</u> .60	<u>5.196</u> 32	<u>6.057.3</u> 7	<u>6.888.3</u> 8	<u>7.869.5</u> 7	<u>8.9740.</u> 92	<u>9.5644.</u> 65
100/300	<u>12.30</u> 10.54	<u>14.444</u> 2.34	<u>16.104</u> 3.76	<u>17.504</u> 4.96	<u>19.564</u> 6.72	<u>20.4947</u> .54	<u>6.187</u> 53	<u>7.208.7</u> 7	<u>7.999.7</u> 3	<u>8.6540.</u> 54	<u>9.6344.</u> 73	<u>10.074</u> 2.27
250/500	<u>14.84</u> 12.68	<u>16.644</u> 4.22	<u>17.964</u> 5.35	<u>19.234</u> 6.44	<u>20.704</u> 7.69	*	<u>7.388</u> 99	<u>8.2440.</u> 04	<u>8.8840.</u> 84	<u>9.4744.</u> 54	<u>10.164</u> 2.38	*
500/1,000	<u>16.64</u> 14.22	<u>18.164</u> 5.52	<u>19.234</u> 6.44	<u>20.294</u> 7.34	*	*	<u>8.244</u> 0.04	<u>8.9740.</u> 92	<u>9.4744.</u> 54	<u>9.9842.</u> 46	*	*

\* Refer to company.

**Table 97.B.2.a.(2)(LC) Split Limits Uninsured Motorists Bodily Injury Coverage Loss Costs**

Underinsured Motorists Coverage		
Bodily Injury Limits	Private Passenger Types Per Exposure	Other Than Private Passenger Types Per Exposure
\$ 50,000	\$ 1.264.12	\$ 0.820.73
60,000	1.804.60	1.174.04
100,000	6.145.46	3.993.55
125,000	8.587.63	5.584.96
150,000	11.7740.46	7.656.80
200,000	17.3845.45	11.3040.04
250,000	21.6549.24	14.0742.54
300,000	25.8122.94	16.7744.94
350,000	28.9125.70	18.8046.74
400,000	32.2828.69	20.9848.65
500,000	36.4232.37	23.6721.04
600,000	40.0135.56	26.0023.14
750,000	44.7939.84	29.1225.88
1,000,000	50.4344.83	32.7829.14
1,500,000	58.3351.85	37.9133.70
2,000,000	63.8656.76	41.5036.89

Table 97.B.3.a.(1)(LC) Single Limits Underinsured Motorists Bodily Injury Coverage Loss Costs

Underinsured Motorists Coverage		
Bodily Injury Limits	Private Passenger Types Per Exposure	Other Than Private Passenger Types Per Exposure
\$ 50,000/100,000	\$ 1.804.60	\$ 1.174.04
100,000/300,000	7.957.07	5.184.60
250,000/500,000	23.6421.04	15.3743.66
500,000/1,000,000	37.3733.22	24.2921.59

Table 97.B.3.a.(2)(LC) Split Limits Underinsured Motorists Bodily Injury Coverage Loss Costs

## Supplementary Information – Missouri

### **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 Missouri

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>
03/31/2014	+1.4%	+4.8%
06/30/2014	+1.5%	+4.2%
09/30/2014	+1.8%	+3.7%
12/31/2014	+1.8%	+3.3%
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%

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 – Missouri

### 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 2006 - September 2007	4.6%	6.8%
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%

### 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 – Missouri

### Missouri Trends

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

	Current Trends <u>Data through 12/31/2017</u>	Previous Trends <u>Data through 12/31/2016</u>
Missouri Claim Cost Trends		
Bodily Injury (\$100,000 Limit)	-0.3%	-0.7%
Property Damage (\$100,000 Limit)	+7.9%	+8.6%
Credibility-Weighted Claim Cost Trends		
Bodily Injury (\$100,000 Limit)	+3.6%	+2.5%
Property Damage (\$100,000 Limit)	+5.4%	+6.4%
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)	+3.6%	+2.5%
Property Damage (\$100,000 Limit)	+5.4%	+6.4%
Private Passenger Types		
Bodily Injury (\$100,000 Limit)	+3.6%	+2.5%
Property Damage (\$100,000 Limit)	+5.4%	+6.4%

Missouri bodily injury severity trend receives 5% 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 +6.0% rather than +6.6%. For the Private Passenger Types coverage, the indication would have been +1.6% instead of +2.1%.



## Supplementary Information – Missouri

### Physical Damage Loss Trend

	<u>Coverage</u>	<u>Current Trends</u>	<u>Previous Trends</u>
		<u>Data through 12/31/2017</u>	<u>Data through 12/31/2016</u>
Trucks, Tractors & Trailers	OTC	+7.0%	+6.5%
	Collision	+5.0%	+5.5%
Private Passenger Types	OTC	+6.5%	+5.0%
	Collision	+4.5%	+5.0%

### Physical Damage OCN Trend

	<u>Coverage</u>	<u>Current Trends</u>	<u>Previous Trends</u>
		<u>Data through 12/31/2017</u>	<u>Data through 12/31/2016</u>
Trucks, Tractors & Trailers	OTC	+1.0%	+0.9%
	Collision	+1.6%	+1.3%
Private Passenger Types	OTC	+1.1%	+1.0%
	Collision	+0.6%	+0.6%

The loss trend has increased by 0.5 points for Trucks, Tractors & Trailers OTC and has increased by 1.5 points for Private Passenger Types OTC. The OCN trend has increased by 0.1 points for Trucks, Tractors and Trailers OTC and 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 +14.6%, instead of +16.0%, and +3.0%, instead of +6.8%, 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 increased by 0.3 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 and Trailers and Private Passenger Types collision indications in this document would have been +0.4%, instead of -2.0%, and +2.8%, instead of +1.4%, respectively.

## Supplementary Information – Missouri

### Loss Development

#### Methodology

For the Trucks, Tractors & Trailers and Private Passenger Types Liability coverages, we continue to employ a credibility-weighted combination of Missouri 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	1.080	1.078
27 to Ultimate	1.161	1.158
15 to Ultimate	1.350	1.340
Trucks, Tractors and Trailers PD		
39 to Ultimate	1.003	1.004
27 to Ultimate	1.011	1.012
15 to Ultimate	1.041	1.033
Private Passenger Types BI		
39 to Ultimate	1.069	1.064
27 to Ultimate	1.128	1.112
15 to Ultimate	1.360	1.315
Private Passenger Types PD		
39 to Ultimate	1.004	1.005
27 to Ultimate	1.012	1.012
15 to Ultimate	1.032	1.031

## Supplementary Information – Missouri

### 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 +3.4% is indicated when each of the coverage indications is weighted by its respective loss cost volume. Staff will file the indications, which reflect a 10/01/2019 proposed effective date, with the following exceptions: For Trucks, Tractors & Trailers Collision, Private Passenger Types Liability, and Private Passenger Types Collision, No Change (N.C.) was selected due to the modest indications.

<u>Coverage</u>	<u>Indicated Change</u>	<u>Filed Change</u>
Trucks, Tractors, and Trailers Collision	-2.0%	No Change (N.C.)
Private Passenger Types Liability	+2.1%	No Change (N.C.)
Private Passenger Types Collision	+1.4%	No Change (N.C.)

The overall filed change is +3.5%.

### Notes

- The Trucks, Tractors, and Trailers OTC indication (+16.0%) is being driven by poor experience in the five accident years included in the review.
- The Auto Dealers Liability coverage is not being reviewed this year.
- The Auto Dealers and Garagekeepers physical damage coverages are not being reviewed this year.
- A revision of the Medical Payments loss costs is included in this document. The overall change for the Trucks, Tractors and Trailers, Private Passenger Types and Public Automobiles medical payments revision is reflected in the overall change quoted in this filing. The documentation for this revision can be found in Section D.
- A revision of the Non-ownership Liability loss costs contained in Rule 89.C.1.a.(1) is included in this document. The overall change for this coverage is reflected in the overall change quoted in this filing. The documentation for this revision can be found in Section E.
- A revision of the Uninsured and Underinsured Motorists loss costs contained in Rule 97 is included in this document. The overall change for the Private Passenger Types and Other than Private Passenger Types UM and UIM revision is reflected in the overall change quoted in this filing. The documentation for this revision can be found in Section F.