

LOSS COSTS – IMPLEMENTATION

MARCH 27, 2023

COMMERCIAL AUTOMOBILE

LI-CA-2023-105

## NORTH DAKOTA REVISED COMMERCIAL AUTO ADVISORY PROSPECTIVE LOSS COSTS TO BE IMPLEMENTED

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### KEY MESSAGE

Loss costs representing a 9.0% statewide change to be implemented.

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### BACKGROUND

In circular [LI-CA-2023-001](#), we provided you with information about the Commercial Auto loss cost level experience review.

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### CONSIDERATION OF COVID-19

There will almost certainly be long-term behavioral, social and economic changes as a result of COVID-19. So far, we observe that the pandemic resulted in decreases for Commercial Auto frequencies with some offsetting effects on severity. We expect that the sharpest economic disruptions are behind us, but the effects may persist in muted form for some time. In response to this, we are taking the effects of COVID-19 into account when we make our trend selections in the loss cost filings. Additionally, due to the impact that the COVID-19 pandemic had on experience from March 2020 and beyond, we have decided to adjust the year weights for liability, PIP, and collision to give less weight to the most recent year. Please feel free to contact us for additional discussion, clarification or questions.

See the filing material for further details.

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### ISO ACTION

We are implementing [CA-2023-BRLA1](#), which presents a review of Commercial Auto loss cost experience. Refer to the attached explanatory material for complete details about the filing.

*For more information on the status of filings in a particular state, including filed and approved documents, associated circulars and links to Print Ready Manuals and Commercial Lines Manual, please feel free to access our [Filings](#) feature within the ISOnet Circulars product.*

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### SUPPLEMENTARY INFORMATION

We are including supplementary information for North Dakota, 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 July 1, 2023.

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 July 1, 2023, 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 JUNE 21, 2023. 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 Filing Number CA-2023-BRLA1 and SERFF Tracking Number ISOF-133600427, 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-2023-005](#) contains the ISO Guide To Renewals With Changed Conditions For Commercial Lines, which is available only as a guide to assist participating companies in complying with various conditional renewal statutes or regulations, for the major commercial lines of insurance serviced by ISO. The information in the Guide does not necessarily reflect all requirements or exceptions that may apply, and it is not intended as a substitute for your review of all applicable statutes and regulations concerning policyholder notification.

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**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 7-23 (or the earliest possible subsequent date), along with any new and/or revised manual pages.

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## REFERENCE(S)

- [LI-CL-2023-005](#) (02/21/2023) Commercial Lines Revised Lead Time Requirements Listing
- [LI-CA-2023-001](#) (01/03/2023) Commercial Auto Experience Level Indications Reviewed By Staff

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## ATTACHMENT(S)

- Filing CA-2023-BRLA1
- Supplementary Information

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## FILES AVAILABLE FOR DOWNLOAD

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

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

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## DATA QUALITY

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

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## ACKNOWLEDGEMENT OF ACTUARIAL QUALIFICATIONS

The American Academy of Actuaries' "Qualifications Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States" requires that an actuary issuing a Statement of Actuarial Opinion should include an acknowledgment with the opinion that he/she has met the qualification standards of the AAA. ISO considers this loss cost review a Statement of Actuarial Opinion; therefore, we are including the following acknowledgment:

I, Rebecca Gordon, am an Actuarial Associate for ISO, and I, Kevin Hughes, 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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## ISO RISK ANALYZER®

The loss cost analysis in this circular is reflected in ISO Risk Analyzer®, a suite of predictive models that help with granular pricing of insurance risks. Risk Analyzer can provide loss costs for refined territories and classes, as well as feed custom modeling efforts. For more information, please visit <https://www.verisk.com/riskanalyzer>.

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We provide participating insurers with information concerning the jurisdictions for which our products and services are distributed. Even in those jurisdictions, each insurer must determine what filing requirements, if any, apply and whether those requirements have been satisfied.

Now, as in the past, all of our products and services are advisory, and are made available for optional use by participating insurers as a matter of individual choice. Your company must decide for itself which, if any, ISO products or services are needed or useful to its operation and how those selected for use should be applied. We urge that you be guided by the advice of your attorneys on the legal requirements.

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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).

NORTH DAKOTA

BASIC LIMITS PROSPECTIVE LOSS COST LEVEL – COMMERCIAL AUTOMOBILE

FILING CA-2023-BRLA1

EXECUTIVE SUMMARY

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PURPOSE	<p>This document:</p> <ul style="list-style-type: none"><li>• revises the advisory prospective loss costs for the major Commercial Automobile classes. These loss costs represent a 9.0% statewide change from the loss costs currently in effect.</li><li>• provides the analyses used to derive these advisory loss costs.</li></ul>
DEFINITION OF THE ISO ADVISORY PROSPECTIVE LOSS COSTS	<p>Advisory prospective loss costs in this document are the expected value of that portion of a rate that does not include provisions for expenses (other than loss adjustment expenses) or profit, and are based on historical aggregate losses and loss adjustment expenses adjusted through development to their ultimate value and projected through trending to a future point in time. Throughout this document the words “loss cost” are synonymous with the words “prospective loss cost.”</p>
IMPACTS OF COVID-19 ON ADVISORY PROSPECTIVE LOSS COSTS	<p>There will almost certainly be long-term behavioral, social and economic changes as a result of COVID-19. So far, we observe that the pandemic resulted in decreases for Commercial Auto frequencies with some offsetting effects on severity. We are including the pandemic experience in our review without adjustment. We will continue to monitor existing reporting trends, including how new data entering the experience period of our next review reflects COVID-19 impacts. Please feel free to contact us for additional discussion, clarification or questions.</p>
FORMAT	<p>In this document, all explanatory material appears first, followed by all exhibits, and then the revised prospective loss costs. Explanatory pages are numbered B-1 through D-4, the exhibits are labeled EXHIBIT A1 through EXHIBIT D9, and the revised prospective loss cost pages are numbered E-1 through E-11.</p>
HIRED AUTOS LOSS COSTS	<p>The loss costs for hired autos physical damage have been revised in this filing. Details of the analysis are in Section D.</p>
AUTO DEALERS AND GARAGEKEEPERS	<p>The Auto Dealers and Garagekeepers Physical Damage coverages are not being reviewed this year.</p>

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REVISED LOSS  
COST CHANGES

The statewide advisory loss cost level changes are:

<u>Trucks, Tractors &amp; Trailers</u>	<u>Indicated</u>	<u>Filed*</u>	<u>Adjusted**</u>
<u>Liability</u>			
Single Limit Liability	6.1%	6.1%	1.1%
Personal Injury Protection	-6.9%	-15.0%	-15.0%
<u>Physical Damage</u>			
Other than Collision	6.5%	6.5%	-4.5%
Collision	21.1%	21.1%	-9.2%
<b>Total Trucks, Tractors &amp; Trailers</b>	<b>9.1%</b>	<b>8.9%</b>	<b>-3.0%</b>
<u>Private Passenger Types</u>			
<u>Liability</u>			
Single Limit Liability	6.5%	6.5%	-0.4%
Personal Injury Protection	2.7%	N.C.	N.C.
<u>Physical Damage</u>			
Other than Collision	6.3%	6.3%	1.8%
Collision	7.1%	7.1%	6.9%
<b>Total Private Passenger Types</b>	<b>6.4%</b>	<b>6.3%</b>	<b>2.0%</b>
<u>Auto Dealers</u>			
<u>Liability</u>			
Single Limit Liability	24.8%	24.8%	24.8%
Personal Injury Protection	3.4%	-10.0%	-10.0%
<b>Total Auto Dealers</b>	<b>22.7%</b>	<b>21.4%</b>	<b>21.4%</b>
<u>Hired Autos</u>			
<u>Physical Damage</u>			
Other Than Collision	37.8%	37.8%	37.8%
Collision	164.3%	164.3%	164.3%
<b>Total Hired Autos</b>	<b>129.7%</b>	<b>129.7%</b>	<b>129.7%</b>
<u>Grand Total</u>	<b>9.3%</b>	<b>9.0%</b>	<b>-2.0%</b>

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

\* Due to the simultaneous implementation of filing CA-2022-RLC1, the FILED column displays the impact for companies already using the optional class plan prior to the effective date of the CA-2022-RLC1 filing.

\*\* The ADJUSTED changes display the impact of the filed loss costs on companies not using the optional class plan prior to the effective date of the CA-2022-RLC1 filing.

INDICATED VS.  
FILED

Indicated changes are based on standard ISO methodology, utilizing a 7/1/2023 trend effective date. The filed loss cost level changes are the same as the indicated with the following exceptions: No Change (N.C.) was selected for Private Passenger Types PIP due to the modest indication. -15.0% was selected for Trucks, Tractors and Trailers PIP, and -10% was selected for Auto Dealers PIP to reflect the favorable state experience.

PRIOR ISO REVISIONS

The latest selected revisions in this state are:

<u>Filing</u>	CA-2022-BRLA1	CA-2021-BRLA1	CA-2020-BRLA1
Rate Level/ Loss Costs	Loss Costs	Loss Costs	Loss Costs
Effective Date	7/1/2022	7/1/2021	7/1/2020
<u>Changes</u>			
Indicated	2.7%	2.9%	-2.5%
Filed	1.4%	2.8%	-2.5%
Approved	1.4%	2.8%	-2.5%

HISTORICAL SOURCE DATA

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

- ISO companies reporting voluntary automobile experience under the Commercial Automobile modules of ISO's statistical plans.
- Accident year data through year ended 12/31/2021 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 2021 and claim frequency trend data through third quarter 2021 were used in selecting the following annual liability trend factors:

<u>Coverage</u>	<u>Annual Trend Factor</u>
Trucks, Tractors, and Trailers Liability:	
Bodily Injury	+7.1%
Property Damage	+8.3%
Private Passenger Types Liability:	
Bodily Injury	+7.1%
Property Damage	+8.3%

ADJUSTMENTS TO  
REPORTED  
EXPERIENCE  
(CONT'D)

Trucks, Tractors & Trailers PIP	+3.1%
Private Passenger Types PIP	+3.6%
Trucks, Tractors & Trailers OTC	+6.0%
Trucks, Tractors & Trailers Collision	+7.0%
Private Passenger Types OTC	+6.5%
Private Passenger Types Collision	+7.0%

Liability Premium Trend

To recognize the trend in the Vehicle Age factors and Original Cost New factors for Trucks, Tractors & Trailers and Private Passenger Types Liability, aggregate loss costs at current level have been multiplied by premium trend factors. The selected annual Liability premium trends are +0.4% for Trucks, Tractors & Trailers and 0.0% for Private Passenger Types.

Physical Damage Vehicle Value Factor (VVF) Trends

To recognize the trend in the vehicle value component of the rating procedure (which includes Vehicle Age and Original Cost New) for Trucks, Tractors & Trailers and Private Passenger Types Physical Damage, aggregate loss costs at current level have been multiplied by VVF trend factors. The selected annual VVF trend factors for Trucks, Tractors & Trailers are +1.5% and +2.5% for OTC and Collision respectively. For Private Passenger Types, the VVF trend factors are +2.2% and +1.0% 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. Employers Mutual Casualty Company
3. Zurich American Insurance Company
4. Nationwide Mutual Insurance Co.
5. Western National Mutual Ins. Co.
6. Insurance Co. of North America
7. Sentry Insurance A Mutual Company
8. United Fire & Casualty Company
9. Cincinnati Insurance Company
10. Federated Mutual Insurance Company

PHYSICAL DAMAGE (ASLOB 21.2)

1. Travelers Indemnity Company
2. Employers Mutual Casualty Company
3. Western National Mutual Ins. Co.
4. Zurich American Insurance Company
5. United Fire & Casualty Company
6. Cincinnati Insurance Company
7. Motors Insurance Corporation
8. Federated Mutual Insurance Company
9. Liberty Mutual Insurance Company
10. Nationwide Mutual Insurance Co.

Insurers are listed in descending order based on the percent of statewide written premium volume from Annual Statement Page 15 for the year ending 12/31/2021 for the Annual Statement Line of Business (ASLOB) indicated.

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 12/31/2021 is:

Liability (ASLOB 19.3 & 19.4)  
36.4%

Physical Damage (ASLOB 21.2)  
28.6%

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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NORTH DAKOTA  
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.

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**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." See the calculations in **Exhibits B1-B5**.

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**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. See the calculations in **Exhibits B6-B15**.

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**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 E.

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## OVERVIEW OF ISO ACTUARIAL PROCEDURES – COMMERCIAL AUTOMOBILE

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

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**OBJECTIVE** 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?

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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 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. See the calculations in **Exhibits B1-B5**.

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**EXPERIENCE BASE** 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.

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**AGGREGATE LOSS COSTS (Item 1)** 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.

Trucks, Tractors & Trailers and Private Passenger Types aggregate loss costs are placed on the prospective OCN and Vehicle Age relativity level by the application of premium trend factors.

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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. See the calculations in **Exhibits B6-B15**.

---

AUTO DEALERS  
LIABILITY

Because Auto Dealers Statistics by territory lack sufficient credibility to be used meaningfully in developing revised loss costs, it is appropriate to utilize a body of statistics which can be expected to reflect the Auto Dealers hazard differences by territory. Consequently, the development of indicated Auto Dealers base loss costs is based upon a relationship to the corresponding Trucks, Tractors & Trailers \$100,000 revised base loss costs by territory. The revised Trucks, Tractors & Trailers base loss costs are compared to the revised statewide average Trucks, Tractors & Trailers base loss cost to produce the indicated territorial indices to the statewide average base loss costs for Auto Dealers. The relationship between these Trucks, Tractors & Trailers indicated territorial indices and the current Auto Dealers territorial indices yields the change in the Auto Dealers index.

EXPLANATORY MEMORANDUM FOR TRUCKS, TRACTORS & TRAILERS AND PRIVATE PASSENGER TYPES LIABILITY AND PIP TERRITORY DEVELOPMENT

---

COLUMN (1) EARNED CAR YEARS	Number of car-years, or exposures, earned in the latest year. These exposures are used to calculate the weighted averages through the analysis. (For calculating the weighted average of the Experience Ratio in Col (4) and the Formula Experience Ratio in Col (6) the product of [Col(1) x Col(2)] are used as weights).
COLUMN (2) \$100,000 LIABILITY OR BASIC PIP 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 \$100,000 liability or basic PIP loss cost at present ISO manual level. Liability loss costs are trended to a prospective level by the application of premium trend 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 Bodily Injury and Property Damage combined or basic PIP 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 liability or basic PIP 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	The formula experience ratio is a credibility weighted average of the territory group experience ratio and statewide experience ratio. The formula is as follows:  $[\text{Terr. Group Col. (4)} \times \text{Terr. Group Col. (5)}] \\ + [\text{SW Total Col. (4)} \times (1.0 - \text{Terr. Group Col. (5)})]$

---

COLUMN (7)  
INDEX TO  
STATE

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

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

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

---

COLUMN (8)  
BASE CLASS  
LOSS COST

Present ISO \$100,000 liability base class loss cost or basic PIP 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 liability base loss cost or basic PIP loss cost.

---

COLUMN (11)  
ADVISORY  
LOSS COST  
CHANGE

Percentage change from the present base loss cost to the revised base loss cost.

---

EXPLANATORY MEMORANDUM FOR AUTO DEALERS LIABILITY AND PIP

---

COLUMN (1)  
EARNED CAR  
YEARS

Number of car-years, or exposures (Trucks, Tractors and Trailers), earned in the latest year. These exposures are used to calculate the weighted averages for column (3) and column (4).

---

COLUMN (2)  
AUTO DEALERS  
AGGREGATE LOSS  
COST AT  
CURRENT LEVEL

The Auto Dealers aggregate loss cost at current level. This column is used to calculate the weighted average for column (7).

---

COLUMN (3)  
REVISED  
TRUCKS, TRACTORS  
& TRAILERS  
\$100,000 LIABILITY  
OR BASIC PIP  
LOSS COST

These are the revised Trucks, Tractors & Trailers \$100,000 liability base loss costs or basic PIP loss costs.

---

COLUMN (4)  
AUTO DEALERS  
PRESENT  
\$100,000 LIABILITY  
OR BASIC PIP  
LOSS COST

Current Auto Dealers \$100,000 liability base loss cost or basic PIP loss cost.

---

COLUMN  
(5) & (6) RATIOS  
TO STATEWIDE  
AVERAGE

Are derived by dividing each base loss cost by the statewide average loss cost for Trucks, Tractors & Trailers and Auto Dealers, respectively.

---

COLUMN (7)  
TERRITORY  
RELATIVITY

Is derived by dividing the Trucks, Tractors & Trailers indices (column (5)) by the Auto Dealers indices (column (6)).

---

COLUMN (8)  
ADJUSTED  
TERRITORY  
RELATIVITY

Is derived by multiplying the territory relativity (column (7)) by the adjustment, which is one divided by the statewide average territory relativity (SW column (7)). This yields the required change in the Auto Dealers index in column (7).

---

---

COLUMN (9)  
INDICATED  
BASE LOSS COST

Indicated base loss cost for a particular territory. It is calculated by applying the product of the adjusted territory relativity (column (8)) and the statewide Auto Dealers loss cost level indication to the present Auto Dealers base loss cost.

---

COLUMN (10)  
REVISED  
BASE LOSS COST

Revised \$100,000 limit base loss cost or basic PIP loss cost.

---

COLUMN (11)  
LOSS COST  
CHANGE

Percentage change from the present base loss cost to the revised 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 level by the application of VVF trend 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

The formula experience ratio is a credibility weighted average of the territory group experience ratio and statewide experience ratio. The formula is as follows:

$$\begin{aligned} & [\text{Terr. Group Col. (4)} \times \text{Terr. Group Col. (5)}] \\ & + [\text{SW Total Col. (4)} \times (1.0 - \text{Terr. Group Col. (5)})] \end{aligned}$$

---

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

---

## LOSS ADJUSTMENT EXPENSE FACTORS

---

**OBJECTIVE**                      The reported indemnity losses must be loaded for any loss adjustment expenses (LAE) that are not reported in statistical detail to ISO. See the calculations in **Exhibit C1**.

---

**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.

---

## 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. See the calculations in **Exhibits C2-C3**.

---

**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** 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:

$$A = C/(C+K)$$

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.

---

LIABILITY:  
FREQUENCY  
TREND

---

The data underlying the claim frequency trend selections is shown on the attached claim frequency exhibits. See the calculations in **Exhibits C4-C5**. 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.
- Theft losses have been removed from our Other Than Collision trend reviews due to a large increase in small-value theft claims which have caused an inappropriate distortion in severity trend.

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.

PHYSICAL  
DAMAGE:  
LOSS TREND  
(CONT'D)

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. For example, if a shift in the distribution of vehicle weights occurred, we would want to remove the corresponding shift in loss severity from our estimate of severity trend. Due to the introduction of Vehicle Value Factor Trend on the premium side, we are no longer dividing losses by an Age Factor in our loss trend analysis.

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:

Type of Loss	Year 1		Year 2	
	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 =  $(\$316.25 / \$269) - 1 = 17.6\%$

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

Type of Loss	Year 1		Year 2	
	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:  $(23\% + 25\%) / 2 = 24\%$

PHYSICAL  
DAMAGE:  
LOSS TREND  
(CONT'D)

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

Type of Loss	Year 1		Year 2	
	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. See the calculations in **Exhibits C8-C11**. 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 \$500, \$1,000, and \$2,000 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:	+6.0%	+6.5%
COLL:	+7.0%	+7.0%

PERSONAL  
INJURY  
PROTECTION  
TREND

The average annual trend for personal injury protection coverage is based on consumer price indices for medical and hospital related services, and wage data from the Bureau of Labor statistics. The average annual claim cost trend uses a weighted average of the medical and wage trends using weights based on type of loss data for this state. The weighted average annual trend in claim cost is then multiplied by the selected average annual trend in claim frequency. The average annual trend in claim frequency for PIP that is used is the same for bodily injury claim frequency.

COMMERCIAL AUTOMOBILE PHYSICAL DAMAGE  
SUPPLEMENTARY EXHIBIT

Quarterly Values <u>Ending</u>	Consumer Price Index for Bodywork	
	<u>Actual</u>	<u>Exponential Fit</u>
3/31/2019	3.074	3.000
6/30/2019	3.118	3.051
9/30/2019	3.158	3.103
12/31/2019	3.189	3.156
3/31/2020	3.194	3.210
6/30/2020	3.248	3.265
9/30/2020	3.263	3.321
12/31/2020	3.283	3.377
3/31/2021	3.315	3.435
6/30/2021	3.384	3.494
9/30/2021	3.458	3.554
12/31/2021	3.561	3.614
3/31/2022	3.703	3.676
6/30/2022	3.848	3.739
9/30/2022	3.903	3.803
12/31/2022	3.984	3.868
	<u>R-Squared</u>	<u>Average Annual Change</u>
16 Point Fit	0.9214	7.0%
12 Point Fit	0.9453	8.9%

## LIABILITY PREMIUM TREND

---

### OBJECTIVE

For Trucks, Tractors & Trailers and Private Passenger Types Liability, as new, higher-valued commercial automobiles are introduced and existing vehicles are taken out of service, there is a change in revenue due to the Liability Vehicle Age Factor and the Liability OCN Factor, which represent differences in expected Liability loss experience associated with Vehicle Age and Original Cost New. In order to reflect the revenue impact of such changes during the prospective period, ISO uses a premium trend procedure.

---

### DATA LIMITATIONS UNIQUE TO PREMIUM TREND

We began collecting Vehicle Age and OCN for the Liability coverage in 2016 and the new fields became mandatory in 2019. However, the reporting on Liability records is still insufficient to support a premium trend analysis. Instead, since the new variables have always been part of our physical damage rating plan, we opted to perform our analysis using Collision data. The Collision exposures were rated as if they were Liability exposures. Approximately 80% of vehicles are provided Collision coverage. Nevertheless, we expect that some selection bias is present in the results, and we plan to switch to using Liability exposures for this analysis as soon as that is reasonably possible.

There are more serious data limitations than the selection bias that might be present due to using Collision exposures.

The Vehicle Age values we collect include coding for individual vehicle ages out to the 26th preceding model year, with a final category for the 27th preceding model year and all older vehicles. However the prior version of the ISO rating manual only provided rating factors for vehicle ages out to the tenth preceding model year, terminating with a factor for the 11th preceding model year and older. This final category from the old plan represented approximately 20% of vehicles historically and was reported statistically using an age code of "X".

Although ISO began collecting vehicle age data in fuller detail at the same time as Liability reporting was first introduced, there were similar delays for that change. Consequently, there's a relevant volume of statistically reported data in recent years that still contains exposures coded with the retired age code of "X".

The estimated percentage of total Collision reporting volume represented by companies that are fully reporting vehicle age detail in each year is as follows:

<u>Earned Year Ending</u>	<u>Trucks, Tractors and Trailers</u>	<u>Private Passenger Types</u>
12/31/2017	0.0%	0.0%
12/31/2018	0.1%	2.7%
12/31/2019	0.6%	3.1%
12/31/2020	21.8%	6.6%
12/31/2021	39.7%	26.9%

DATA  
LIMITATIONS  
UNIQUE TO  
PREMIUM TREND,  
CONTINUED

For most purposes, a representative average vehicle age value can be assigned to these exposures, allowing the data to be used in our analysis. However, ISO is aware that in the case of premium trend specifically, the indication is not only particularly sensitive to this selection, but also it is also not enough even to choose a correct representative average overall, because here we are focused on the change in the Liability Age Factor over time, even as individual insurers, each of whose book of business has a unique mix, are in the process of switching from reporting Age X to reporting vehicle age in full detail.

As a consequence of these considerations, ISO's actuarial staff made the decision to review premium trend using two cuts of data, and make a judgmental selection based on consideration of both results.

In the first cut of data, we display results using only the most recent three years ending 12/31/2021 for Private Passenger Types, and the two most recent years for Trucks, Tractors and Trailers, and to include in both only companies that reported vehicle age codes in full detail during that timeframe. This first cut has a far smaller volume that is typically used for this analysis, and we do not deem the indications to be fully credible. We observe that the significantly greater volume of usable reporting in the most recent year means that we will have available a much more credible version of this review when we next perform an experience review in one year's time.

The second cut of data includes a much greater volume of data over a full five years, but excludes all vehicles older than the 10th preceding model year. This second cut is much more stable than the first, but likely expresses a significant bias that we are not able to quantify.

---

DESCRIPTION  
OF DATA

Subject to the unique limitations described immediately above, two measures of the average Liability Rating Factors are displayed on the following exhibits. See the calculations in **Exhibits C6-C7**. The data is displayed by coverage. To determine the historical average trend for Factors, 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 vehicle value factors. Based on the results of these curves, and mindful of the data limitations discussed above, ISO has selected annual Liability premium trends of 0.4% and 0.0% for Trucks, Tractors & Trailers and Private Passenger Types respectively.

---

## PHYSICAL DAMAGE VVF 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 and existing vehicles depreciate, there is a change in revenue due to the vehicle value factor component of the rating procedure, which incorporates the effects of Original Cost New and Vehicle Age. In order to reflect the revenue impact of such changes during the prospective period, ISO uses a VVF trend procedure.

---

### DATA LIMITATIONS UNIQUE TO PREMIUM TREND

The Vehicle Value Factors we are concerned with in this analysis include factors for individual vehicle ages out to the 26th preceding model year, with a final category for the 27th preceding model year and all older vehicles. The prior version of the ISO rating manual only provided rating factors for vehicle ages out to the tenth preceding model year, terminating with a factor for the 11th preceding model year and older. This final category from the old plan represented approximately 20% of vehicles historically and was reported statistically using an age code of "X".

Although ISO began collecting vehicle age data in fuller detail beginning in 2016, the changes did not become mandatory for insurers until mid-2019, and many insurers were not able to meet even this deadline. Consequently, there's a relevant volume of statistically reported data in recent years that still contains exposures coded with the retired age code of "X".

The estimated percentage of total reporting volume represented by companies that are fully reporting vehicle age detail in each year is as follows:

<u>Earned Year Ending</u>	<u>Trucks, Tractors and Trailers</u>	<u>Private Passenger Types</u>
12/31/2017	0.0%	0.0%
12/31/2018	0.1%	3.0%
12/31/2019	0.6%	3.3%
12/31/2020	16.8%	6.8%
12/31/2021	39.2%	27.5%

For most purposes, a representative average vehicle age value can be assigned to these exposures, allowing the data to be used in our analysis. However, ISO is aware that in the case of premium trend specifically, the indication is not only particularly sensitive to this selection, but also it is also not enough even to choose a correct representative average overall, because here we are focused on the change in the VVF over time, even as individual insurers, each of whose book of business has a unique mix, are in the process of switching from reporting Age X to reporting vehicle age in full detail.

As a consequence of these considerations, ISO's actuarial staff made the decision to review premium trend using two cuts of data, and make a judgmental selection based on consideration of both results.

DATA  
LIMITATIONS  
UNIQUE TO  
PREMIUM TREND,  
CONTINUED

In the first cut of data, we display results using only the most recent three years ending 12/31/2021 for Private Passenger Types, and the two most recent years for Trucks, Tractors and Trailers, and to include in both only companies that reported vehicle age codes in full detail during that timeframe. This first cut has a far smaller volume that is typically used for this analysis, and we do not deem the indications to be fully credible. We observe that the significantly greater volume of usable reporting in the most recent year means that we will have available a much more credible version of this review when we next perform an experience review in one year's time.

The second cut of data includes a much greater volume of data over a full five years, but excludes all vehicles older than the 10th preceding model year. This second cut is much more stable than the first, but likely expresses a significant bias that we are not able to quantify.

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DESCRIPTION  
OF DATA

Subject to the unique limitations described immediately above, two measures of the average vehicle value factors (VVF) for Comprehensive and Collision are displayed on the following exhibits. See the calculations in **Exhibits C12-C13**. The data is displayed by coverage. To determine the historical average trend for VVF, 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 vehicle value factors. Based on the results of these curves, and mindful of the data limitations discussed above, ISO has selected annual VVF trends of 1.5% and 2.5% for Trucks, Tractors & Trailers OTC and Collision coverages respectively. For Private Passenger Types, VVF trends of 2.2% and 1.0% 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, Private Passenger Types, and Auto Dealers Liability, the incurred losses and allocated loss adjustment expenses underlying the statewide loss cost level indications are on an accident year basis and were evaluated as of March 31, 2022. In other words, accident year ended December 31, 2021 includes all losses and allocated loss adjustment expenses paid through March 31, 2022 on accidents occurring from January 1, 2021 to December 31, 2021 and all losses and allocated loss adjustment expenses outstanding on these accidents as of March 31, 2022, 15 months after the inception of the accident year. Similarly, the incurred losses and allocated loss adjustment expenses for accident year ended December 31, 2020 include all loss and loss adjustment expenses paid through March 31, 2022 on accidents occurring from January 1, 2020 to December 31, 2020 and all losses and allocated loss adjustment expenses outstanding on these accidents as of March 31, 2022, 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. See the calculations in **Exhibits C14-C16**.

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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, Private Passenger Types, and Auto Dealers 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.

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, Private Passenger Types, and Auto Dealers 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.

AUTO DEALERS

For the Auto Dealers Bodily Injury coverage, development is based upon \$100,000 CSL multistate tort or no-fault data. For the Auto Dealers Property Damage coverage, basic limits multistate experience is used.

## LOSS DEVELOPMENT FOR PHYSICAL DAMAGE

---

OBJECTIVE	The application of loss development recognizes the important concept that some of the losses for a particular accident year have not been finally determined at the time the experience is compiled.
DESCRIPTION OF EXPERIENCE PERIOD DATA	For Physical Damage, paid losses underlying the statewide loss cost level indications are on an accident year basis and were evaluated as of March 31, 2022. In other words, accident year ended December 31, 2021 includes all losses paid through March 31, 2022 on accidents occurring from January 1, 2021 to December 31, 2021. Similarly, the paid losses for accident year ended December 31, 2020 include all losses paid through March 31, 2022 on accidents occurring from January 1, 2020 to December 31, 2020. 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. See the calculations in <b>Exhibits C17-C18</b> .
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

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OBJECTIVE	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.
METHODOLOGY	The standards for full credibility were determined from a credibility study using various size of loss distributions for liability, PIP, 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.
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 (<math>Z</math>), 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 <math>X</math> equals the full credibility standard, by line and coverage, as shown on the following pages of this section.</p>
YEAR WEIGHTS	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.

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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 PIP  
FLOWCHART TO DETERMINE  
YEAR WEIGHTS AND  
EXPERIENCE PERIOD CREDIBILITY

TRUCKS, TRACTORS, & TRAILERS AND PRIVATE PASSENGER TYPES

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  $\geq 3,000$ ,  
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  $\geq 350$ ,  
Then use 3 years of experience and assign 50/30/20 weights.
5. If 3 year Avg. claims  $< 350$ ,  
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 PIP FLOWCHART TO DETERMINE  
YEAR WEIGHTS AND  
EXPERIENCE PERIOD CREDIBILITY

AUTO DEALERS

- Step 1: Determine Number of Years to be used and Year Weights.
1. If Latest Year claims  $\geq 683$   
Assign 100% weight to latest year.
  - 2.A. If Latest Year claims  $< 683$   
Then add latest 2 years of claims and  
divide by 2 to determine the 2 year average.
    - B. If 2 year Avg. # of claims  $\geq 85\%$  of 683  
Then assign 85/15 weights.
  - 3.A. If 2 year Avg. # of claims  $< 85\%$  of 683  
then
    - B.1.a. Use 3 year Avg. # of claims.
      - b. If 3 year Avg. # of claims  $\geq 70\%$  of 683  
Then assign 70/20/10 weights.
      - c. If 3 year Avg. # of claims  $< 70\%$  but  $\geq 50\%$  of 683  
Then assign 50/30/20 weights.
    - B.2.a. If 3 year Avg. # of claims  $< 50\%$  of 683  
Sum 3 year total claims and determine the experience  
credibility.
      - b. If 3 year Experience Cred.  $\geq 50\%$   
Use 50/30/20.
      - c. If 3 year Experience Cred.  $< 50\%$   
Add a 4th Prior Year's claims to determine 4 year  
total of claims and determine the experience credibility.
      - d. If 4 year Experience Cred.  $\geq 50\%$   
Use of 40/30/20/10
      - e. If 4 year Experience Cred.  $< 50\%$   
Use 5 years of experience with 30/25/20/15/10 weights.
- Step 2: Determine Experience Period Credibility.  
Use the total # 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.

PERSONAL INJURY PROTECTION  
CREDIBILITY TABLES  
NUMBER OF CLAIMS

<u>Credibility</u>	<u>Trucks, Tractors &amp; Trailers and Private Pass Types</u>		<u>Credibility</u>	<u>Auto Dealers</u>	
*0.00	0	- 7	*0.00	0	- 6
0.05	8	- 29	0.10	7	- 27
0.10	30	- 67	0.20	28	- 61
0.15	68	- 119	0.30	62	- 109
0.20	120	- 187	0.40	110	- 170
0.25	188	- 269	0.50	171	- 245
0.30	270	- 367	0.60	246	- 334
0.35	368	- 479	0.70	335	- 437
0.40	480	- 607	0.80	438	- 553
0.45	608	- 749	0.90	554	- 682
0.50	750	- 907	1.00	>	682
0.55	908	- 1,079			
0.60	1,080	- 1,267			
0.65	1,268	- 1,469			
0.70	1,470	- 1,687			
0.75	1,688	- 1,919			
0.80	1,920	- 2,167			
0.85	2,168	- 2,429			
0.90	2,430	- 2,707			
0.95	2,708	- 2,999			
1.00	>	2,999			

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

Cred	Trucks, Tractors & Trailers			Private Passenger Types		
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

Cred	Trucks, Tractors & Trailers			Private Passenger Types		
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.

NORTH DAKOTA  
CLAIMS PER TERRITORY  
LIABILITY AND PIP

Territory	Trucks, Tractors & Trailers Incurred Claims 5 Years Ending 12/31/2021		Private Passenger Types Incurred Claims 5 Years Ending 12/31/2021	
	Combined BI and PD	PIP	Combined BI and PD	PIP
101	360	6	58	6
102	1,214	94	118	22
104	308	13	37	4
105	94	3	27	2
106	143	5	18	2
SW Total	2,119	121	258	36

Claims for Trend

BI	PD
<u>44</u>	<u>308</u>

NORTH DAKOTA  
CLAIMS PER TERRITORY  
PHYSICAL DAMAGE

Territory	Trucks, Tractors & Trailers Paid Claims 5 Years Ending 12/31/2021		Private Passenger Types Paid Claims 5 Years Ending 12/31/2021	
	OTC	Coll	OTC	Coll
101	432	285	141	85
102	2,329	1,096	326	134
104	425	196	74	42
105	106	72	55	42
106	186	93	46	25
SW Total	3,478	1,742	642	328

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  
NORTH DAKOTA

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	137,862	372,687	234,825	0.587	-0.132	-30,997	341,690
1988	60,672	420,454	359,782	0.169	0.286	102,898	523,352
1989	63,151	403,582	340,431	0.186	0.269	91,576	495,158
1990	160,441	864,625	704,184	0.228	0.227	159,850	1,024,475
1991	121,669	580,476	458,807	0.265	0.190	87,173	667,649
1992	49,679	428,407	378,728	0.131	0.324	122,708	551,115
1993	132,970	539,790	406,820	0.327	0.128	52,073	591,863
1994	330,332	890,969	560,637	0.589	-0.134	-75,125	815,844
1995	591,021	1,261,869	670,848	0.881	-0.426	-285,781	976,088
1996	262,014	964,390	702,376	0.373	0.082	57,595	1,021,985
1997	691,942	1,784,292	1,092,350	0.633	-0.178	-194,438	1,589,854
1998	164,724	1,077,355	912,631	0.180	0.275	250,974	1,328,329
1999	543,702	1,745,584	1,201,882	0.452	0.003	3,606	1,749,190
2000	1,135,062	2,329,953	1,194,891	0.950	-0.495	-591,471	1,738,482
2001	2,018,537	3,026,996	1,008,459	2.002	-1.547	-1,560,086	1,466,910
2002	271,776	919,757	647,981	0.419	0.036	23,327	943,084
2003	133,803	885,917	752,114	0.178	0.277	208,336	1,094,253
2004	78,522	744,189	665,667	0.118	0.337	224,330	968,519
2005	297,808	1,203,505	905,697	0.329	0.126	114,118	1,317,623
2006	51,084	612,831	561,747	0.091	0.364	204,476	817,307
2007	207,123	1,288,547	1,081,424	0.192	0.263	284,415	1,572,962
2008	179,154	1,264,818	1,085,664	0.165	0.290	314,843	1,579,661
2009	277,017	1,399,333	1,122,316	0.247	0.208	233,442	1,632,775
2010	625,236	1,537,484	912,248	0.685	-0.230	-209,817	1,327,667
2011	439,819	1,554,415	1,114,596	0.395	0.060	66,876	1,621,291
2012	265,310	1,740,618	1,475,308	0.180	0.275	405,710	2,146,328
2013	519,217	1,847,575	1,328,358	0.391	0.064	85,015	1,932,590
2014	1,059,665	2,560,967	1,501,302	0.706	-0.251	-376,827	2,184,140
2015	484,121	2,120,758	1,636,637	0.296	0.159	260,225	2,380,983
2016	2,441,496	4,386,189	1,944,693	1.255	-0.8	-1,555,754	2,830,435
2017	377,849	2,074,900	1,697,051	0.223	0.232	393,716	2,468,616
2018	1,051,437	2,924,064	1,872,627	0.561	-0.106	-198,498	2,725,566
2019	1,634,868	3,552,054	1,917,186	0.853	-0.398	-763,040	2,789,014
2020	577,463	2,509,395	1,931,932	0.299	0.156	301,381	2,810,776
2021	1,035,144	3,772,502	2,737,358	0.378	0.077	210,777	3,983,279

(8) NORMAL WIND TO NON W&W RATIO= AVG. (4) 0.455

INSURANCE SERVICES OFFICE, INC.

WIND AND WATER PROCEDURE  
OTHER THAN COLLISION  
NORTH DAKOTA

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	106,175	234,120	127,945	0.830	-0.358	-45,804	188,316
1988	53,977	168,743	114,766	0.470	0.002	230	168,973
1989	45,704	215,320	169,616	0.269	0.203	34,432	249,752
1990	38,411	180,005	141,594	0.271	0.201	28,460	208,465
1991	46,443	211,000	164,557	0.282	0.190	31,266	242,266
1992	19,926	170,033	150,107	0.133	0.339	50,886	220,919
1993	83,390	245,460	162,070	0.515	-0.043	-6,969	238,491
1994	173,612	366,090	192,478	0.902	-0.430	-82,766	283,324
1995	271,893	577,612	305,719	0.889	-0.417	-127,485	450,127
1996	126,207	444,405	318,198	0.397	0.075	23,865	468,270
1997	396,988	712,230	315,242	1.259	-0.787	-248,095	464,135
1998	73,290	343,501	270,211	0.271	0.201	54,312	397,813
1999	146,311	427,320	281,009	0.521	-0.049	-13,769	413,551
2000	272,895	664,733	391,838	0.696	-0.224	-87,772	576,961
2001	539,871	891,875	352,004	1.534	-1.062	-373,828	518,047
2002	68,214	347,209	278,995	0.244	0.228	63,611	410,820
2003	46,135	352,439	306,304	0.151	0.321	98,324	450,763
2004	28,422	245,741	217,319	0.131	0.341	74,106	319,847
2005	187,474	375,113	187,639	0.999	-0.527	-98,886	276,227
2006	24,866	229,493	204,627	0.122	0.350	71,619	301,112
2007	109,405	311,451	202,046	0.541	-0.069	-13,941	297,510
2008	76,092	267,555	191,463	0.397	0.075	14,360	281,915
2009	26,150	198,219	172,069	0.152	0.320	55,062	253,281
2010	82,454	302,204	219,750	0.375	0.097	21,316	323,520
2011	36,585	141,055	104,470	0.350	0.122	12,745	153,800
2012	19,573	193,296	173,723	0.113	0.359	62,367	255,663
2013	48,608	241,566	192,958	0.252	0.220	42,451	284,017
2014	68,269	242,874	174,605	0.391	0.081	14,143	257,017
2015	37,993	203,561	165,568	0.229	0.243	40,233	243,794
2016	209,355	509,856	300,501	0.697	-0.225	-67,613	442,243
2017	29,125	264,296	235,171	0.124	0.348	81,840	346,136
2018	66,312	319,146	252,834	0.262	0.21	53,095	372,241
2019	231,380	444,641	213,261	1.085	-0.613	-130,729	313,912
2020	43,291	338,372	295,081	0.147	0.325	95,901	434,273
2021	112,165	334,728	222,563	0.504	-0.032	-7,122	327,606

(8) NORMAL WIND TO NON W&W RATIO= AVG. (4) 0.472

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).

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COLUMN (2)  
OTC TOTAL  
LOSSES

Dollar amount of Other Than Collision losses resulting from all perils.

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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. Column (2) - Column (1).

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COLUMN (4)  
WIND AND WATER  
TO NON-WIND AND  
WATER RATIO

Ratio of Wind and Water losses to Non-Wind and Water losses.  
Column (1) ÷ Column (3)

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COLUMN (5)  
VARIATION FROM  
AVERAGE WIND  
RATIO

Variation from the long term average Wind and Water to non-Wind and Water ratio.  
Avg (4) - Column (4).

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COLUMN (6)  
WIND AND WATER  
ADJUSTMENT

Wind and Water loss adjustment to bring experience to average Wind and Water level.  
Column (3) \* Column (5).

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COLUMN (7)  
ADJUSTED OTC  
TOTAL LOSSES

Column (2) + Column (6).

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TERRITORIAL WIND AND WATER PROCEDURE  
OTHER THAN COLLISION

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OBJECTIVE

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

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DESCRIPTION OF  
TERRITORIAL WIND  
AND WATER  
PROCEDURE

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

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

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

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

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

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

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

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

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

Territory	(1) Long-Term Capped* Ratio of Wind & Water to Non-Wind & Water Losses	(2) Non-Wind & Water Losses for Latest Five Years	(3) 'Expected' Wind & Water Losses for Latest Five Years (1) x (2)	(4) 'Expected' Wind & Water Distribution (3) / Total (3)
A	.250	500,000	125,000	.500
B	.750	100,000	75,000	.300
C	.200	250,000	50,000	.200
Territory	(5) Statewide Wind Provision for Year 20XX **	(6) Territory Wind Provision for Year 20XX (4) x (5)	(7) Non-Wind & Water Losses for Year 20XX	(8) Adjusted Total Losses for Year 20XX (6) + (7)
A		50,000	150,000	200,000
B		30,000	50,000	80,000
C		20,000	80,000	100,000
	100,000			
Territory	(9) Non-Wind & Water Claims for Year 20XX	(10) Five-Year Average Wind & Water Claim Cost	(11) Adjusted Wind & Water Claims for Year 20XX (6) / (10)	(12) Total Adjusted Claims for Year 20XX (9) + (11)
A	200	500	100	300
B	100	400	75	175
C	150	400	50	200

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

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

## OVERVIEW OF ISO ACTUARIAL PROCEDURES – COMMERCIAL AUTOMOBILE

### PHYSICAL DAMAGE LOSS COSTS FOR RULE 290. - HIRED AUTOS

---

OBJECTIVE	The objective of this procedure is to determine the indicated advisory prospective physical damage loss costs for Rule 290. - Hired Autos. Advisory prospective physical damage loss costs for additional deductible amounts are also being introduced.
STEP 1: DETERMINATION OF MULTISTATE LOSS COST INDICATION	The first step in this process is the determination of the multistate loss cost indications for Hired Autos OTC and Collision. 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 exhibit labeled "Determination of Statewide Advisory Loss Cost Level Change." See the calculations in <b>Exhibit D1</b> .
STEP 2: CALCULATION OF DEDUCTIBLE DISCOUNT FACTORS	In order to examine the relationship between the loss costs by deductible, we calculated deductible discount factors. This analysis also allows us to introduce loss costs for additional deductibles of \$250, \$500, \$1000, \$2000, \$3000, and \$5000 for OTC and \$2000, \$3000, and \$5000 for Collision.
STEP 3: REVISED MULTISTATE BASE LOSS COSTS	The multistate OTC and Collision loss costs appearing in this section are calculated by multiplying the current multistate base loss cost by the filed change (from <b>Exhibit D1</b> ) and by an off-balance factor. The Deductible Discount Factor changes in this filing will be introduced on a "revenue neutral" basis. That is, an off-balance factor (OBF) will be applied to the base loss costs so that, on average, there is no change to the aggregate loss costs. The off-balance factors are calculated on <b>Exhibit D7</b> . See the calculation of the revised multistate base loss costs in <b>Exhibit D8</b> .

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STEP 4:  
REVISED  
LOSS COSTS BY  
DEDUCTIBLE

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The revised indicated OTC and Collision loss costs by deductible are determined by multiplying the revised multistate base loss cost (**Exhibit D8**) by one minus the appropriate deductible discount factor (**Exhibit D6**).

For specified perils, the revised loss cost was determined by multiplying the current loss cost by the OTC filed change from **Exhibit D1**.

The OTC full coverage loss cost was selected to be higher than the OTC \$50 deductible loss cost. For all other deductibles, the selected loss cost is the same as the indicated loss cost.

The OTC loss costs are appropriate for deductibles applicable to All Perils. Loss costs for deductibles applicable to Theft, Mischief and Vandalism Only are refer to company.

See **Exhibit D9** for the revised loss costs.

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EXPERIENCE  
PERIOD DATA

The review is being conducted on a multistate basis and the data is aggregated on an accident year basis.

The incurred losses and allocated loss adjustment expenses are on an accident year basis and were evaluated as of June 30, 2021. In other words, accident year ended March 31, 2021 includes all losses and allocated loss adjustment expenses paid through June 30, 2021 on accidents occurring from April 1, 2020 to March 31, 2021 and all losses and allocated loss adjustment expenses outstanding on these accidents as of June 30, 2021, 15 months after the inception of the accident year. Similarly, the incurred losses and allocated loss adjustment expenses for accident year ended March 31, 2020 include all loss and loss adjustment expenses paid through June 30, 2021 on accidents occurring from April 1, 2019 to March 31, 2020 and all losses and allocated loss adjustment expenses outstanding on these accidents as of June 30, 2021, 27 months after the inception of the accident year.

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## OVERVIEW OF ISO ACTUARIAL PROCEDURES – COMMERCIAL AUTOMOBILE

### STEP 1 - DETERMINATION OF MULTISTATE ADVISORY LOSS COST LEVEL CHANGE

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OBJECTIVE	<p>The objective of this procedure is to determine the indicated multistate advisory loss cost level change for Hired Autos OTC and Collision. 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 exhibit labeled "Determination of Statewide Advisory Loss Cost Level Change." See the calculations in <b>Exhibit D1</b>.</p>
DESCRIPTION	<p>This procedure compares the developed incurred losses and allocated loss adjustment expenses with the aggregate loss costs.</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 dividing the annual cost of hire by one hundred and multiplying the result by the current loss cost for the coverage and deductible.</p>
INCURRED LOSSES & LAE (Item 2)	<p>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.</p> <p>For the physical damage coverages, the reported paid (accident year) losses are subject to the following adjustments:</p> <ul style="list-style-type: none"><li>• Developed to an ultimate settlement basis by the application of loss development factors (see <b>Exhibit D2</b>);</li><li>• Loaded for all loss adjustment expenses (see Section C);</li><li>• Placed on the prospective cost/frequency levels by the application of trend factors (see <b>Exhibits D3 and D4</b>).</li></ul>
EXPERIENCE RATIO (Item 3)	<p>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 experience period.</p>

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## OVERVIEW OF ISO ACTUARIAL PROCEDURES – COMMERCIAL AUTOMOBILE

### STEP 2 - CALCULATION OF DEDUCTIBLE DISCOUNTS FACTORS

In order to examine the relationship between the loss costs by deductible, we calculated deductible discount factors. This analysis also allows us to introduce loss costs for additional deductibles of \$250, \$500, \$1000, \$2000, \$3000, and \$5000 for OTC and \$2000, \$3000, and \$5000 for Collision.

We begin developing Deductible Discount Factors by restating each claim in our database at higher deductible amounts and summarizing the results in a traditional deductible triangle. The rows contain loss data originally written at a given deductible amount, and the columns indicate to what deductible amount the data has been adjusted.

Following each deductible triangle is a Relative Loss Ratio triangle comparing adjacent deductible amounts. A weighted average of these values is developed, and they are accumulated to produce a Relative Loss Level curve showing the impact of deductible amount. The deductible and Relative Loss Ratio triangles are shown in **Exhibit D5**.

To derive the indicated percentage discounts, we divide the relative loss level for each deductible by the relative loss level for the base deductible and subtract the result from one. The base deductibles are \$100 for OTC and \$500 for Collision. The indicated percentage discounts are shown in **Exhibit D6**.

VERISK

NORTH DAKOTA  
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	\$ 7,882,345	6.1%
Personal Injury Protection	389,246	-15.0%
Combined	8,271,591	5.1%
Physical Damage		
Other Than Collision	4,000,170	6.5%
Collision	3,371,322	21.1%
Combined	7,371,492	13.2%
Total Trucks, Tractors & Trailers	15,643,083	8.9%
<b>PRIVATE PASSENGER TYPES</b>		
Liability		
Single Limit Liability	580,817	6.5%
Personal Injury Protection	53,052	N.C.
Combined	633,869	6.0%
Physical Damage		
Other Than Collision	413,885	6.3%
Collision	329,399	7.1%
Combined	743,284	6.7%
Total Private Passenger Types	1,377,153	6.3%
<b>AUTO DEALERS</b>		
Liability		
Single Limit Liability	302,030	24.8%
Personal Injury Protection	33,208	-10.0%
Combined	335,238	21.4%
Total Auto Dealers	335,238	21.4%
<b>HIRED AUTOS</b>		
Physical Damage		
Other Than Collision	3,677	37.8%
Collision	9,757	164.3%
Combined	13,434	129.7%
Total Hired Autos	13,434	129.7%
<b>GRAND TOTAL ALL COVERAGES</b>	<b>17,368,908</b>	<b>9.0%</b>
TOTAL LIABILITY	9,240,698	5.8%
TOTAL PHYSICAL DAMAGE	8,128,210	12.8%

(A) An implementation date of 07/01/2023 is assumed for purposes of trending.

(B) Accident Year ending 12/31/2021 Aggregate Loss Cost at Current Level for all coverages. The Liability loss costs are on a Total Limits basis.

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

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

VERISK

NORTH DAKOTA  
 COMMERCIAL AUTOMOBILE INSURANCE  
 REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
 TERRITORY LOSS COST LEVEL CHANGES  
 FOR TRUCKS, TRACTORS, AND TRAILERS POLICY COVERAGES

Territory	\$100,000 CSL	
Code	Liability	PIP <sup>(a)</sup>
101	4.4%	-15.4%
102	5.7%	-16.7%
104	8.9%	-14.3%
105	4.7%	-15.0%
106	8.1%	-14.3%

(a) For Trucks, Tractors and Trailers PIP, -15.0% was selected to better reflect the favorable state experience.

VERISK

NORTH DAKOTA  
 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	
101	11.6%	15.2%	12.7%
102	6.7%	23.4%	6.8%
104	2.9%	15.7%	2.2%
105	4.5%	17.1%	3.3%
106	6.6%	19.0%	7.3%

VERISK

NORTH DAKOTA  
COMMERCIAL AUTOMOBILE INSURANCE  
REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY  
FOR TRUCKS, TRACTORS, AND TRAILERS POLICY COVERAGES

Territory Code	Liability \$100,000 CSL	PIP	Physical Damage		Specified Causes of Loss <sup>(d)</sup>
			Comprehensive <sup>(b)</sup>	Collision <sup>(c)</sup>	
101	165	11	154	258	89
102	112	10	191	253	110
104	196	12	247	273	142
105	134	17	162	240	93
106	160	12	178	276	103

(a) Comprehensive base loss cost is the \$25,000-29,999 OCN, age 1, \$500 deductible loss cost.

(b) Collision base loss cost is the \$25,000-29,999 OCN, age 1, \$500 deductible loss cost.

(c) The loss costs for Specified Causes of Loss have been calculated by a relativity of 0.576 to the Trucks, Tractors, and Trailers Comprehensive base loss costs.

VERISK

NORTH DAKOTA  
 COMMERCIAL AUTOMOBILE INSURANCE  
 REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
 TERRITORY LOSS COST LEVEL CHANGES  
 FOR PRIVATE PASSENGER TYPES POLICY COVERAGES

Territory	\$100,000 CSL	
Code	Liability	PIP <sup>(a)</sup>
101	5.5%	
102	6.7%	
104	7.6%	
105	7.1%	
106	6.5%	

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

VERISK

NORTH DAKOTA  
 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		Specified Causes of Loss
	Comprehensive	Collision	
101	6.3%	7.1%	6.4%
102	6.8%	5.9%	7.3%
104	4.5%	5.6%	4.8%
105	6.4%	17.6%	6.0%
106	8.7%	8.2%	8.3%

VERISK

NORTH DAKOTA  
COMMERCIAL AUTOMOBILE INSURANCE  
REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY

FOR PRIVATE PASSENGER TYPES POLICY COVERAGES

Territory	Liability		Physical Damage		Specified Causes
Code	\$100,000 CSL	PIP	Comprehensive <sup>(b)</sup>	Collision <sup>(c)</sup>	of Loss <sup>(d)</sup>
101	229	25	201	255	116
102	111	24	281	268	162
104	185	26	305	265	176
105	121	19	216	241	124
106	131	20	226	303	130

(a) Comprehensive base loss cost is the \$25,000-29,999 OCN, age 1, \$500 deductible loss cost.

(b) Collision base loss cost is the \$25,000-29,999 OCN, age 1, \$500 deductible loss cost.

(c) The loss costs for Specified Causes of Loss have been calculated by a relativity of 0.576 to the Private Passenger Types Comprehensive base loss costs.

VERISK

NORTH DAKOTA  
 COMMERCIAL AUTOMOBILE INSURANCE  
 REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
 TERRITORY LOSS COST LEVEL CHANGES  
 FOR AUTO DEALERS POLICY COVERAGES

Territory	\$100,000 CSL	
Code	Liability	PIP <sup>(a)</sup>
101	11.2%	-11.5%
102	28.4%	-12.5%
104	23.5%	-3.8%
105	15.8%	-7.9%
106	24.1%	-3.8%

(a) For Auto Dealers PIP, -10.0% was selected to better reflect the favorable state experience.

VERISK

NORTH DAKOTA  
COMMERCIAL AUTOMOBILE INSURANCE  
—  
REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY  
FOR AUTO DEALERS POLICY COVERAGES

Territory	Liability	
Code	\$100,000 CSL	PIP
101	398	23
102	271	21
104	473	25
105	323	35
106	386	25

VERISK

NORTH DAKOTA  
 COMMERCIAL AUTOMOBILE INSURANCE  
 REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
 TERRITORY LOSS COST LEVEL CHANGES  
 FOR VAN POOLS POLICY COVERAGES

Territory	\$100,000 CSL	
Code	Liability	PIP <sup>(a)</sup>
101	4.7%	-11.1%
102	5.0%	-22.2%
104	8.8%	-10.0%
105	4.1%	-14.3%
106	7.8%	-10.0%

(a) For Trucks, Tractors and Trailers PIP, -15.0% was selected to better reflect the favorable state experience.

VERISK

NORTH DAKOTA  
 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
	Comprehensive	Collision	of Loss
101	11.4%	15.3%	12.5%
102	6.6%	23.4%	6.4%
104	2.7%	15.6%	2.4%
105	4.2%	17.1%	2.9%
106	6.7%	19.0%	7.5%

VERISK

NORTH DAKOTA  
COMMERCIAL AUTOMOBILE INSURANCE  
REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY  
FOR VAN POOLS POLICY COVERAGES

Territory Code	Liability	PIP <sup>(b)</sup>	Physical Damage		Specified Causes of Loss <sup>(e)</sup>
	\$100,000 CSL <sup>(a)</sup>		Comprehensive <sup>(c)</sup>	Collision <sup>(d)</sup>	
101	157	8	234	581	135
102	106	7	290	569	167
104	186	9	375	614	216
105	127	12	246	540	141
106	152	9	271	621	157

- (a) The loss costs for Van Pools were calculated by a relativity of 0.95 to the Trucks, Tractors, and Trailers CSL Liability loss costs.
- (b) The loss costs for PIP have been calculated by a relativity of 0.72 to the Trucks, Tractors, and Trailers PIP loss costs.
- (c) Comprehensive base loss cost is the \$25,000-29,999 OCN, age 1, \$500 deductible loss cost and was calculated by a relativity of 1.52 to the Trucks, Tractors, and Trailers loss cost.
- (d) Collision base loss cost is the \$25,000-29,999 OCN, age 1, \$500 deductible loss cost, and has been calculated by a relativity of 2.25 to the Trucks, Tractors, and Trailers loss cost.
- (e) The loss costs for Specified Causes of Loss were calculated by a relativity of 1.52 to the Trucks, Tractors, and Trailers Specified Causes of Loss loss costs.

VERISK

NORTH DAKOTA  
 COMMERCIAL AUTOMOBILE INSURANCE  
 REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
 TERRITORY LOSS COST LEVEL CHANGES  
 FOR TAXIS AND LIMOUSINES POLICY COVERAGES

Territory	\$100,000 CSL	
Code	Liability	PIP <sup>(a)</sup>
101	4.4%	-14.3%
102	5.6%	-16.9%
104	8.8%	-14.5%
105	4.7%	-14.8%
106	8.1%	-14.5%

(a) For Trucks, Tractors and Trailers PIP, -15.0% was selected to better reflect the favorable state experience.

VERISK

NORTH DAKOTA  
 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	
101	11.4%	15.3%	12.5%
102	6.6%	23.4%	6.4%
104	2.7%	15.6%	2.4%
105	4.2%	17.1%	2.9%
106	6.7%	19.0%	7.5%

VERISK

NORTH DAKOTA  
COMMERCIAL AUTOMOBILE INSURANCE  
REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY

FOR TAXIS AND LIMOUSINES POLICY COVERAGES

Territory Code	Liability	PIP <sup>(b)</sup>	Physical Damage		Specified Causes of Loss <sup>(e)</sup>
	\$100,000 CSL <sup>(a)</sup>		Comprehensive <sup>(c)</sup>	Collision <sup>(d)</sup>	
101	663	60	234	581	135
102	450	54	290	569	167
104	788	65	375	614	216
105	539	92	246	540	141
106	643	65	271	621	157

- (a) The loss costs for Taxis and Limousines were calculated by a relativity of 4.02 to the Trucks, Tractors, and Trailers CSL Liability loss costs.
- (b) The loss costs for PIP have been calculated by a relativity of 5.41 to the Trucks, Tractors, and Trailers PIP loss costs.
- (c) Comprehensive base loss cost is the \$25,000-29,999 OCN, age 1, \$500 deductible loss cost and was calculated by a relativity of 1.52 to the Trucks, Tractors, and Trailers loss cost.
- (d) Collision base loss cost is the \$25,000-29,999 OCN, age 1, \$500 deductible loss cost, and has been calculated by a relativity of 2.25 to the Trucks, Tractors, and Trailers loss cost.
- (e) The loss costs for Specified Causes of Loss were calculated by a relativity of 1.52 to the Trucks, Tractors, and Trailers Specified Causes of Loss loss costs.

VERISK

NORTH DAKOTA  
 COMMERCIAL AUTOMOBILE INSURANCE  
 REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
 TERRITORY LOSS COST LEVEL CHANGES  
 FOR SCHOOL AND CHURCH BUSES POLICY COVERAGES

Territory	\$100,000 CSL	
Code	Liability	PIP <sup>(a)</sup>
101	5.0%	-22.2%
102	7.5%	-12.5%
104	8.8%	-11.1%
105	4.1%	-15.4%
106	8.9%	-11.1%

(a) For Trucks, Tractors and Trailers PIP, -15.0% was selected to better reflect the favorable state experience.

VERISK

NORTH DAKOTA  
 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	
101	11.7%	15.6%	13.0%
102	6.6%	23.3%	7.1%
104	3.1%	15.4%	2.1%
105	4.8%	17.1%	3.3%
106	6.1%	19.2%	7.7%

VERISK

NORTH DAKOTA  
COMMERCIAL AUTOMOBILE INSURANCE  
REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY

FOR SCHOOL AND CHURCH BUSES POLICY COVERAGES

Territory Code	Liability	PIP <sup>(b)</sup>	Physical Damage		Specified Causes of Loss <sup>(e)</sup>
	\$100,000 CSL <sup>(a)</sup>		Comprehensive <sup>(c)</sup>	Collision <sup>(d)</sup>	
101	63	7	105	163	61
102	43	7	130	159	75
104	74	8	168	172	97
105	51	11	110	151	63
106	61	8	121	174	70

- (a) The loss costs for School and Church Buses were calculated by a relativity of 0.38 to the Trucks, Tractors, and Trailers CSL Liability loss costs.
- (b) The loss costs for PIP have been calculated by a relativity of 0.66 to the Trucks, Tractors, and Trailers PIP loss costs.
- (c) Comprehensive base loss cost is the \$25,000-29,999 OCN, age 1, \$500 deductible loss cost and was calculated by a relativity of 0.68 to the Trucks, Tractors, and Trailers loss cost.
- (d) Collision base loss cost is the \$25,000-29,999 OCN, age 1, \$500 deductible loss cost, and has been calculated by a relativity of 0.63 to the Trucks, Tractors, and Trailers loss cost.
- (e) The loss costs for Specified Causes of Loss were calculated by a relativity of 0.68 to the Trucks, Tractors, and Trailers Specified Causes of Loss loss costs.

VERISK

NORTH DAKOTA  
 COMMERCIAL AUTOMOBILE INSURANCE  
 REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
 TERRITORY LOSS COST LEVEL CHANGES  
 FOR ALL OTHER BUSES POLICY COVERAGES

Territory	\$100,000 CSL	
Code	Liability	PIP <sup>(a)</sup>
101	4.4%	-15.9%
102	5.7%	-17.1%
104	8.8%	-13.6%
105	4.7%	-15.1%
106	8.1%	-13.6%

(a) For Trucks, Tractors and Trailers PIP, -15.0% was selected to better reflect the favorable state experience.

VERISK

NORTH DAKOTA  
 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
	Comprehensive	Collision	of Loss
101	11.7%	15.6%	13.0%
102	6.6%	23.3%	7.1%
104	3.1%	15.4%	2.1%
105	4.8%	17.1%	3.3%
106	6.1%	19.2%	7.7%

VERISK

NORTH DAKOTA  
COMMERCIAL AUTOMOBILE INSURANCE  
REVISED PROSPECTIVE LOSS COSTS AND PERCENTAGE CHANGES  
REVISED BASE LOSS COSTS BY TERRITORY  
FOR ALL OTHER BUSES POLICY COVERAGES

Territory Code	Liability	PIP <sup>(b)</sup>	Physical Damage		Specified Causes of Loss <sup>(e)</sup>
	\$100,000 CSL <sup>(a)</sup>		Comprehensive <sup>(c)</sup>	Collision <sup>(d)</sup>	
101	521	69	105	163	61
102	354	63	130	159	75
104	619	76	168	172	97
105	423	107	110	151	63
106	506	76	121	174	70

- (a) The loss costs for All Other Buses were calculated by a relativity of 3.16 to the Trucks, Tractors, and Trailers CSL Liability loss costs.
- (b) The loss costs for PIP have been calculated by a relativity of 6.30 to the Trucks, Tractors, and Trailers PIP loss costs.
- (c) Comprehensive base loss cost is the \$25,000-29,999 OCN, age 1, \$500 deductible loss cost and was calculated by a relativity of 0.68 to the Trucks, Tractors, and Trailers loss cost.
- (d) Collision base loss cost is the \$25,000-29,999 OCN, age 1, \$500 deductible loss cost, and has been calculated by a relativity of 0.63 to the Trucks, Tractors, and Trailers loss cost.
- (e) The loss costs for Specified Causes of Loss were calculated by a relativity of 0.68 to the Trucks, Tractors, and Trailers Specified Causes of Loss loss costs.

## VERISK

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

	(1)	(2)	(3)	(4)	(5)
ACCIDENT YEAR ENDING	AGGREGATE LOSS COST AT CURRENT LEVEL (B)	\$100,000 INCURRED LOSSES (C)	EXPERIENCE RATIO (2) / (1)	ACCIDENT YEAR WEIGHTS	NUMBER OF INCURRED CLAIMS
12/31/17	\$5,549,737	\$6,629,635	1.195	10%	472
12/31/18	\$5,406,233	\$7,622,355	1.410	15%	505
12/31/19	\$5,350,991	\$7,234,097	1.352	20%	519
12/31/20	\$5,132,303	\$4,202,208	0.819	25%	322
12/31/21	\$4,841,735	\$3,749,491	0.774	30%	301

(6) AVERAGE EXPERIENCE RATIO (SUM OF (3)\*(4)). 1.039

(7) EXPECTED EXPERIENCE RATIO (D). 1.075

(8) CREDIBILITY (E). 0.40

(9) CREDIBILITY WEIGHTED EXPERIENCE RATIO:  
 ( (6) \* (8) ) + ( (7) \* (1.000- (8)) ). 1.061

(10) INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ). 6.1%

(11) FILED CHANGE. 6.1%

(A) TRUCK, TRACTOR, AND TRAILER EXPERIENCE IS FOR VEHICLES WRITTEN IN ACCORDANCE WITH RULE 222 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, DIVIDED BY THE PREMIUM TREND FACTOR, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 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 1.000 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).

VERISK

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

	ACC. YEAR ENDING	BODILY INJURY	PROPERTY DAMAGE	COMBINED
(1) INCURRED LOSSES AND	12/31/17	\$1,410,348	\$2,154,985	
ALLOCATED LOSS	12/31/18	\$1,975,388	\$2,421,278	
ADJUSTMENT EXPENSES	12/31/19	\$1,593,930	\$2,784,083	
	12/31/20	\$673,515	\$1,965,474	
	12/31/21	\$790,093	\$1,682,571	
(2) DEVELOPED LOSSES AND	12/31/17	\$1,534,727	\$2,375,224	
ALL LOSS ADJUSTMENT	12/31/18	\$2,193,984	\$2,671,396	
EXPENSES (A)	12/31/19	\$1,879,467	\$3,077,804	
	12/31/20	\$898,664	\$2,194,452	
	12/31/21	\$1,033,924	\$1,952,624	
(3) SELECTED ANNUAL LOSS				
TREND (SEE TREND		7.1%	8.3%	7.9%
EXHIBIT IN SECTION C)				
(4) TRENDED LOSSES AND	12/31/17	\$2,480,119	\$4,149,516	\$6,629,635
ALL LOSS ADJUSTMENT	12/31/18	\$3,310,722	\$4,311,633	\$7,622,355
EXPENSES (B)	12/31/19	\$2,648,169	\$4,585,928	\$7,234,097
	12/31/20	\$1,182,642	\$3,019,566	\$4,202,208
	12/31/21	\$1,269,659	\$2,479,832	\$3,749,491

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

1 - UNALLOCATED LOSS ADJUSTMENT FACTORS:                    B. I. 1.070                    P. D. 1.100  
2 - LOSS DEVELOPMENT FACTORS:

YEAR ENDING	B. I.	P. D.
12/31/17	1.017	1.002
12/31/18	1.038	1.003
12/31/19	1.102	1.005
12/31/20	1.247	1.015
12/31/21	1.223	1.055

(B) TRENDED LOSSES ARE EQUAL TO (2) \* ( (1.0 + (3)) \*\* N), WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD
12/31/17	7/1/17	7.000
12/31/18	7/1/18	6.000
12/31/19	7/1/19	5.000
12/31/20	7/1/20	4.000
12/31/21	7/1/21	3.000

VERISK

NORTH DAKOTA  
TRUCKS, TRACTORS, AND TRAILERS  
AUTOMOBILE LIABILITY INSURANCE  
DETERMINATION OF LIABILITY TRENDED AGGREGATE LOSS COSTS

	ACC. YEAR ENDING	AGGREGATE LOSS COSTS
(1) AGGREGATE LOSS COSTS	12/31/17	\$5,398,577
AT CURRENT LEVEL	12/31/18	\$5,279,524
	12/31/19	\$5,246,070
	12/31/20	\$5,051,479
	12/31/21	\$4,784,323
(2) SELECTED ANNUAL PREMIUM		
TREND (SEE TREND		0.4%
EXHIBIT IN SECTION C)		
(3) TRENDED AGGREGATE	12/31/17	\$5,549,737
LOSS COSTS AT	12/31/18	\$5,406,233
CURRENT LEVEL (A)	12/31/19	\$5,350,991
	12/31/20	\$5,132,303
	12/31/21	\$4,841,735

(A) TRENDED AGGREGATE LOSS COSTS ARE EQUAL TO (1) \* ((1.0 + (2)) \*\* N),  
WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF  
WRITING TO SIX MONTHS BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF  
07/01/23 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDED.

YEAR ENDING	AVERAGE DATE OF WRITING	PROJECTION PERIOD
12/31/17	1/1/17	7.000
12/31/18	1/1/18	6.000
12/31/19	1/1/19	5.000
12/31/20	1/1/20	4.000
12/31/21	1/1/21	3.000

## VERISK

NORTH DAKOTA  
 AUTOMOBILE LIABILITY INSURANCE - TRUCKS, TRACTORS, AND TRAILERS (A)  
 DETERMINATION OF STATEWIDE ADVISORY LOSS COST LEVEL CHANGES  
 PERSONAL INJURY PROTECTION

ACCIDENT YEAR ENDING	(1) AGGREGATE LOSS COST AT CURRENT LEVEL (B)	(2) INCURRED LOSSES (C)	(3) EXPERIENCE RATIO (2) / (1)	(4) ACCIDENT YEAR WEIGHTS	(5) NUMBER OF INCURRED CLAIMS
12/31/17	\$408,319	\$283,768	0.695	10%	32
12/31/18	\$403,941	\$216,872	0.537	15%	21
12/31/19	\$406,829	\$306,205	0.753	20%	31
12/31/20	\$397,646	\$271,246	0.682	25%	20
12/31/21	\$389,246	\$72,926	0.187	30%	17
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).				0.529
(7)	EXPECTED EXPERIENCE RATIO (D).				1.031
(8)	CREDIBILITY (E).				0.20
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000- (8)) ).				0.931
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).				-6.9%
(11)	FILED CHANGE.				-15.0%
(A)	TRUCK, TRACTOR, AND TRAILER EXPERIENCE IS FOR VEHICLES WRITTEN IN ACCORDANCE WITH RULE 222 OF THE COMMERCIAL LINES MANUAL, DIVISION 1, AUTOMOBILE, ELIGIBLE FOR FIRST PARTY COVERAGE.				
(B)	THE AGGREGATE LOSS COST AT CURRENT LEVEL IS CALCULATED BY EXTENDING EXPOSURES BY THE CURRENT LOSS COSTS FROM THE LAST REVISION.				
(C)	LOSSES INCLUDE ALL LOSS ADJUSTMENT EXPENSES FOR PERSONAL INJURY PROTECTION. SEE FOLLOWING PAGE.				
(D)	EXPECTED EXPERIENCE RATIO IS EQUAL TO THE TREND FACTOR SHOWN ON THE FOLLOWING PAGE, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 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 1.000 YEAR(S).				
(E)	CREDIBILITY IS BASED ON A 5 YEAR TOTAL OF CLAIMS FOR PIP SHOWN IN COLUMN (5). THE STANDARD FOR FULL CREDIBILITY IS 3,000 CLAIMS (SEE CREDIBILITY TABLES IN SECTION C).				

VERISK

NORTH DAKOTA  
TRUCKS, TRACTORS, AND TRAILERS  
AUTOMOBILE LIABILITY INSURANCE  
DETERMINATION OF PERSONAL INJURY PROTECTION LOSSES

	ACC. YEAR ENDING	PIP
(1) INCURRED LOSSES AND	12/31/17	\$214,220
ALLOCATED LOSS	12/31/18	\$168,763
ADJUSTMENT EXPENSES	12/31/19	\$245,397
	12/31/20	\$228,449
	12/31/21	\$71,150
(2) DEVELOPED LOSSES AND	12/31/17	\$229,215
ALL LOSS ADJUSTMENT	12/31/18	\$180,576
EXPENSES (A)	12/31/19	\$262,837
	12/31/20	\$240,041
	12/31/21	\$66,538
(3) SELECTED ANNUAL LOSS		
TREND (SEE TREND		3.1%
EXHIBIT IN SECTION C)		
(4) TRENDED LOSSES AND	12/31/17	\$283,768
ALL LOSS ADJUSTMENT	12/31/18	\$216,872
EXPENSES (B)	12/31/19	\$306,205
	12/31/20	\$271,246
	12/31/21	\$72,926

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

1 - UNALLOCATED LOSS ADJUSTMENT FACTORS: 1.070  
2 - LOSS DEVELOPMENT FACTORS:

YEAR ENDING	PIP
12/31/17	1.000
12/31/18	1.000
12/31/19	1.001
12/31/20	0.982
12/31/21	0.874

(B) TRENDED LOSSES ARE EQUAL TO (2) \* ( (1.0 + (3)) \*\* N), WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD
12/31/17	7/1/17	7.000
12/31/18	7/1/18	6.000
12/31/19	7/1/19	5.000
12/31/20	7/1/20	4.000
12/31/21	7/1/21	3.000

VERISK

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

COVERAGE	ACCIDENT YEAR ENDING	(1)	(2)	(3)	(4)	(5)	
		AGGREGATE LOSS COST AT CURRENT LEVEL (B)	INCURRED LOSSES (C)	EXPERIENCE RATIO (2) / (1)	ACCIDENT YEAR WEIGHTS	NUMBER OF PAID CLAIMS	
O.T.C.	12/31/17	\$4,750,037	\$4,195,462	0.883	10%	671	
	12/31/18	\$4,602,620	\$4,370,364	0.950	15%	658	
	12/31/19	\$4,453,251	\$4,221,038	0.948	20%	672	
	12/31/20	\$4,045,060	\$4,012,343	0.992	25%	675	
	12/31/21	\$4,000,170	\$5,505,558	1.376	30%	802	
COLL.	12/31/17	\$4,006,856	\$6,254,533	1.561	10%	435	
	12/31/18	\$4,003,255	\$6,259,733	1.564	15%	397	
	12/31/19	\$3,853,267	\$5,466,451	1.419	20%	390	
	12/31/20	\$3,386,148	\$3,674,880	1.085	25%	282	
	12/31/21	\$3,371,322	\$4,220,036	1.252	30%	238	
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3) * (4)).				O.T.C.	1.082	COLLISION 1.322
(7)	EXPECTED EXPERIENCE RATIO (D).					1.044	1.044
(8)	CREDIBILITY (E).					0.55	0.60
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000 - (8)) ).					1.065	1.211
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).					6.5%	21.1%
(11)	FILED CHANGE.					6.5%	21.1%
(A)	TRUCK, TRACTOR AND TRAILER EXPERIENCE IS FOR VEHICLES WRITTEN IN ACCORDANCE WITH RULE 222 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 VVF LEVEL BY THE APPLICATION OF VVF 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 VVF TREND FACTOR, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 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 1.000 YEAR(S).						
(E)	CREDIBILITY IS BASED ON A 5 YEAR TOTAL OF CLAIMS FOR O.T.C. AND A 5 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).						

VERISK

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

	ACC. YEAR ENDING	O.T.C	COLLISION
(1) PAID LOSSES	12/31/17	\$2,468,616	\$3,446,442
	12/31/18	\$2,725,566	\$3,690,597
	12/31/19	\$2,789,014	\$3,451,468
	12/31/20	\$2,810,776	\$2,500,635
	12/31/21	\$3,983,279	\$3,165,740
(2) DEVELOPED LOSSES AND	12/31/17	\$2,789,536	\$3,894,479
ALL LOSS ADJUSTMENT	12/31/18	\$3,079,890	\$4,170,375
EXPENSES (A)	12/31/19	\$3,154,737	\$3,896,259
	12/31/20	\$3,179,353	\$2,803,112
	12/31/21	\$4,622,635	\$3,444,927
(3) SELECTED ANNUAL LOSS TREND (SEE TREND EXHIBIT IN SECTION C)		6.0%	7.0%
(4) TRENDED LOSSES AND	12/31/17	\$4,195,462	\$6,254,533
ALL LOSS ADJUSTMENT	12/31/18	\$4,370,364	\$6,259,733
EXPENSES (B)	12/31/19	\$4,221,038	\$5,466,451
	12/31/20	\$4,012,343	\$3,674,880
	12/31/21	\$5,505,558	\$4,220,036

(A) PAID LOSSES ARE ADJUSTED BY THE FOLLOWING:

1 - LOSS ADJUSTMENT EXPENSE FACTORS:

	O.T.C	COLL.
	1.130	1.130

2 - LOSS DEVELOPMENT FACTORS:

YEAR ENDING	O.T.C.	COLL.
12/31/17	1.000	1.000
12/31/18	1.000	1.000
12/31/19	1.001	0.999
12/31/20	1.001	0.992
12/31/21	1.027	0.963

(B) TRENDED LOSSES ARE EQUAL TO (2) \* ((1.0 + (3)) \*\* N), WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING BOTH OTC AND COLLISION.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD OTC	PROJECTION PERIOD COLL
12/31/17	7/1/17	7.000	7.000
12/31/18	7/1/18	6.000	6.000
12/31/19	7/1/19	5.000	5.000
12/31/20	7/1/20	4.000	4.000
12/31/21	7/1/21	3.000	3.000

VERISK

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

	ACC. YEAR ENDING	O.T.C	COLLISION
(1) AGGREGATE LOSS COSTS	12/31/17	\$4,279,313	\$3,369,938
AT CURRENT LEVEL	12/31/18	\$4,210,997	\$3,451,082
	12/31/19	\$4,134,866	\$3,406,956
	12/31/20	\$3,812,498	\$3,067,163
	12/31/21	\$3,824,254	\$3,130,290
(2) SELECTED ANNUAL VVF			
TREND (SEE TREND		1.5%	2.5%
EXHIBIT IN SECTION C)			
(3) TRENDED AGGREGATE	12/31/17	\$4,750,037	\$4,006,856
LOSS COSTS AT	12/31/18	\$4,602,620	\$4,003,255
CURRENT LEVEL (A)	12/31/19	\$4,453,251	\$3,853,267
	12/31/20	\$4,045,060	\$3,386,148
	12/31/21	\$4,000,170	\$3,371,322

(A) TRENDED AGGREGATE LOSS COSTS ARE EQUAL TO (1) \* ((1.0 + (2)) \*\* N), WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF WRITING TO SIX MONTHS BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING BOTH OTC AND COLLISION.

YEAR ENDING	AVERAGE DATE OF WRITING	PROJECTION PERIOD OTC	PROJECTION PERIOD COLL
12/31/17	1/1/17	7.000	7.000
12/31/18	1/1/18	6.000	6.000
12/31/19	1/1/19	5.000	5.000
12/31/20	1/1/20	4.000	4.000
12/31/21	1/1/21	3.000	3.000

## VERISK

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

	(1) AGGREGATE LOSS COST AT CURRENT LEVEL (B)	(2) \$100,000 INCURRED LOSSES (C)	(3) EXPERIENCE RATIO (2) / (1)	(4) ACCIDENT YEAR WEIGHTS	(5) NUMBER OF INCURRED CLAIMS
ACCIDENT YEAR ENDING					
12/31/17	\$495,335	\$597,737	1.207	10%	62
12/31/18	\$470,059	\$385,048	0.819	15%	49
12/31/19	\$470,255	\$594,457	1.264	20%	69
12/31/20	\$422,360	\$250,601	0.593	25%	33
12/31/21	\$384,647	\$377,315	0.981	30%	45
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).				0.939
(7)	EXPECTED EXPERIENCE RATIO (D).				1.079
(8)	CREDIBILITY (E).				0.10
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000- (8)) ).				1.065
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).				6.5%
(11)	FILED CHANGE.				6.5%
(A)	PRIVATE PASSENGER TYPE EXPERIENCE IS FOR VEHICLES WRITTEN IN ACCORDANCE WITH RULE 232 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, DIVIDED BY THE PREMIUM TREND FACTOR, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 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 1.000 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).				

VERISK

NORTH DAKOTA  
PRIVATE PASSENGER TYPES  
AUTOMOBILE LIABILITY INSURANCE  
DETERMINATION OF SINGLE LIMIT LOSSES

	ACC. YEAR ENDING	BODILY INJURY	PROPERTY DAMAGE	COMBINED
(1) INCURRED LOSSES AND	12/31/17	\$92,830	\$227,435	
ALLOCATED LOSS	12/31/18	\$120,525	\$105,190	
ADJUSTMENT EXPENSES	12/31/19	\$154,888	\$207,566	
	12/31/20	\$27,500	\$130,385	
	12/31/21	\$53,999	\$170,565	
(2) DEVELOPED LOSSES AND	12/31/17	\$99,427	\$250,179	
ALL LOSS ADJUSTMENT	12/31/18	\$131,283	\$115,825	
EXPENSES (A)	12/31/19	\$179,486	\$229,236	
	12/31/20	\$38,664	\$145,145	
	12/31/21	\$103,713	\$196,815	
(3) SELECTED ANNUAL LOSS TREND (SEE TREND EXHIBIT IN SECTION C)		7.1%	8.3%	7.9%
(4) TRENDED LOSSES AND	12/31/17	\$160,674	\$437,063	\$597,737
ALL LOSS ADJUSTMENT	12/31/18	\$198,106	\$186,942	\$385,048
EXPENSES (B)	12/31/19	\$252,896	\$341,562	\$594,457
	12/31/20	\$50,882	\$199,720	\$250,601
	12/31/21	\$127,360	\$249,955	\$377,315

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

1 - UNALLOCATED LOSS ADJUSTMENT FACTORS: B.I. 1.070 P.D. 1.100  
2 - LOSS DEVELOPMENT FACTORS:

YEAR ENDING	B.I.	P.D.
12/31/17	1.001	1.000
12/31/18	1.018	1.001
12/31/19	1.083	1.004
12/31/20	1.314	1.012
12/31/21	1.795	1.049

(B) TRENDED LOSSES ARE EQUAL TO (2) \* ( (1.0 + (3)) \*\* N), WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD
12/31/17	7/1/17	7.000
12/31/18	7/1/18	6.000
12/31/19	7/1/19	5.000
12/31/20	7/1/20	4.000
12/31/21	7/1/21	3.000

VERISK

NORTH DAKOTA  
PRIVATE PASSENGER TYPES  
AUTOMOBILE LIABILITY INSURANCE  
DETERMINATION OF LIABILITY TRENDED AGGREGATE LOSS COSTS

	ACC. YEAR ENDING	AGGREGATE LOSS COSTS
(1) AGGREGATE LOSS COSTS	12/31/17	\$495,335
AT CURRENT LEVEL	12/31/18	\$470,059
	12/31/19	\$470,255
	12/31/20	\$422,360
	12/31/21	\$384,647
(2) SELECTED ANNUAL PREMIUM		
TREND (SEE TREND		0.0%
EXHIBIT IN SECTION C)		
(3) TRENDED AGGREGATE	12/31/17	\$495,335
LOSS COSTS AT	12/31/18	\$470,059
CURRENT LEVEL (A)	12/31/19	\$470,255
	12/31/20	\$422,360
	12/31/21	\$384,647

(A) TRENDED AGGREGATE LOSS COSTS ARE EQUAL TO (1) \* ((1.0 + (2)) \*\* N),  
WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF  
WRITING TO SIX MONTHS BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF  
07/01/23 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.

YEAR ENDING	AVERAGE DATE OF WRITING	PROJECTION PERIOD
12/31/17	1/1/17	7.000
12/31/18	1/1/18	6.000
12/31/19	1/1/19	5.000
12/31/20	1/1/20	4.000
12/31/21	1/1/21	3.000

VERISK

NORTH DAKOTA  
 AUTOMOBILE LIABILITY INSURANCE - PRIVATE PASSENGER TYPES (A)  
 DETERMINATION OF STATEWIDE ADVISORY LOSS COST LEVEL CHANGES  
 PERSONAL INJURY PROTECTION

	(1) AGGREGATE LOSS COST AT CURRENT LEVEL (B)	(2) INCURRED LOSSES (C)	(3) EXPERIENCE RATIO (2) / (1)	(4) ACCIDENT YEAR WEIGHTS	(5) NUMBER OF INCURRED CLAIMS
ACCIDENT YEAR ENDING					
12/31/17	\$63,949	\$42,523	0.665	10%	12
12/31/18	\$63,750	\$88,367	1.386	15%	10
12/31/19	\$64,550	\$18,364	0.284	20%	5
12/31/20	\$57,362	\$81,158	1.415	25%	4
12/31/21	\$53,052	\$45,237	0.853	30%	5
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).				0.942
(7)	EXPECTED EXPERIENCE RATIO (D).				1.036
(8)	CREDIBILITY (E).				0.10
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000- (8)) ).				1.027
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).				2.7%
(11)	FILED CHANGE.				N.C.
(A)	PRIVATE PASSENGER TYPE EXPERIENCE IS FOR VEHICLES WRITTEN IN ACCORDANCE WITH RULE 232 OF THE COMMERCIAL LINES MANUAL, DIVISION 1, AUTOMOBILE, ELIGIBLE FOR FIRST PARTY COVERAGE.				
(B)	THE AGGREGATE LOSS COST AT CURRENT LEVEL IS CALCULATED BY EXTENDING EXPOSURES BY THE CURRENT LOSS COSTS FROM THE LAST REVISION.				
(C)	LOSSES INCLUDE ALL LOSS ADJUSTMENT EXPENSES FOR PERSONAL INJURY PROTECTION. SEE FOLLOWING PAGE.				
(D)	EXPECTED EXPERIENCE RATIO IS EQUAL TO THE TREND FACTOR SHOWN ON THE FOLLOWING PAGE, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 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 1.000 YEAR(S).				
(E)	CREDIBILITY IS BASED ON A 5 YEAR TOTAL OF CLAIMS FOR PIP SHOWN IN COLUMN (5). THE STANDARD FOR FULL CREDIBILITY IS 3,000 CLAIMS (SEE CREDIBILITY TABLES IN SECTION C).				

VERISK

NORTH DAKOTA  
PRIVATE PASSENGER TYPES  
AUTOMOBILE LIABILITY INSURANCE  
DETERMINATION OF PERSONAL INJURY PROTECTION LOSSES

	ACC. YEAR ENDING	PIP
(1) INCURRED LOSSES AND	12/31/17	\$31,023
ALLOCATED LOSS	12/31/18	\$66,817
ADJUSTMENT EXPENSES	12/31/19	\$14,473
	12/31/20	\$66,239
	12/31/21	\$37,274
(2) DEVELOPED LOSSES AND	12/31/17	\$33,195
ALL LOSS ADJUSTMENT	12/31/18	\$71,494
EXPENSES (A)	12/31/19	\$15,393
	12/31/20	\$70,450
	12/31/21	\$40,681
(3) SELECTED ANNUAL LOSS		
TREND (SEE TREND		3.6%
EXHIBIT IN SECTION C)		
(4) TRENDED LOSSES AND	12/31/17	\$42,523
ALL LOSS ADJUSTMENT	12/31/18	\$88,367
EXPENSES (B)	12/31/19	\$18,364
	12/31/20	\$81,158
	12/31/21	\$45,237

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

1 - UNALLOCATED LOSS ADJUSTMENT FACTORS: 1.070  
2 - LOSS DEVELOPMENT FACTORS:

YEAR ENDING	PIP
12/31/17	1.000
12/31/18	1.000
12/31/19	0.994
12/31/20	0.994
12/31/21	1.020

(B) TRENDED LOSSES ARE EQUAL TO (2) \* ( (1.0 + (3)) \*\* N), WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD
12/31/17	7/1/17	7.000
12/31/18	7/1/18	6.000
12/31/19	7/1/19	5.000
12/31/20	7/1/20	4.000
12/31/21	7/1/21	3.000

VERISK

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

COVERAGE	ACCIDENT YEAR ENDING	(1)	(2)	(3)	(4)	(5)	
		AGGREGATE LOSS COST AT CURRENT LEVEL (B)	INCURRED LOSSES (C)	EXPERIENCE RATIO (2) / (1)	ACCIDENT YEAR WEIGHTS	NUMBER OF PAID CLAIMS	
O.T.C	12/31/17	\$554,916	\$607,822	1.095	10%	130	
	12/31/18	\$513,065	\$613,702	1.196	15%	145	
	12/31/19	\$497,209	\$485,481	0.976	20%	123	
	12/31/20	\$502,512	\$629,815	1.253	25%	145	
	12/31/21	\$413,885	\$451,221	1.090	30%	99	
COLL.	12/31/17	\$427,224	\$524,881	1.229	10%	67	
	12/31/18	\$392,251	\$606,874	1.547	15%	76	
	12/31/19	\$378,740	\$406,277	1.073	20%	72	
	12/31/20	\$396,060	\$389,975	0.985	25%	62	
	12/31/21	\$329,399	\$312,223	0.948	30%	51	
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3) * (4)).				O.T.C.	1.124	COLLISION 1.100
(7)	EXPECTED EXPERIENCE RATIO (D).					1.042	1.059
(8)	CREDIBILITY (E).					0.25	0.30
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000 - (8)) ).					1.063	1.071
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).					6.3%	7.1%
(11)	FILED CHANGE.					6.3%	7.1%
(A)	PRIVATE PASSENGER TYPE EXPERIENCE IS FOR VEHICLES WRITTEN IN ACCORDANCE WITH RULE 232 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 VVF LEVEL BY THE APPLICATION OF VVF 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 VVF TREND FACTOR, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 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 1.000 YEAR(S).						
(E)	CREDIBILITY IS BASED ON A 5 YEAR TOTAL OF CLAIMS FOR O.T.C. AND A 5 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).						

VERISK

NORTH DAKOTA  
PRIVATE PASSENGER TYPES  
AUTOMOBILE PHYSICAL DAMAGE INSURANCE  
DETERMINATION OF PHYSICAL DAMAGE LOSSES

	ACC. YEAR ENDING	O.T.C	COLLISION
(1) PAID LOSSES	12/31/17	\$346,136	\$289,226
	12/31/18	\$372,241	\$357,799
	12/31/19	\$313,912	\$256,519
	12/31/20	\$434,273	\$265,365
	12/31/21	\$327,606	\$239,696
(2) DEVELOPED LOSSES AND	12/31/17	\$391,134	\$326,825
ALL LOSS ADJUSTMENT	12/31/18	\$420,632	\$404,313
EXPENSES (A)	12/31/19	\$354,366	\$289,577
	12/31/20	\$489,747	\$297,464
	12/31/21	\$373,527	\$254,876
(3) SELECTED ANNUAL LOSS			
TREND (SEE TREND		6.5%	7.0%
EXHIBIT IN SECTION C)			
(4) TRENDED LOSSES AND	12/31/17	\$607,822	\$524,881
ALL LOSS ADJUSTMENT	12/31/18	\$613,702	\$606,874
EXPENSES (B)	12/31/19	\$485,481	\$406,277
	12/31/20	\$629,815	\$389,975
	12/31/21	\$451,221	\$312,223

(A) PAID LOSSES ARE ADJUSTED BY THE FOLLOWING:

1 - LOSS ADJUSTMENT EXPENSE FACTORS:

O.T.C	COLL.
1.130	1.130

2 - LOSS DEVELOPMENT FACTORS:

YEAR ENDING	O.T.C.	COLL.
12/31/17	1.000	1.000
12/31/18	1.000	1.000
12/31/19	0.999	0.999
12/31/20	0.998	0.992
12/31/21	1.009	0.941

(B) TRENDED LOSSES ARE EQUAL TO (2) \* ((1.0 + (3)) \*\* N), WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING BOTH OTC AND COLLISION.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD OTC	PROJECTION PERIOD COLL
12/31/17	7/1/17	7.000	7.000
12/31/18	7/1/18	6.000	6.000
12/31/19	7/1/19	5.000	5.000
12/31/20	7/1/20	4.000	4.000
12/31/21	7/1/21	3.000	3.000

VERISK

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

	ACC. YEAR ENDING	O.T.C	COLLISION
(1) AGGREGATE LOSS COSTS	12/31/17	\$476,323	\$398,530
AT CURRENT LEVEL	12/31/18	\$450,452	\$369,351
	12/31/19	\$445,927	\$360,362
	12/31/20	\$460,598	\$380,461
	12/31/21	\$387,896	\$319,805
(2) SELECTED ANNUAL VVF			
TREND (SEE TREND		2.2%	1.0%
EXHIBIT IN SECTION C)			
(3) TRENDED AGGREGATE	12/31/17	\$554,916	\$427,224
LOSS COSTS AT	12/31/18	\$513,065	\$392,251
CURRENT LEVEL (A)	12/31/19	\$497,209	\$378,740
	12/31/20	\$502,512	\$396,060
	12/31/21	\$413,885	\$329,399

(A) TRENDED AGGREGATE LOSS COSTS ARE EQUAL TO (1) \* ((1.0 + (2)) \*\* N), WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF WRITING TO SIX MONTHS BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDED BOTH OTC AND COLLISION.

YEAR ENDING	AVERAGE DATE OF WRITING	PROJECTION PERIOD OTC	PROJECTION PERIOD COLL
12/31/17	1/1/17	7.000	7.000
12/31/18	1/1/18	6.000	6.000
12/31/19	1/1/19	5.000	5.000
12/31/20	1/1/20	4.000	4.000
12/31/21	1/1/21	3.000	3.000

VERISK

NORTH DAKOTA  
 AUTOMOBILE LIABILITY INSURANCE - AUTO DEALERS (A)  
 DETERMINATION OF STATEWIDE ADVISORY LOSS COST LEVEL CHANGES  
 SINGLE LIMIT LIABILITY COVERAGE

	(1) AGGREGATE LOSS COST AT CURRENT LEVEL (B)	(2) \$100,000 INCURRED LOSSES (C)	(3) EXPERIENCE RATIO (2) / (1)	(4) ACCIDENT YEAR WEIGHTS	(5) NUMBER OF INCURRED CLAIMS
ACCIDENT YEAR ENDING					
12/31/17	\$246,819	\$70,778	0.287	10%	8
12/31/18	\$216,072	\$98,806	0.457	15%	9
12/31/19	\$189,810	\$183,121	0.965	20%	14
12/31/20	\$193,254	\$317,652	1.644	25%	11
12/31/21	\$200,020	\$442,638	2.213	30%	11
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).				1.366
(7)	EXPECTED EXPERIENCE RATIO (D).				1.242
(8)	CREDIBILITY (E).				0.05
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000- (8)) ).				1.248
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).				24.8%
(11)	FILED CHANGE.				24.8%
(A)	AUTO DEALERS EXPERIENCE IS FOR ALL AUTO DEALERS RISKS WRITTEN IN ACCORDANCE WITH RULE 248 OF THE COMMERCIAL LINES MANUAL, DIVISION 1, AUTOMOBILE.				
(B)	THE AGGREGATE LOSS COST AT CURRENT LEVEL IS CALCULATED BY EXTENDING EXPOSURES BY THE CURRENT LOSS COSTS FROM THE LAST REVISION.				
(C)	LOSSES INCLUDE ALL LOSS ADJUSTMENT EXPENSES FOR BODILY INJURY AND PROPERTY DAMAGE LIABILITY. SEE FOLLOWING PAGE.				
(D)	EXPECTED EXPERIENCE RATIO IS EQUAL TO THE COMBINED TREND FACTOR SHOWN ON THE FOLLOWING PAGE, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 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 3.000 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).				

VERISK

NORTH DAKOTA  
 AUTO DEALERS  
 AUTOMOBILE LIABILITY INSURANCE  
 DETERMINATION OF SINGLE LIMIT LOSSES

	ACC. YEAR ENDING	BODILY INJURY	PROPERTY DAMAGE	COMBINED
(1) INCURRED LOSSES AND	12/31/17	\$0	\$36,757	
ALLOCATED LOSS	12/31/18	\$2,828	\$52,372	
ADJUSTMENT EXPENSES	12/31/19	\$0	\$107,845	
	12/31/20	\$113,147	\$57,702	
	12/31/21	\$98,750	\$98,844	
(2) DEVELOPED LOSSES AND	12/31/17	\$0	\$40,514	
ALL LOSS ADJUSTMENT	12/31/18	\$3,244	\$58,185	
EXPENSES (A)	12/31/19	\$0	\$122,900	
	12/31/20	\$170,100	\$68,169	
	12/31/21	\$228,442	\$127,647	
(3) SELECTED ANNUAL LOSS				
TREND (SEE TREND		7.1%	8.3%	7.5%
EXHIBIT IN SECTION C)				
(4) TRENDED LOSSES AND	12/31/17	\$0	\$70,778	\$70,778
ALL LOSS ADJUSTMENT	12/31/18	\$4,895	\$93,911	\$98,806
EXPENSES (B)	12/31/19	\$0	\$183,121	\$183,121
	12/31/20	\$223,852	\$93,801	\$317,652
	12/31/21	\$280,527	\$162,112	\$442,638

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

1 - UNALLOCATED LOSS ADJUSTMENT FACTORS:                   B.I. 1.070                   P.D. 1.100  
 2 - LOSS DEVELOPMENT FACTORS:

YEAR ENDING	B.I.	P.D.
12/31/17	1.016	1.002
12/31/18	1.072	1.010
12/31/19	1.168	1.036
12/31/20	1.405	1.074
12/31/21	2.162	1.174

(B) TRENDED LOSSES ARE EQUAL TO (2) \* ( (1.0 + (3)) \*\* N), WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD
12/31/17	7/1/17	7.000
12/31/18	7/1/18	6.000
12/31/19	7/1/19	5.000
12/31/20	7/1/20	4.000
12/31/21	7/1/21	3.000

VERISK

NORTH DAKOTA  
 AUTOMOBILE LIABILITY INSURANCE - AUTO DEALERS (A)  
 DETERMINATION OF STATEWIDE ADVISORY LOSS COST LEVEL CHANGES  
 PERSONAL INJURY PROTECTION

	(1) AGGREGATE LOSS COST AT CURRENT LEVEL (B)	(2) INCURRED LOSSES (C)	(3) EXPERIENCE RATIO (2) / (1)	(4) ACCIDENT YEAR WEIGHTS	(5) NUMBER OF INCURRED CLAIMS
ACCIDENT YEAR ENDING					
12/31/17	\$32,493	\$1,148	0.035	10%	1
12/31/18	\$31,917	\$1,274	0.040	15%	1
12/31/19	\$28,724	\$34,481	1.200	20%	4
12/31/20	\$35,282	\$0	0.000	25%	-
12/31/21	\$33,208	\$9,360	0.282	30%	2
(6)	AVERAGE EXPERIENCE RATIO (SUM OF (3)*(4)).				0.335
(7)	EXPECTED EXPERIENCE RATIO (D).				1.112
(8)	CREDIBILITY (E).				0.10
(9)	CREDIBILITY WEIGHTED EXPERIENCE RATIO: ( (6) * (8) ) + ( (7) * (1.000- (8)) ).				1.034
(10)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (9) - 1.000 ).				3.4%
(11)	FILED CHANGE.				-10.0%
(A)	AUTO DEALERS EXPERIENCE IS FOR ALL AUTO DEALERS RISKS WRITTEN IN ACCORDANCE WITH RULE 248 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 PERSONAL INJURY PROTECTION. SEE FOLLOWING PAGE.				
(D)	EXPECTED EXPERIENCE RATIO IS EQUAL TO THE TREND FACTOR SHOWN ON THE FOLLOWING PAGE, PROJECTED FOR M YEARS. THE PERIOD M IS EQUAL TO THE NUMBER OF YEARS FROM ONE YEAR BEYOND THE IMPLEMENTATION DATE OF THE LAST REVISION TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 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 3.000 YEAR(S).				
(E)	CREDIBILITY IS BASED ON A 5 YEAR TOTAL OF CLAIMS FOR PIP SHOWN IN COLUMN (5). THE STANDARD FOR FULL CREDIBILITY IS 683 CLAIMS (SEE CREDIBILITY TABLES IN SECTION C).				

VERISK

NORTH DAKOTA  
 AUTO DEALERS  
 AUTOMOBILE LIABILITY INSURANCE  
 DETERMINATION OF PERSONAL INJURY PROTECTION LOSSES

	ACC. YEAR ENDING	PIP
(1) INCURRED LOSSES AND	12/31/17	\$837
ALLOCATED LOSS	12/31/18	\$964
ADJUSTMENT EXPENSES	12/31/19	\$27,012
	12/31/20	\$0
	12/31/21	\$7,866
(2) DEVELOPED LOSSES AND	12/31/17	\$896
ALL LOSS ADJUSTMENT	12/31/18	\$1,031
EXPENSES (A)	12/31/19	\$28,903
	12/31/20	\$0
	12/31/21	\$8,417
(3) SELECTED ANNUAL LOSS		
TREND (SEE TREND		3.6%
EXHIBIT IN SECTION C)		
(4) TRENDED LOSSES AND	12/31/17	\$1,148
ALL LOSS ADJUSTMENT	12/31/18	\$1,274
EXPENSES (B)	12/31/19	\$34,481
	12/31/20	\$0
	12/31/21	\$9,360

(A) INCURRED LOSSES AND ALLOCATED LOSS ADJUSTMENT EXPENSES ARE ADJUSTED BY THE FOLLOWING FACTORS:  
 1 - UNALLOCATED LOSS ADJUSTMENT FACTORS: 1.070

(B) TRENDED LOSSES ARE EQUAL TO (2) \* ( (1.0 + (3)) \*\* N), WHERE N IS EQUAL TO THE NUMBER OF YEARS PROJECTION FROM THE AVERAGE DATE OF ACCIDENT TO ONE YEAR BEYOND THE ANTICIPATED IMPLEMENTATION DATE OF 07/01/23 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD
12/31/17	7/1/17	7.000
12/31/18	7/1/18	6.000
12/31/19	7/1/19	5.000
12/31/20	7/1/20	4.000
12/31/21	7/1/21	3.000

VERISK

NORTH DAKOTA  
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)
	EARNED CAR	\$100000	EXPER LOSS					BASE	BASE	BASE	
T	YRS YR	UND	COST 5 YRS				INDEX	CLASS	CLASS	CLASS	ADV
R	ENDED	LOSS	END	EXPER		FORM	(6) TO	LOSS	LOSS	LOSS	LOSS
R	12/31/2021	COST	12/31/2021	RATIO	CRED	RATIO	STATE	COST	COST	COST	COST
								PRES	IND*	REV	CHG**
101	4612	143.57	142.40	0.992	0.15	1.108	0.982	158	165	165	4.4%
102	40227	78.92	88.33	1.119	0.30	1.126	0.998	106	112	112	5.7%
104	3840	141.94	188.99	1.331	0.15	1.159	1.027	180	196	196	8.9%
105	1485	94.45	75.97	0.804	0.05	1.113	0.987	128	134	134	4.7%
106	2732	117.08	153.04	1.307	0.10	1.147	1.017	148	160	160	8.1%
SW	52896	91.54	103.35	1.129							

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 6.1 PERCENT.

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

VERISK

NORTH DAKOTA  
COMMERCIAL AUTOMOBILE INSURANCE  
PERSONAL INJURY PROTECTION

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

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	EARNED CAR	P.I.P.	EXPER LOSS					BASE	BASE	BASE	
T	YRS YR	UND	COST 5 YRS				INDEX	CLASS	CLASS	CLASS	ADV
E	ENDED	LOSS	END	EXPER		FORM	(6) TO	LOSS	LOSS	LOSS	LOSS
R	12/31/2021	COST	12/31/2021	RATIO	CRED	RATIO	STATE	COST	COST	COST	COST
R								PRES	IND*	REV**	CHG***
101	4916	7.06	4.43	0.627	0.00	0.565	1.000	13	12	11	-15.4%
102	41817	6.65	3.81	0.573	0.15	0.566	1.002	12	11	10	-16.7%
104	5267	7.42	3.51	0.473	0.05	0.560	0.991	14	13	12	-14.3%
105	1491	10.57	4.75	0.449	0.00	0.565	1.000	20	19	17	-15.0%
106	2926	7.37	4.65	0.631	0.00	0.565	1.000	14	13	12	-14.3%
SW	56417	6.90	3.90	0.565		0.565					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF -6.9 PERCENT.

\*\* KEYED TO A STATEWIDE LOSS COST CHANGE OF -15.0 PERCENT.

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

VERISK

NORTH DAKOTA  
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)	(10)	(11)
								BASE	BASE	BASE	
T	EARNED CAR	\$100000	EXPER LOSS					CLASS	CLASS	CLASS	ADV
E	YRS YR	UND	COST 5 YRS				INDEX	LOSS	LOSS	LOSS	LOSS
R	ENDED	LOSS	END	EXPER		FORM	(6) TO	COST	COST	COST	COST
R	12/31/2021	COST	12/31/2021	RATIO	CRED	RATIO	STATE	PRES	IND*	REV	CHG**
101	550	206.82	149.15	0.721	0.05	0.970	0.989	217	229	229	5.5%
102	1787	94.49	95.73	1.013	0.10	0.986	1.005	104	111	111	6.7%
104	403	162.56	177.64	1.093	0.05	0.989	1.008	172	185	185	7.6%
105	154	106.21	125.56	1.182	0.00	0.983	1.002	113	121	121	7.1%
106	176	114.68	193.15	1.684	0.00	0.983	1.002	123	131	131	6.5%
SW	3070	125.30	123.13	0.983		0.981					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 6.5 PERCENT.

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

VERISK

NORTH DAKOTA  
COMMERCIAL AUTOMOBILE INSURANCE  
PERSONAL INJURY PROTECTION

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

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
								BASE	BASE
T	EARNED CAR	P.I.P.	EXPER LOSS					CLASS	CLASS
E	YRS YR	UND	COST 5 YRS				INDEX	LOSS	LOSS
R	ENDED	LOSS	END	EXPER		FORM	(6) TO	COST	COST
R	12/31/2021	COST	12/31/2021	RATIO	CRED	RATIO	STATE	PRES	IND*
101	583	16.91	16.82	0.995	0.00	0.926	0.998	25	26
102	1829	17.17	17.18	1.001	0.05	0.930	1.002	24	25
104	404	18.14	7.33	0.404	0.00	0.926	0.998	26	27
105	167	12.78	1.53	0.120	0.00	0.926	0.998	19	19
106	170	13.69	27.48	2.007	0.00	0.926	0.998	20	21
SW	3153	16.83	15.58	0.926		0.928			

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 2.7 PERCENT.

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

VERISK

NORTH DAKOTA  
COMMERCIAL AUTOMOBILE INSURANCE  
SINGLE LIMIT LIABILITY

DETERMINATION OF LOSS COST LEVEL CHANGES BY TERRITORY  
AUTO DEALERS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	TTT ACC-YR	AGG LCCL	REV	PRES AUTO	RATIO TO		CHANGES IN		BASE	BASE	
T	12/31/2021	YR ENDED	TTT	DEALERS	STATEWIDE		TERRITORY		CLASS	CLASS	ADV
E	EARNED	12/31/2021	BASE	BASE LOSS	AVERAGE	COLUMNS	RELATIVITY	ADJ	LOSS	LOSS	LOSS
R	EXPOS		LOSS	COST	(3)	(4)	REQ	1.003	COST	COST	COST
R			COST	COST			(5)/(6)		IND*	REV	CHG**
101	4612	7471	165	358	1.310	1.473	0.889	0.892	398	398	11.2%
102	40227	61508	112	211	0.889	0.868	1.024	1.027	271	271	28.4%
104	3840	48954	196	383	1.556	1.576	0.987	0.990	473	473	23.5%
105	1485	0	134	279	1.063	1.148	0.926	0.929	323	323	15.8%
106	2732	82087	160	311	1.270	1.280	0.992	0.995	386	386	24.1%
SW	52896	200020	126	243			0.997				

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 24.8 PERCENT.

\*\* PERCENTAGE CHANGE IN LOSS COST IS (COL 10/COL 4)

VERISK

NORTH DAKOTA  
COMMERCIAL AUTOMOBILE INSURANCE  
PERSONAL INJURY PROTECTION

DETERMINATION OF LOSS COST LEVEL CHANGES BY TERRITORY  
AUTO DEALERS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	TTT ACC-YR	AGG LCCL	REV	PRES AUTO	RATIO TO		CHANGES IN	BASE	BASE		
T	12/31/2021	YR ENDED	TTT	DEALERS	STATEWIDE		TERRITORY	CLASS	CLASS	ADV	
E	EARNED	12/31/2021	BASE	BASE LOSS	AVERAGE	COLUMNS	RELATIVITY	LOSS	LOSS	LOSS	
R	EXPOS		LOSS	COST	(3)	(4)	REQ	COST	COST	COST	
R			COST	COST			(5)/(6)	1.017	IND*	REV**	CHG***
101	4916	11776	11	26	1.000	1.040	0.962	0.978	26	23	-11.5%
102	41817	11458	10	24	0.909	0.960	0.947	0.963	24	21	-12.5%
104	5267	4938	12	26	1.091	1.040	1.049	1.067	29	25	-3.8%
105	1491	326	17	38	1.545	1.520	1.016	1.033	41	35	-7.9%
106	2926	4710	12	26	1.091	1.040	1.049	1.067	29	25	-3.8%
SW	56417	33208	11	25			0.983				

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 3.4 PERCENT.

\*\* KEYED TO A STATEWIDE LOSS COST CHANGE OF -10.0 PERCENT.

\*\*\* PERCENTAGE CHANGE IN LOSS COST IS (COL 10/COL 4)

VERISK

NORTH DAKOTA  
 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)
	EARNED CAR	UND	EXPER LOSS	EXPER	CRED	FORM	INDEX	BASE	BASE	BASE	ADV
T	YRS YR	LOSS	COST 5 YRS	RATIO			(6) TO	CLASS	CLASS	CLASS	LOSS
E	ENDED	LOSS	END				STATE	LOSS	LOSS	LOSS	LOSS
R	12/31/2021	COST	12/31/2021					COST	COST	COST	COST
R								PRES	IND*	REV	CHG**
101	3424	96.99	136.35	1.406	0.15	1.122	1.045	138	154	154	11.6%
102	26043	112.66	121.51	1.079	0.45	1.075	1.001	179	191	191	6.7%
104	2781	163.14	137.38	0.842	0.15	1.038	0.966	240	247	247	2.9%
105	1043	88.99	66.82	0.751	0.05	1.056	0.983	155	162	162	4.5%
106	1589	117.92	128.58	1.090	0.10	1.074	1.000	167	178	178	6.6%
SW	34880	114.68	122.92	1.072		1.074					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 6.5 PERCENT.

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

VERISK

NORTH DAKOTA  
COMMERCIAL AUTOMOBILE INSURANCE  
PHYSICAL DAMAGE - COLLISION

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

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	EARNED CAR	UND	EXPER LOSS	EXPER	CRED	FORM	INDEX	BASE	BASE	BASE	ADV
T	YRS YR	LOSS	COST 5 YRS	RATIO		RATIO	(6) TO	CLASS	CLASS	CLASS	LOSS
E	ENDED	LOSS	END				STATE	LOSS	LOSS	LOSS	LOSS
R	12/31/2021	COST	12/31/2021					COST	COST	COST	COST
R								PRES	IND*	REV	CHG**
101	3207	151.56	184.12	1.215	0.25	1.374	0.952	224	258	258	15.2%
102	15324	146.15	223.79	1.531	0.45	1.474	1.021	205	253	253	23.4%
104	2409	137.36	164.48	1.197	0.20	1.381	0.956	236	273	273	15.7%
105	818	114.45	124.98	1.092	0.10	1.394	0.965	205	240	240	17.1%
106	1244	177.74	234.82	1.321	0.10	1.416	0.981	232	276	276	19.0%
SW	23002	146.56	209.13	1.427		1.444					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 21.1 PERCENT.

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

VERISK

NORTH DAKOTA  
 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)
	EARNED CAR	UND	EXPER LOSS	EXPER	CRED	FORM	INDEX	BASE	BASE	BASE	ADV
T	YRS YR	LOSS	COST 5 YRS	RATIO		RATIO	(6) TO	CLASS	CLASS	CLASS	LOSS
E	ENDED	LOSS	END				STATE	LOSS	LOSS	LOSS	LOSS
R	12/31/2021	COST	12/31/2021					COST	COST	COST	COST
R								PRES	IND*	REV	CHG**
101	439	194.89	229.36	1.177	0.10	1.150	1.000	189	201	201	6.3%
102	857	234.4	282.46	1.205	0.15	1.156	1.005	263	281	281	6.8%
104	307	245.35	186.59	0.761	0.05	1.128	0.981	292	305	305	4.5%
105	128	204.42	241.16	1.180	0.05	1.149	0.999	203	216	216	6.4%
106	127	204.47	343.47	1.680	0.05	1.174	1.021	208	226	226	8.7%
SW	1858	222.76	255.40	1.147		1.150					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 6.3 PERCENT.

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

VERISK

NORTH DAKOTA  
 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)	(10)	(11)
	EARNED CAR	UND	EXPER LOSS	EXPER	CRED	FORM	INDEX	BASE	BASE	BASE	ADV
T	YRS YR	LOSS	COST 5 YRS	RATIO		RATIO	(6) TO	CLASS	CLASS	CLASS	LOSS
E	ENDED	LOSS	END				STATE	LOSS	LOSS	LOSS	LOSS
R	12/31/2021	COST	12/31/2021					COST	COST	COST	COST
R								PRES	IND*	REV	CHG**
101	446	201.05	224.57	1.117	0.15	1.136	1.000	238	255	255	7.1%
102	716	190.63	197.56	1.036	0.15	1.124	0.989	253	268	268	5.9%
104	294	177.99	164.59	0.925	0.10	1.118	0.984	251	265	265	5.6%
105	126	164.15	366.38	2.232	0.10	1.248	1.099	205	241	241	17.6%
106	129	234.33	301.69	1.287	0.05	1.146	1.009	280	303	303	8.2%
SW	1711	192.52	219.22	1.139		1.136					

\* KEYED TO A STATEWIDE LOSS COST CHANGE OF 7.1 PERCENT.

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

VERISK

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. <u>AVG</u>	5 YR. <u>AVG</u>
<u>ITEM</u>		<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>		
(1)	Direct Losses Incurred	6,019,685	6,699,508	7,148,263	7,814,080	7,857,734		
(2)	Allocated Loss Adjustment Expenses Incurred	685,049	706,434	689,741	788,804	848,374		
(3)	Unallocated Loss Adjustment Expense Incurred	506,748	528,552	547,902	583,052	567,364		
(4)	Unallocated LAE as a Ratio to Losses + Allocated LAE (3)/[(1)+(2)]	7.6%	7.1%	7.0%	6.8%	6.5%	6.8%	7.0%
(5)	Selected Factor							7.0%

		<u>Property Damage</u> (000's)					3 YR. <u>AVG</u>	5 YR. <u>AVG</u>
<u>ITEM</u>		<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>		
(1)	Direct Losses Incurred	1,199,502	1,195,132	1,312,867	1,213,303	1,087,320		
(2)	Allocated Loss Adjustment Expenses Incurred	60,189	65,065	69,121	54,802	49,307		
(3)	Unallocated Loss Adjustment Expense Incurred	129,564	135,456	141,467	122,670	111,251		
(4)	Unallocated LAE as a Ratio to Losses + Allocated LAE (3)/[(1)+(2)]	10.3%	10.7%	10.2%	9.7%	9.8%	9.9%	10.1%
(5)	Selected Factor							10.0%

All items are from Special Call Submission for available writers.

VERISK

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>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>AVG</u>	<u>AVG</u>
(1)	Direct Losses Incurred	4,809,253	5,444,825	5,515,995	5,746,395	5,199,621		
(2)	Loss Adjustment Expenses Incurred	622,246	702,163	714,081	736,491	662,516		
(3)	Losses + LAE Incurred as Ratio to Losses Incurred [(1)+(2)]/(1)	1.129	1.129	1.129	1.128	1.127	1.128	1.129
(4)	Selected							1.130

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

VERISK

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

AVERAGE PAID CLAIM COST DATA

YEAR ENDED	NORTH DAKOTA				MULTISTATE*			
	BODILY INJURY (\$100000 LIMITS)		PROPERTY DAMAGE (\$100000 LIMITS)		BODILY INJURY (\$100000 LIMITS)		PROPERTY DAMAGE (\$100000 LIMITS)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	EXPONENTIAL		EXPONENTIAL		EXPONENTIAL		EXPONENTIAL	
	ACTUAL	FIT	ACTUAL	FIT	ACTUAL	FIT	ACTUAL	FIT
3/31/2019	34339.35	35567.16	4977.29	5062.55	25376.34	24788.50	4649.58	4622.24
6/30/2019	35351.06	34598.40	4882.74	5190.77	25378.01	25217.15	4731.27	4713.97
9/30/2019	38786.75	33656.03	5118.24	5322.24	25548.37	25653.22	4794.91	4807.52
12/31/2019	35963.98	32739.32	5646.77	5457.04	25952.73	26096.83	4855.43	4902.92
3/31/2020	27575.00	31847.58	5590.96	5595.26	26255.17	26548.11	4938.27	5000.22
6/30/2020	27137.23	30980.14	5826.85	5736.98	26661.33	27007.19	5113.20	5099.44
9/30/2020	30441.74	30136.31	6124.78	5882.28	27167.70	27474.21	5220.85	5200.64
12/31/2020	26118.18	29315.48	6281.03	6031.27	27696.07	27949.31	5360.14	5303.85
3/31/2021	30301.44	28516.99	6908.63	6184.03	28334.16	28432.62	5490.90	5409.10
6/30/2021	31076.00	27740.26	6680.85	6340.66	29086.01	28924.29	5435.24	5516.44
9/30/2021	25618.77	26984.69	6422.53	6501.26	29616.84	29424.46	5592.86	5625.91
12/31/2021	27249.27	26249.69	5660.12	6665.92	30401.42	29933.28	5759.68	5737.56

		BODILY INJURY	PROPERTY DAMAGE
(9)	AVERAGE ANNUAL PERCENT CHANGE IN PAID CLAIM COST (12TH POINT / 8TH POINT)		
	(A) NORTH DAKOTA	-10.5%	10.5%
	(B) MULTISTATE	7.1%	8.2%
(10)	CREDIBILITY	0.00	0.05
(11)	WEIGHTED AVERAGE ANNUAL PERCENT CHANGE IN PAID CLAIM COSTS {(10) * (9A)} + {(1.0 - (10)) * (9B)}	7.1%	8.3%
(12)	SELECTED ANNUAL PERCENT CHANGE IN CLAIM FREQUENCY	0.0%	0.0%
(13)	AVERAGE ANNUAL PERCENT CHANGE IN LIABILITY LOSS RATIO (11) * (12)	7.1%	8.3%

\* EXCLUDES MASSACHUSETTS

VERISK

CLAIM COST TREND DATA FOR PIP  
TRUCKS, TRACTORS, & TRAILERS  
NORTH DAKOTA

QUARTER ENDING	MEDICAL INDEX*		HOSPITAL AND RELATED SERVICES*		INCOME LOSSES**	
	ACTUAL	EXPONENTIAL FIT	ACTUAL	EXPONENTIAL FIT	ACTUAL	EXPONENTIAL FIT
9/30/2019	500.0	505.2	885.0	891.8	796.03	794.31
12/31/2019	507.8	508.2	899.7	899.5	801.17	805.92
3/31/2020	513.9	511.2	913.8	907.2	806.90	817.69
6/30/2020	519.0	514.3	919.8	915.0	842.47	829.63
9/30/2020	522.8	517.4	923.6	922.9	844.60	841.75
12/31/2020	519.8	520.4	927.1	930.8	857.90	854.05
3/31/2021	523.7	523.5	940.0	938.8	859.53	866.52
6/30/2021	523.8	526.7	945.0	946.9	882.70	879.18
9/30/2021	524.7	529.8	954.4	955.0	893.93	892.02
12/31/2021	528.8	533.0	960.6	963.2	906.47	905.05
3/31/2022	537.2	536.1	972.5	971.5	914.93	918.27
6/30/2022	543.9	539.3	980.8	979.8	929.67	931.68

	(A) MEDICAL	(B) HOSPITAL	(C) COMBINED+	(D) INCOME
(1) AVERAGE ANNUAL PERCENT CHANGE IN INDICES (12TH POINT/8TH POINT)	2.4%	3.5%	3.0%	6.0%
(2) AVERAGE ANNUAL PERCENT CHANGE IN CLAIM COST 0.98*(1C) + 0.02*(1D). BASED ON RESPECTIVE WEIGHT OF MEDICAL AND INCOME FROM PRICING.				3.1%
(3) SELECTED ANNUAL PERCENT CHANGE IN CLAIM FREQUENCY				0.0%
(4) AVERAGE ANNUAL PERCENT CHANGE IN CLAIM RATIOS (1.0 + (2)) * (1.0 + (3))				3.1%
* MEDICAL INDEX AND HOSPITAL AND RELATED SERVICES INDEX BASED ON CONSUMER PRICE INDEX.				
** INCOME LOST BASED ON BUREAU OF LABOR STATISTICS DATA.				
+ WEIGHT MEDICAL AND HOSPITAL AVERAGE ANNUAL PERCENT CHANGE IN INDEX = {(1A) * .5} + (1B) * .5}.				

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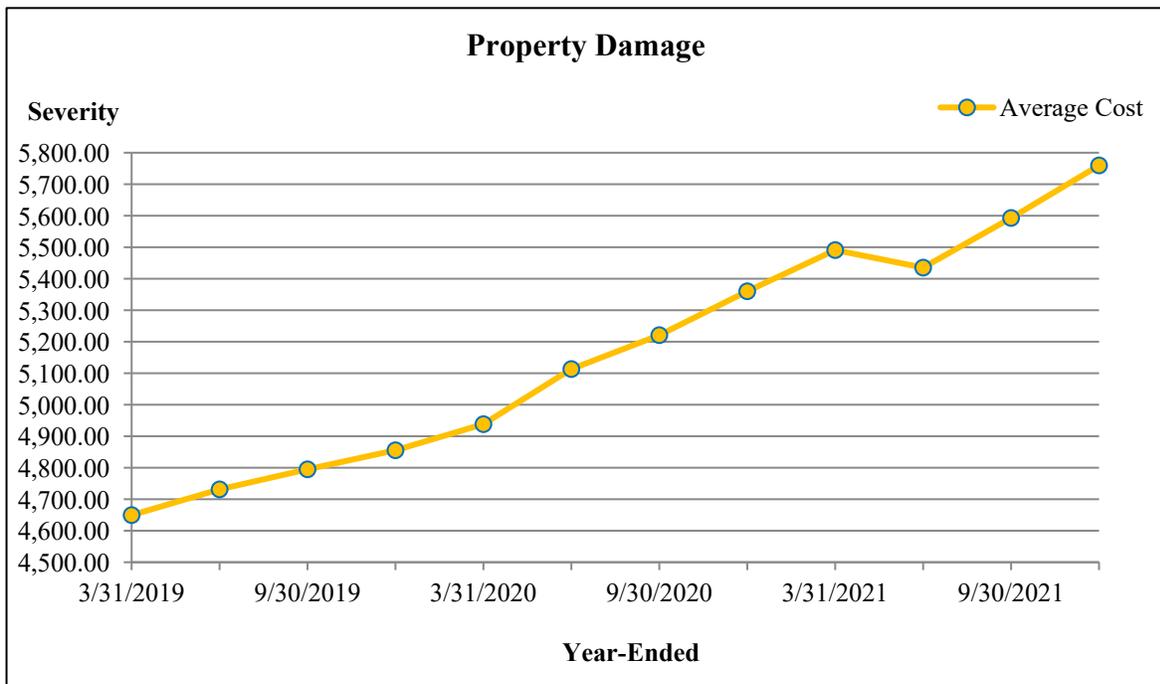
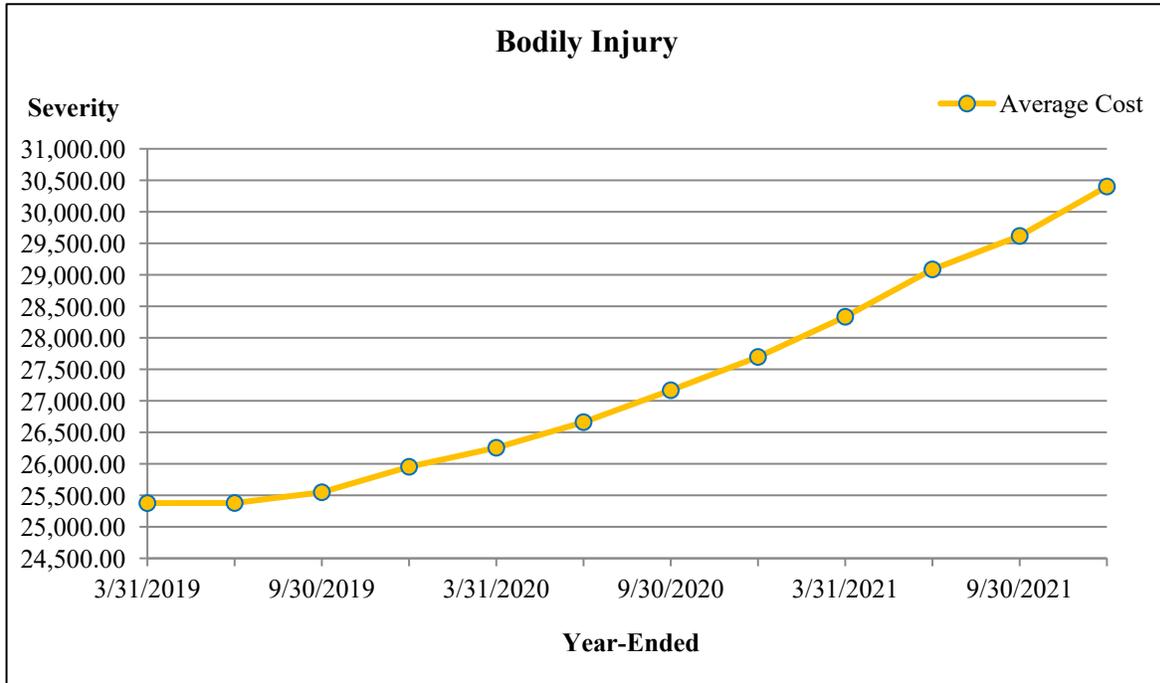
CLAIM COST TREND DATA FOR PIP  
PRIVATE PASSENGER TYPES  
NORTH DAKOTA

QUARTER ENDING	MEDICAL INDEX*		HOSPITAL AND RELATED SERVICES*		INCOME LOSSES**	
	ACTUAL	EXPONENTIAL FIT	ACTUAL	EXPONENTIAL FIT	ACTUAL	EXPONENTIAL FIT
	9/30/2019	500.0	505.2	885.0	891.8	796.03
12/31/2019	507.8	508.2	899.7	899.5	801.17	805.92
3/31/2020	513.9	511.2	913.8	907.2	806.90	817.69
6/30/2020	519.0	514.3	919.8	915.0	842.47	829.63
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3/31/2021	523.7	523.5	940.0	938.8	859.53	866.52
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3/31/2022	537.2	536.1	972.5	971.5	914.93	918.27
6/30/2022	543.9	539.3	980.8	979.8	929.67	931.68

	(A) MEDICAL	(B) HOSPITAL	(C) COMBINED+	(D) INCOME
(1) AVERAGE ANNUAL PERCENT CHANGE IN INDICES (12TH POINT/8TH POINT)	2.4%	3.5%	3.0%	6.0%
(2) AVERAGE ANNUAL PERCENT CHANGE IN CLAIM COST 0.81*(1C) + 0.19*(1D). BASED ON RESPECTIVE WEIGHT OF MEDICAL AND INCOME FROM PRICING.				3.6%
(3) SELECTED ANNUAL PERCENT CHANGE IN CLAIM FREQUENCY				0.0%
(4) AVERAGE ANNUAL PERCENT CHANGE IN CLAIM RATIOS (1.0 + (2)) * (1.0 + (3))				3.6%
* MEDICAL INDEX AND HOSPITAL AND RELATED SERVICES INDEX BASED ON CONSUMER PRICE INDEX.				
** INCOME LOST BASED ON BUREAU OF LABOR STATISTICS DATA.				
+ WEIGHT MEDICAL AND HOSPITAL AVERAGE ANNUAL PERCENT CHANGE IN INDEX = {(1A) * .5} + (1B) * .5}.				

VERISK

Commercial Automobile Liability  
Average Paid Claim Cost Experience  
Multistate\*



\*Excludes Massachusetts

## VERISK

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>
12/31/2015	0.7726		2.8416	
3/31/2016	0.7860		2.8118	
6/30/2016	0.7947		2.8096	
9/30/2016	0.8010		2.8030	
12/31/2016	0.8005	3.6% &	2.7911	-1.8% &
3/31/2017	0.8020		2.7671	
6/30/2017	0.8096		2.7603	
9/30/2017	0.8063	0.7%	2.7320	-2.5%
12/31/2017	0.8074		2.7272	
3/31/2018	0.8080		2.7408	
6/30/2018	0.8037		2.7474	
9/30/2018	0.8018	-0.6%	2.7491	0.6%
12/31/2018	0.7990		2.7511	
3/31/2019	0.7946		2.7424	
6/30/2019	0.7886		2.7048	
9/30/2019	0.7874	-1.8%	2.6948	-2.0%
12/31/2019	0.7842		2.6632	
3/31/2020	0.7579		2.5418	
6/30/2020	0.6783		2.2916	
9/30/2020	0.6322	-19.7%	2.1286	-21.0%
12/31/2020	0.5837		1.9960	
3/31/2021	0.5642		1.9558	
6/30/2021	0.6059		2.0736	
9/30/2021	0.6025	-4.7%	2.0740	-2.6%

\* EXCLUDES MASSACHUSETTS

@ CHANGE BASED ON YEARS ENDING 9/30/XXXX

&amp; CHANGE BASED ON YEAR ENDING 12/31/2016 divided by 12/31/2015

## VERISK

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>
12/31/2015	0.7971		3.0425	
3/31/2016	0.8054		3.0237	
6/30/2016	0.8085		3.0347	
9/30/2016	0.8231		3.0219	
12/31/2016	0.8073	1.3% &	2.9986	-1.4% &
3/31/2017	0.8032		2.9358	
6/30/2017	0.8047		2.9004	
9/30/2017	0.7854	-4.6%	2.8196	-6.7%
12/31/2017	0.7858		2.7929	
3/31/2018	0.7956		2.8126	
6/30/2018	0.7989		2.7637	
9/30/2018	0.7873	0.2%	2.7445	-2.7%
12/31/2018	0.7861		2.7044	
3/31/2019	0.7639		2.6544	
6/30/2019	0.7447		2.6195	
9/30/2019	0.7280	-7.5%	2.5663	-6.5%
12/31/2019	0.7206		2.5080	
3/31/2020	0.6883		2.3878	
6/30/2020	0.5917		2.0635	
9/30/2020	0.5495	-24.5%	1.8644	-27.4%
12/31/2020	0.4835		1.6413	
3/31/2021	0.4647		1.5227	
6/30/2021	0.5190		1.6886	
9/30/2021	0.5341	-2.8%	1.7189	-7.8%

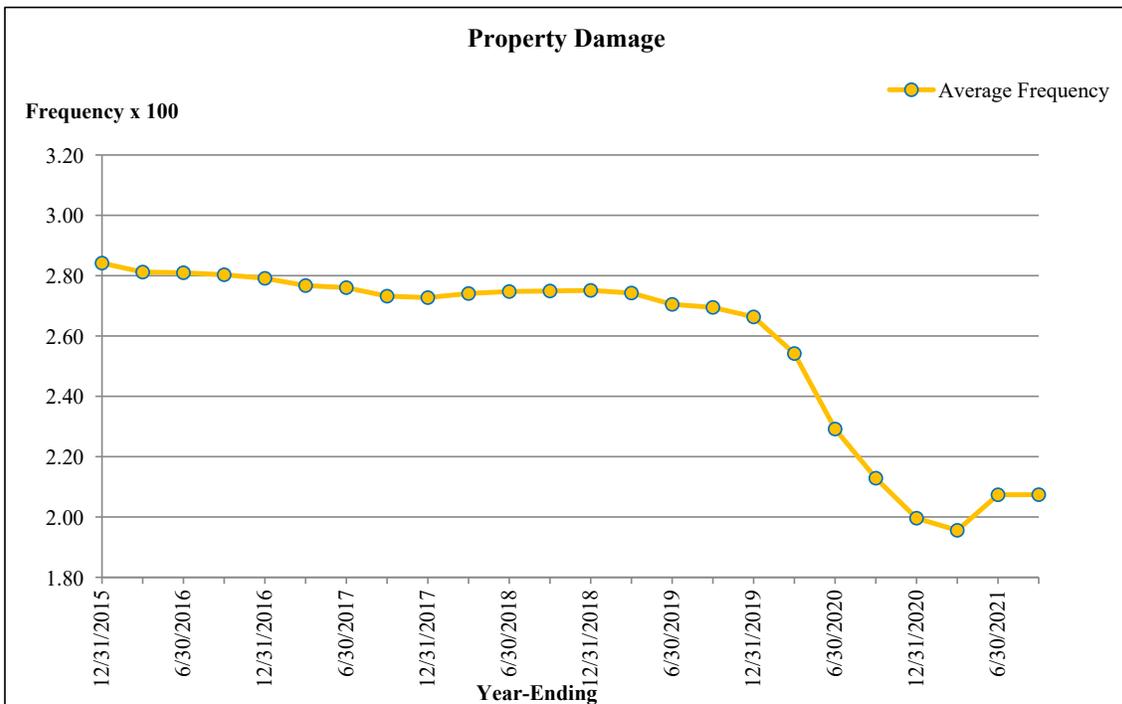
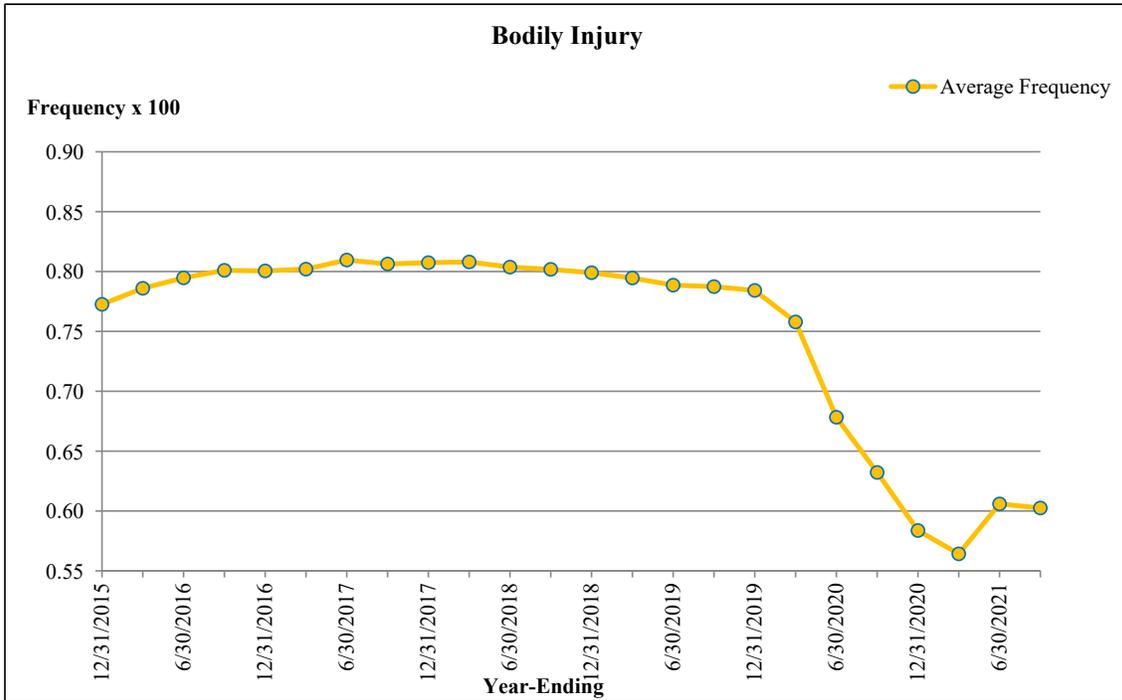
\* EXCLUDES MASSACHUSETTS

@ CHANGE BASED ON YEARS ENDING 9/30/XXXX

&amp; CHANGE BASED ON YEAR ENDING 12/31/2016 divided by 12/31/2015

VERISK

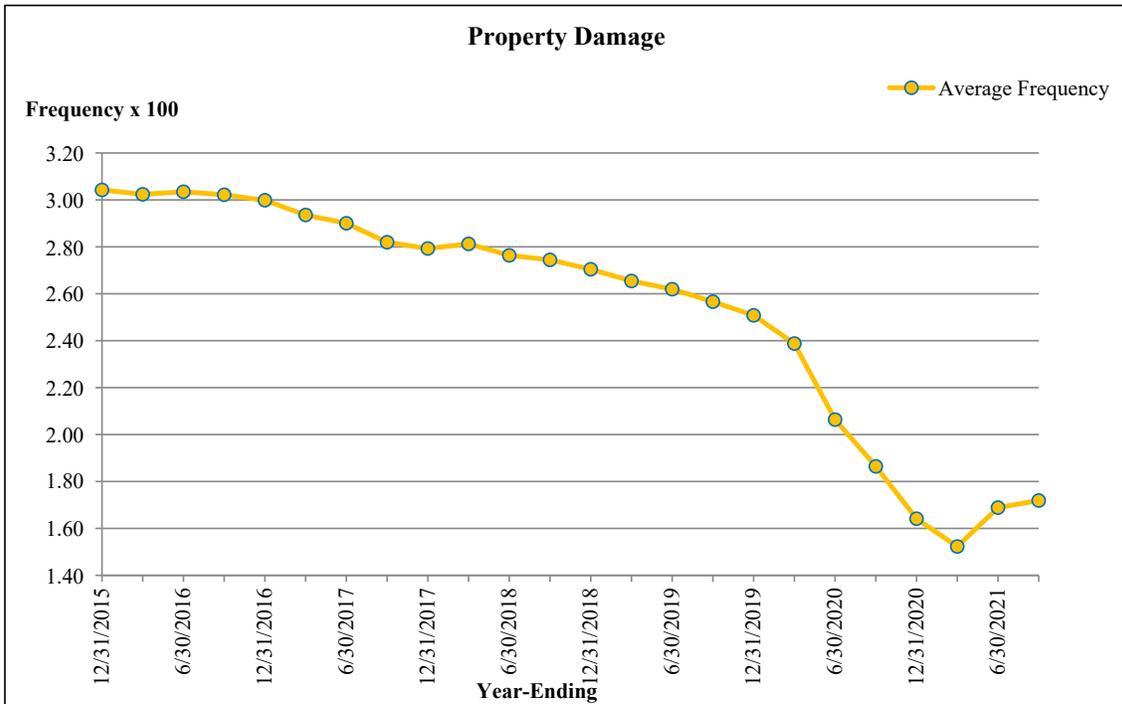
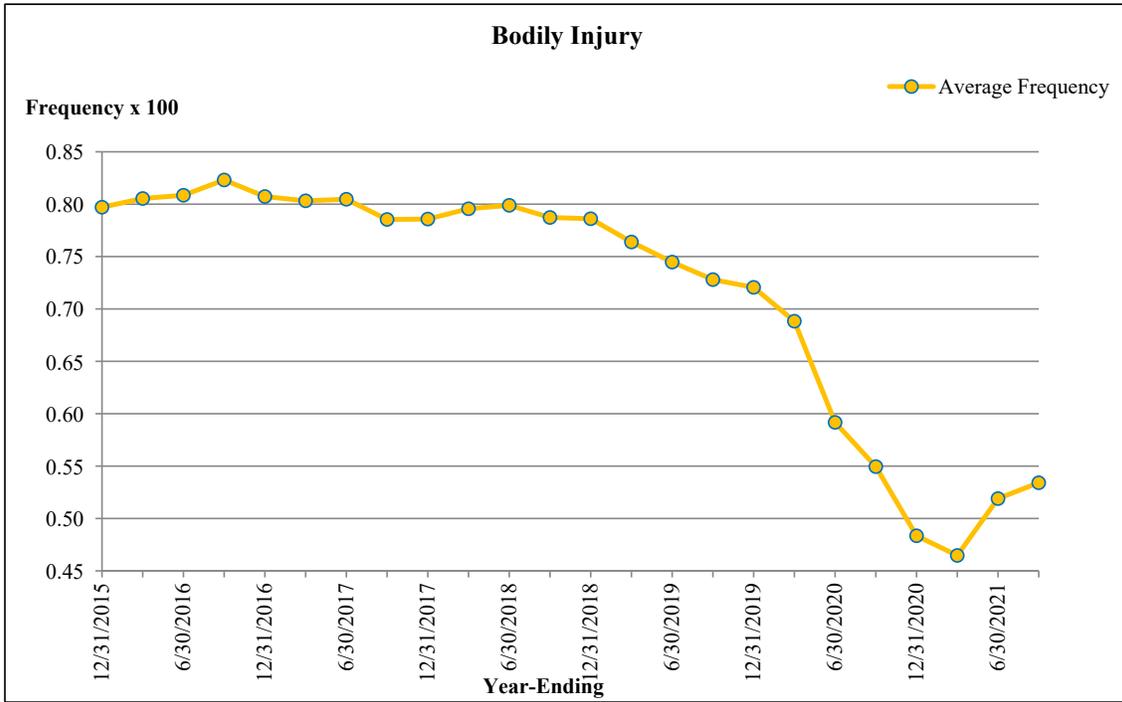
Commercial Automobile Liability  
 Incurred Claim Frequency Experience  
 Trucks, Tractors, and Trailers  
 Multistate\*



\*Excludes Massachusetts

VERISK

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



\*Excludes Massachusetts

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State Group Data\*  
Trucks, Tractors & Trailers  
Liability  
Premium Trend Calculation

Companies Not Reporting Age Code X Data

Year Ending:	Average Rating Factor
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6/30/2020	0.980
12/31/2020	0.979
6/30/2021	0.976
12/31/2021	0.983

Exponential Trend (Average Annual Change)

4 Points	0.1%
3 Points	0.4%

\* Includes Alaska, Arkansas, California, Delaware, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Michigan, Mississippi, Montana, North Dakota, Ohio, Oklahoma, Pennsylvania, Puerto Rico, South Carolina, South Dakota, Texas, Virginia, and Wyoming

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State Group Data\*  
Trucks, Tractors & Trailers  
Liability  
Premium Trend Calculation

All Companies  
Excluding 11th Preceding Model Year and Older Data

Year Ending:	Average Rating Factor
6/30/2017	1.084
12/31/2017	1.090
6/30/2018	1.097
12/31/2018	1.104
6/30/2019	1.110
12/31/2019	1.114
6/30/2020	1.117
12/31/2020	1.120
6/30/2021	1.121
12/31/2021	1.122

Exponential Trend (Average Annual Change)

9 Points	0.7%
7 Points	0.5%
5 Points	0.4%

Selected Annual Premium Trend: 0.4%

\* Includes Alaska, Arkansas, California, Delaware, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Michigan, Mississippi, Montana, North Dakota, Ohio, Oklahoma, Pennsylvania, Puerto Rico, South Carolina, South Dakota, Texas, Virginia, and Wyoming

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State Group Data\*  
 Private Passenger Types  
 Liability  
 Premium Trend Calculation

Companies Not Reporting Age Code X Data

Year Ending:	Average Rating Factor
6/30/2019	0.985
12/31/2019	0.982
6/30/2020	0.981
12/31/2020	0.979
6/30/2021	0.977
12/31/2021	0.977

Exponential Trend (Average Annual Change)

6 Points	-0.3%
5 Points	-0.3%
4 Points	-0.3%

\* Includes Alaska, Arkansas, California, Delaware, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Michigan, Mississippi, Montana, North Dakota, Ohio, Oklahoma, Pennsylvania, Puerto Rico, South Carolina, South Dakota, Texas, Virginia, and Wyoming

VERISK

State Group Data\*  
Private Passenger Types  
Liability  
Premium Trend Calculation

All Companies  
Excluding 11th Preceding Model Year and Older Data

Year Ending:	Average Rating Factor
6/30/2017	0.999
12/31/2017	1.000
6/30/2018	1.001
12/31/2018	1.002
6/30/2019	1.002
12/31/2019	1.003
6/30/2020	1.004
12/31/2020	1.004
6/30/2021	1.002
12/31/2021	1.000

Exponential Trend (Average Annual Change)

9 Points	0.0%
7 Points	0.0%
5 Points	-0.1%

Selected Annual Premium Trend: 0.0%

\* Includes Alaska, Arkansas, California, Delaware, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Michigan, Mississippi, Montana, North Dakota, Ohio, Oklahoma, Pennsylvania, Puerto Rico, South Carolina, South Dakota, Texas, Virginia, and Wyoming

VERISK

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

Frequency (expressed as claims per 100 exposures)

Year Ending:	\$500 Deductible		\$1,000 Deductible		\$2,000 Deductible	
	Value	Change**	Value	Change**	Value	Change**
3/31/2017	1.15		0.72		0.54	
6/30/2017	1.16		0.72		0.54	
9/30/2017	1.17		0.72		0.54	
12/31/2017	1.20		0.75		0.57	
3/31/2018	1.25		0.77		0.58	
6/30/2018	1.28	10.3%	0.79	9.7%	0.59	9.3%
9/30/2018	1.32		0.81		0.60	
12/31/2018	1.36	13.3%	0.83	10.7%	0.61	7.0%
3/31/2019	1.39		0.85		0.63	
6/30/2019	1.41	10.2%	0.86	8.9%	0.63	6.8%
9/30/2019	1.44		0.87		0.64	
12/31/2019	1.44	5.9%	0.87	4.8%	0.63	3.3%
3/31/2020	1.42		0.86		0.63	
6/30/2020	1.38	-2.1%	0.84	-2.3%	0.61	-3.2%
9/30/2020	1.38		0.84		0.61	
12/31/2020	1.38	-4.2%	0.85	-2.3%	0.61	-3.2%
3/31/2021	1.43		0.87		0.61	
6/30/2021	1.49	8.0%	0.89	6.0%	0.62	1.6%
9/30/2021	1.49		0.89		0.62	
12/31/2021	1.47	6.5%	0.86	1.2%	0.60	-1.6%

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

Deductible:	Percent of Losses
Full	0.6%
\$50	0.3%
\$100	2.0%
\$200	0.3%
\$250	7.3%
\$500	29.2%
\$1,000	48.8%
\$2,000	5.8%
\$3,000	2.2%
\$5,000	3.4%

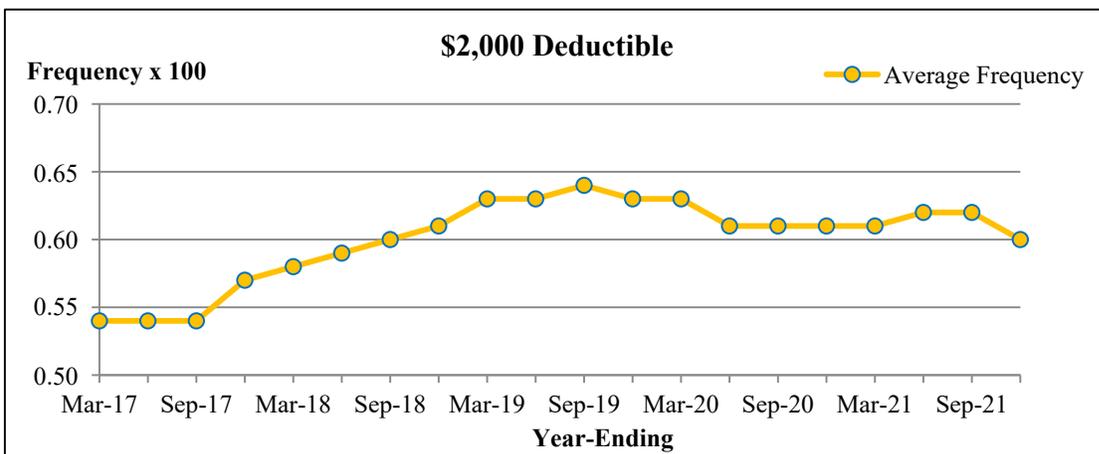
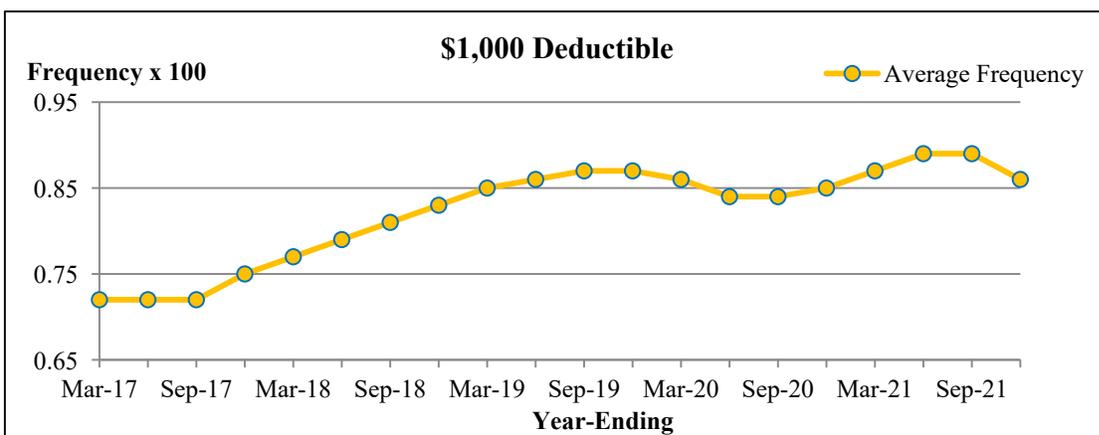
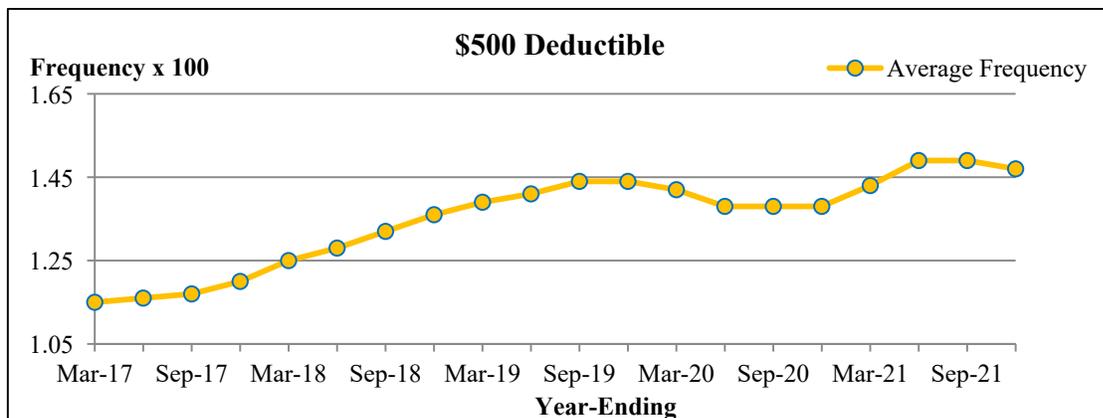
\* Multistate data excludes Massachusetts

\*\* Change based on years ending 06/30/xxx and 12/31/xxxx

\*\*\* Deductibles above \$2,000, totaling 5.6% of losses, are excluded from the trend calculations.

VERISK

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



\*Excludes Massachusetts  
Selected Other Than Collision Frequency Trend Factor: 0.0%

VERISK

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

Severity Trend

	\$500 Deductible	\$1,000 Deductible	\$2,000 Deductible
Year Ending:	Value	Value	Value
3/31/2017	2,383.15	3,651.66	4,268.31
6/30/2017	2,497.11	3,777.28	4,394.46
9/30/2017	2,628.01	3,974.99	4,634.89
12/31/2017	2,717.77	4,048.19	4,706.41
3/31/2018	2,745.52	4,102.60	4,781.84
6/30/2018	2,749.41	4,189.10	4,960.92
9/30/2018	2,719.00	4,185.34	5,016.07
12/31/2018	2,796.56	4,343.74	5,226.72
3/31/2019	2,811.24	4,382.33	5,337.76
6/30/2019	2,852.20	4,444.37	5,387.19
9/30/2019	2,885.27	4,524.08	5,446.03
12/31/2019	2,886.20	4,601.90	5,590.19
3/31/2020	2,914.21	4,560.49	5,468.39
6/30/2020	2,941.78	4,597.29	5,549.01
9/30/2020	2,967.00	4,600.35	5,560.94
12/31/2020	3,049.43	4,649.51	5,617.49
3/31/2021	3,094.63	4,731.66	5,794.58
6/30/2021	3,165.67	4,806.30	5,865.04
9/30/2021	3,383.47	5,037.47	6,180.46
12/31/2021	3,501.67	5,207.23	6,375.24

Average Annual Change Using Exponential Fits:

20 point fit:	6.1%	6.1%	7.3%
16 point fit:	5.9%	5.4%	6.3%
12 point fit:	7.4%	5.2%	5.7%

Selected severity trend:	<b>6.0%</b>
Selected frequency trend:	<b>0.0%</b>
Selected pure premium trend:	<b>6.0%</b>

\* Multistate data excludes Massachusetts

VERISK

Multistate\*  
Trucks, Tractors & Trailers Physical Damage  
Collision

Frequency (expressed as claims per 100 exposures)

Year Ending:	\$500 Deductible		\$1,000 Deductible		\$2,000 Deductible	
	Value	Change**	Value	Change**	Value	Change**
3/31/2017	2.22		1.96		1.61	
6/30/2017	2.23		1.95		1.60	
9/30/2017	2.21		1.94		1.59	
12/31/2017	2.21		1.94		1.60	
3/31/2018	2.24		1.97		1.63	
6/30/2018	2.24	0.4%	2.01	3.1%	1.66	3.7%
9/30/2018	2.27		2.03		1.68	
12/31/2018	2.27	2.7%	2.03	4.6%	1.68	5.0%
3/31/2019	2.27		2.03		1.67	
6/30/2019	2.28	1.8%	2.04	1.5%	1.68	1.2%
9/30/2019	2.29		2.04		1.68	
12/31/2019	2.29	0.9%	2.05	1.0%	1.69	0.6%
3/31/2020	2.20		1.96		1.62	
6/30/2020	2.05	-10.1%	1.81	-11.3%	1.50	-10.7%
9/30/2020	1.97		1.72		1.44	
12/31/2020	1.89	-17.5%	1.66	-19.0%	1.39	-17.8%
3/31/2021	1.92		1.67		1.41	
6/30/2021	2.02	-1.5%	1.77	-2.2%	1.49	-0.7%
9/30/2021	2.04		1.81		1.53	
12/31/2021	2.03	7.4%	1.81	9.0%	1.55	11.5%

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

Deductible:	Percent of Losses
\$100	0.1%
\$200	0.0%
\$250	0.9%
\$500	26.5%
\$1,000	57.4%
\$2,000	7.4%
\$3,000	2.4%
\$5,000	5.3%

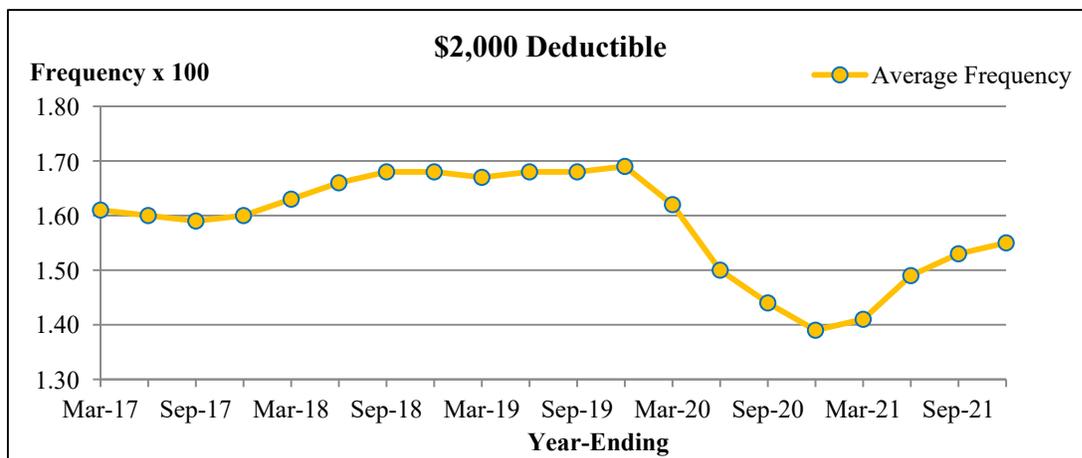
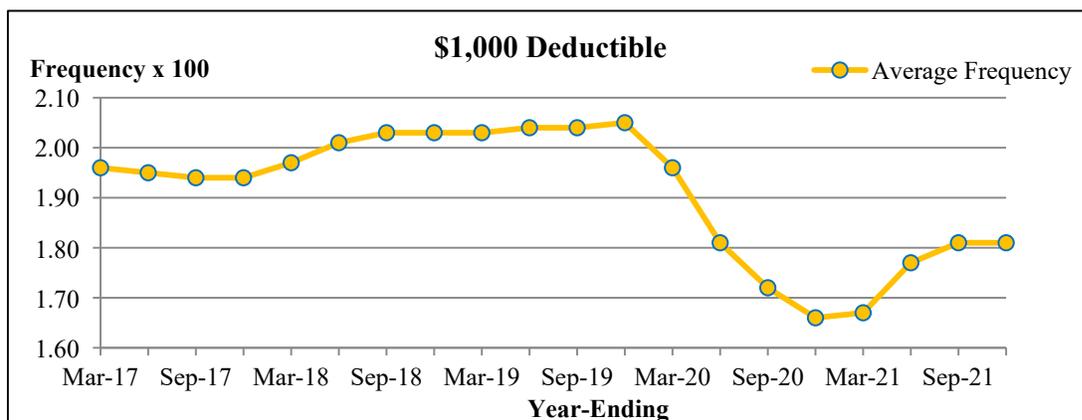
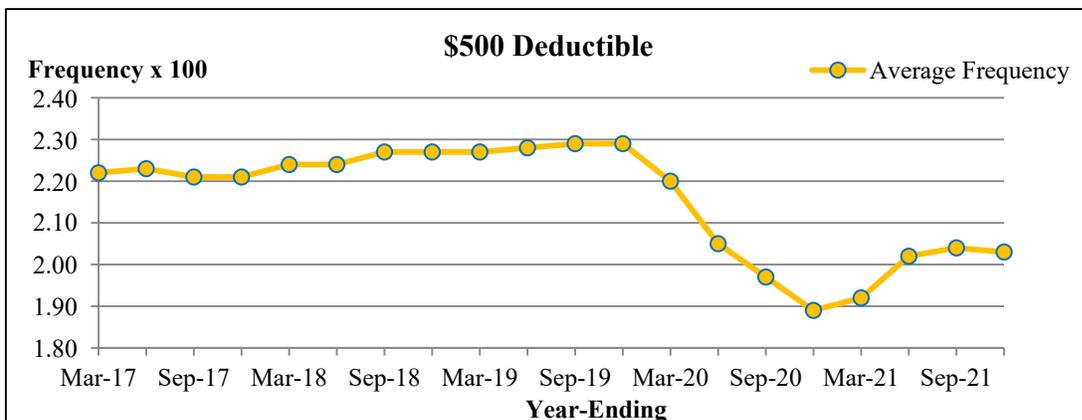
\* Multistate data excludes Massachusetts

\*\* Change based on years ending 06/30/xxx and 12/31/xxxx

\*\*\* Deductibles above \$2,000, totaling 7.7% of losses, are excluded from trend calculations.

VERISK

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



\*Excludes Massachusetts  
Selected Collision Frequency Trend Factor: 0.0%

VERISK

Multistate\*  
Trucks, Tractors & Trailers Physical Damage  
Collision

Severity Trend

	\$500 Deductible	\$1,000 Deductible	\$2,000 Deductible
Year Ending:	Value	Value	Value
3/31/2017	5,193.66	5,912.46	6,255.39
6/30/2017	5,188.58	5,962.06	6,329.55
9/30/2017	5,269.29	6,004.87	6,394.77
12/31/2017	5,329.78	6,054.25	6,435.18
3/31/2018	5,389.62	6,147.89	6,527.62
6/30/2018	5,442.13	6,190.27	6,586.05
9/30/2018	5,522.87	6,276.75	6,666.12
12/31/2018	5,549.22	6,358.84	6,769.38
3/31/2019	5,646.74	6,441.51	6,890.35
6/30/2019	5,728.65	6,583.23	7,051.94
9/30/2019	5,741.87	6,617.55	7,101.47
12/31/2019	5,802.93	6,673.84	7,157.00
3/31/2020	5,825.10	6,752.87	7,239.63
6/30/2020	5,861.40	6,791.80	7,254.75
9/30/2020	5,905.94	6,940.04	7,403.06
12/31/2020	6,001.81	7,101.45	7,587.12
3/31/2021	6,138.25	7,254.75	7,715.65
6/30/2021	6,387.42	7,522.49	8,003.51
9/30/2021	6,780.52	7,911.27	8,404.25
12/31/2021	7,262.74	8,382.00	8,855.80

Average Annual Change Using Exponential Fits:

20 point fit:	5.7%	6.4%	6.5%
16 point fit:	6.4%	7.3%	7.3%
12 point fit:	7.9%	8.8%	8.3%

Selected severity trend:	<b>7.0%</b>
Selected frequency trend:	<b>0.0%</b>
Selected pure premium trend:	<b>7.0%</b>

\* Multistate data excludes Massachusetts

VERISK

Multistate\*  
Private Passenger Types Physical Damage  
Other Than Collision

Frequency (expressed as claims per 100 exposures)

Year Ending:	\$500 Deductible		\$1,000 Deductible		\$2,000 Deductible	
	Value	Change**	Value	Change**	Value	Change**
3/31/2017	2.88		1.77		1.17	
6/30/2017	2.84		1.75		1.15	
9/30/2017	2.85		1.77		1.16	
12/31/2017	2.91		1.82		1.19	
3/31/2018	2.97		1.85		1.21	
6/30/2018	3.07	8.1%	1.90	8.6%	1.24	7.8%
9/30/2018	3.17		1.94		1.25	
12/31/2018	3.26	12.0%	1.98	8.8%	1.27	6.7%
3/31/2019	3.37		2.05		1.31	
6/30/2019	3.45	12.4%	2.11	11.1%	1.35	8.9%
9/30/2019	3.50		2.16		1.37	
12/31/2019	3.51	7.7%	2.16	9.1%	1.36	7.1%
3/31/2020	3.39		2.09		1.33	
6/30/2020	3.12	-9.6%	1.94	-8.1%	1.24	-8.1%
9/30/2020	3.05		1.91		1.24	
12/31/2020	2.96	-15.7%	1.86	-13.9%	1.21	-11.0%
3/31/2021	3.05		1.91		1.21	
6/30/2021	3.36	7.7%	2.07	6.7%	1.29	4.0%
9/30/2021	3.44		2.12		1.31	
12/31/2021	3.48	17.6%	2.11	13.4%	1.31	8.3%

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

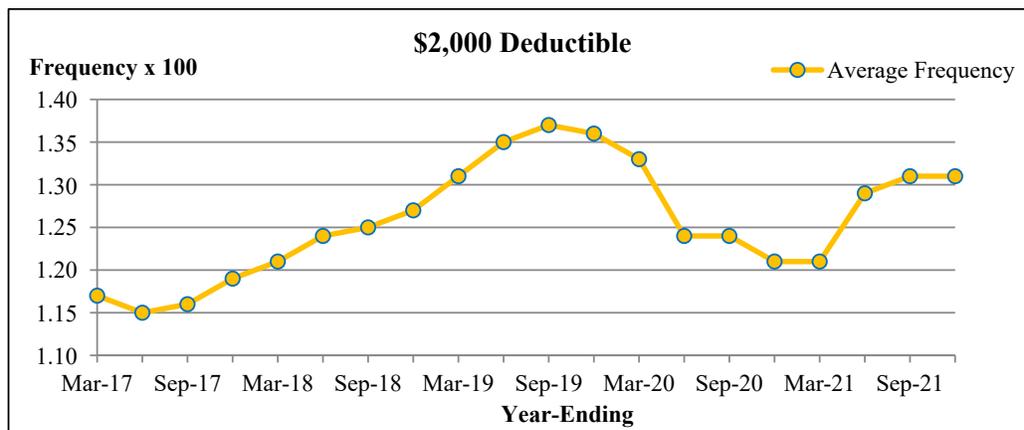
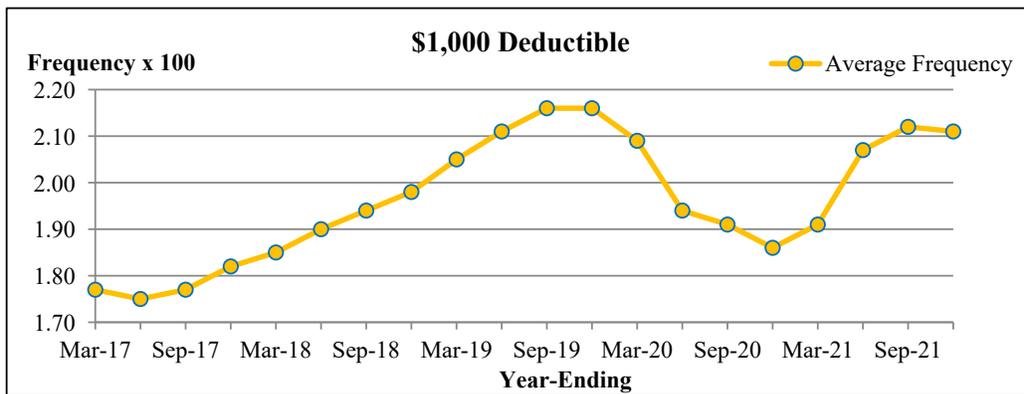
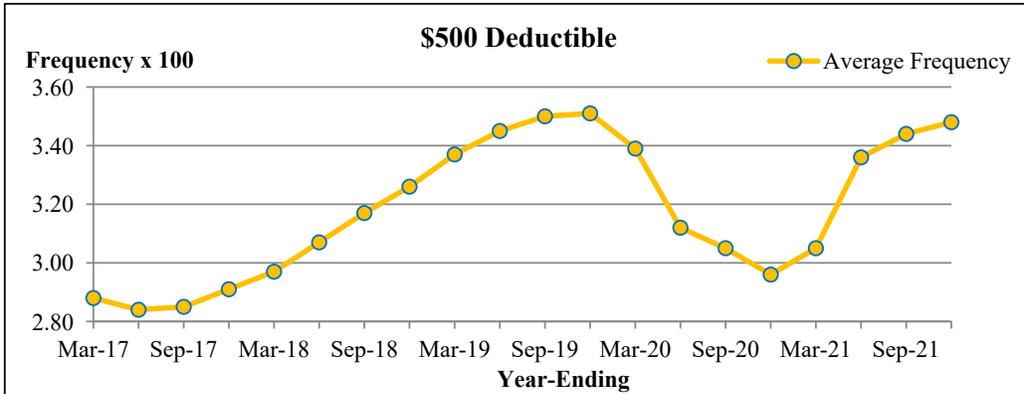
Deductible:	Percent of Losses
Full	0.6%
\$50	0.4%
\$100	2.9%
\$200	0.5%
\$250	11.0%
\$500	37.4%
\$1,000	42.3%
\$2,000	3.1%
\$3,000	0.7%
\$5,000	1.0%

\* Multistate data excludes Massachusetts

\*\* Change based on years ending 06/30/xxx and 12/31/xxxx

VERISK

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



\*Excludes Massachusetts  
Selected Other Than Collision Frequency Trend Factor: 0.0%

VERISK

Multistate\*  
Private Passenger Types Physical Damage  
Other Than Collision

Severity Trend

	\$500 Deductible	\$1,000 Deductible	\$2,000 Deductible
Year Ending:	Value	Value	Value
3/31/2017	1,770.95	2,261.95	2,702.16
6/30/2017	1,774.10	2,292.05	2,766.70
9/30/2017	1,821.13	2,389.13	2,887.63
12/31/2017	1,848.07	2,453.48	2,971.02
3/31/2018	1,836.50	2,432.22	2,949.25
6/30/2018	1,860.38	2,471.82	2,996.65
9/30/2018	1,861.26	2,447.56	2,981.21
12/31/2018	1,908.45	2,530.39	3,116.06
3/31/2019	1,936.30	2,577.88	3,178.58
6/30/2019	1,947.17	2,605.46	3,199.88
9/30/2019	1,946.70	2,646.76	3,243.78
12/31/2019	1,958.24	2,680.91	3,280.47
3/31/2020	2,015.02	2,776.78	3,384.51
6/30/2020	2,094.01	2,821.09	3,456.20
9/30/2020	2,179.49	2,877.59	3,521.47
12/31/2020	2,248.34	2,896.07	3,536.12
3/31/2021	2,238.00	2,854.19	3,521.34
6/30/2021	2,245.35	2,899.21	3,594.81
9/30/2021	2,299.96	2,974.85	3,689.05
12/31/2021	2,327.25	3,044.31	3,804.73

Average Annual Change Using Exponential Fits:

20 point fit:	6.2%	6.1%	6.8%
16 point fit:	7.1%	6.2%	6.8%
12 point fit:	8.1%	5.9%	6.5%

Selected severity trend:	<b>6.5%</b>
Selected frequency trend:	<b>0.0%</b>
Selected pure premium trend:	<b>6.5%</b>

\* Multistate data excludes Massachusetts

VERISK

Multistate\*  
Private Passenger Types Physical Damage  
Collision

Frequency (expressed as claims per 100 exposures)

Year Ending:	\$500 Deductible		\$1,000 Deductible		\$2,000 Deductible	
	Value	Change**	Value	Change**	Value	Change**
3/31/2017	4.71		4.13		3.10	
6/30/2017	4.74		4.13		3.11	
9/30/2017	4.68		4.08		3.08	
12/31/2017	4.70		4.10		3.10	
3/31/2018	4.80		4.18		3.18	
6/30/2018	4.78	0.8%	4.19	1.5%	3.19	2.6%
9/30/2018	4.83		4.25		3.24	
12/31/2018	4.80	2.1%	4.24	3.4%	3.24	4.5%
3/31/2019	4.76		4.24		3.24	
6/30/2019	4.75	-0.6%	4.25	1.4%	3.28	2.8%
9/30/2019	4.75		4.24		3.26	
12/31/2019	4.69	-2.3%	4.25	0.2%	3.26	0.6%
3/31/2020	4.45		4.03		3.10	
6/30/2020	3.95	-16.8%	3.52	-17.2%	2.73	-16.8%
9/30/2020	3.66		3.24		2.55	
12/31/2020	3.34	-28.8%	2.90	-31.8%	2.33	-28.5%
3/31/2021	3.23		2.80		2.28	
6/30/2021	3.53	-10.6%	3.08	-12.5%	2.51	-8.1%
9/30/2021	3.56		3.15		2.58	
12/31/2021	3.57	6.9%	3.21	10.7%	2.66	14.2%

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

Deductible:	Percent of Losses
\$100	0.2%
\$200	0.0%
\$250	1.3%
\$500	34.3%
\$1,000	57.9%
\$2,000	4.3%
\$3,000	0.7%
\$5,000	1.3%

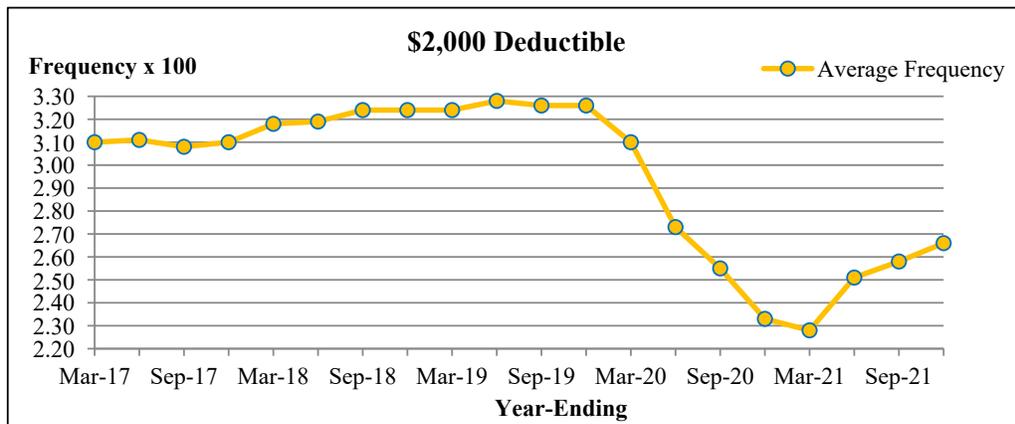
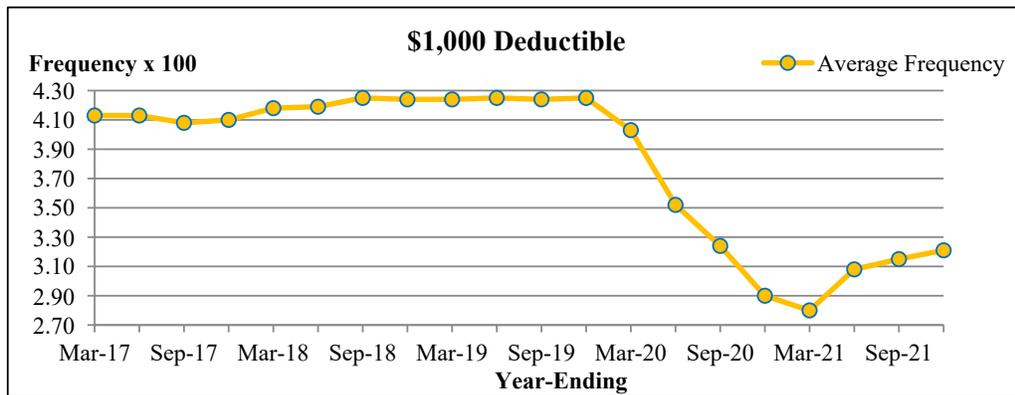
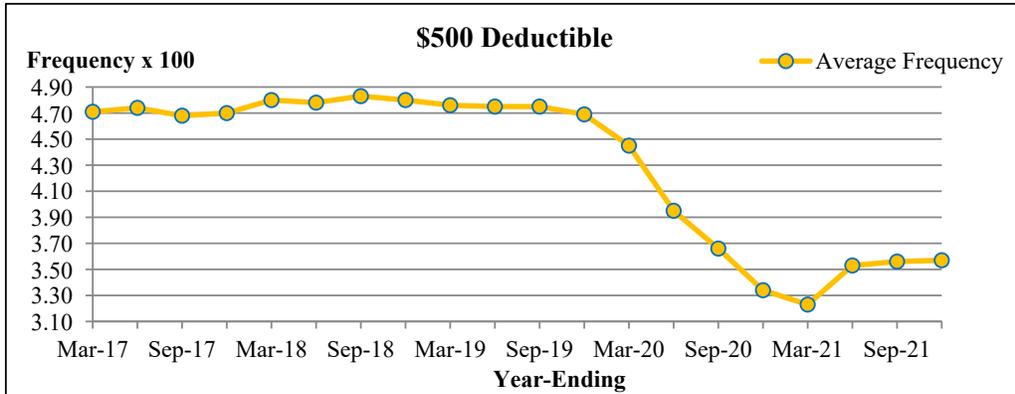
\* Multistate data excludes Massachusetts

\*\* Change based on years ending 06/30/xxx and 12/31/xxxx

\*\*\* Deductibles above \$2,000, totaling 2.0% of losses, are excluded from trend calculations.

VERISK

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



\*Excludes Massachusetts  
Selected Collision Frequency Trend Factor: 0.0%

VERISK

Multistate\*  
Private Passenger Types Physical Damage  
Collision

Severity Trend

	\$500 Deductible	\$1,000 Deductible	\$2,000 Deductible
Year Ending:	Value	Value	Value
3/31/2017	4,318.08	4,732.68	5,165.13
6/30/2017	4,348.34	4,756.19	5,189.39
9/30/2017	4,354.11	4,801.22	5,237.39
12/31/2017	4,434.24	4,881.47	5,332.25
3/31/2018	4,502.37	4,929.23	5,357.69
6/30/2018	4,628.25	5,014.85	5,449.64
9/30/2018	4,641.31	5,041.66	5,489.78
12/31/2018	4,570.36	5,015.12	5,441.35
3/31/2019	4,653.15	5,099.24	5,544.43
6/30/2019	4,609.01	5,121.12	5,542.18
9/30/2019	4,760.34	5,166.30	5,597.15
12/31/2019	4,917.24	5,294.78	5,767.38
3/31/2020	4,980.26	5,362.73	5,841.96
6/30/2020	5,126.63	5,460.16	5,937.86
9/30/2020	5,097.52	5,560.22	5,957.28
12/31/2020	5,183.19	5,723.86	6,043.48
3/31/2021	5,256.19	5,866.37	6,174.73
6/30/2021	5,457.91	6,100.90	6,449.45
9/30/2021	5,796.27	6,409.98	6,828.12
12/31/2021	6,206.69	6,784.81	7,248.56

Average Annual Change Using Exponential Fits:

20 point fit:	6.6%	6.7%	6.0%
16 point fit:	7.5%	7.9%	7.0%
12 point fit:	9.7%	10.4%	9.2%

Selected severity trend:	<b>7.0%</b>
Selected frequency trend:	<b>0.0%</b>
Selected pure premium trend:	<b>7.0%</b>

\* Multistate data excludes Massachusetts

VERISK

State Group Data\*  
Trucks, Tractors & Trailers  
Physical Damage  
Vehicle Value Factor Trend Calculation

Companies Not Reporting Age Code X Data

Average Vehicle Value Factor

Year Ending:	Other Than Collision	Collision
6/30/2020	1.080	0.780
12/31/2020	1.091	0.805
6/30/2021	1.066	0.847
12/31/2021	1.090	0.891

Exponential Trend (Average Annual Change)

4 Points	0.1%	9.5%
3 Points	-0.1%	10.7%

\* Includes Alaska, Arkansas, California, Delaware, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Michigan, Mississippi, Montana, North Dakota, Ohio, Oklahoma, Pennsylvania, Puerto Rico, South Carolina, South Dakota, Texas, Virginia, and Wyoming

VERISK

State Group Data\*  
Trucks, Tractors & Trailers  
Physical Damage  
Vehicle Value Factor Trend Calculation

All Companies  
Excluding 11th Preceding Model Year and Older Data

Average Vehicle Value Factor

Year Ending:	Other Than Collision	Collision
6/30/2017	0.978	0.819
12/31/2017	0.994	0.837
6/30/2018	1.009	0.853
12/31/2018	1.022	0.867
6/30/2019	1.035	0.880
12/31/2019	1.046	0.890
6/30/2020	1.055	0.896
12/31/2020	1.060	0.896
6/30/2021	1.064	0.893
12/31/2021	1.069	0.892

Exponential Trend (Average Annual Change)

9 Points	1.8%	1.6%
7 Points	1.5%	0.9%
5 Points	1.0%	0.0%
Selected Annual VVF Trend:	1.5%	2.5%

\* Includes Alaska, Arkansas, California, Delaware, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Michigan, Mississippi, Montana, North Dakota, Ohio, Oklahoma, Pennsylvania, Puerto Rico, South Carolina, South Dakota, Texas, Virginia, and Wyoming

VERISK

State Group Data\*  
 Private Passenger Types  
 Physical Damage  
 Vehicle Value Factor Trend Calculation

Companies Not Reporting Age Code X Data

Average Vehicle Value Factor

Year Ending:	Other Than Collision	Collision
6/30/2019	0.956	0.835
12/31/2019	0.973	0.829
6/30/2020	0.975	0.822
12/31/2020	0.980	0.812
6/30/2021	0.986	0.815
12/31/2021	1.007	0.852

Exponential Trend (Average Annual Change)

6 Points	1.7%	0.2%
5 Points	1.6%	1.0%
4 Points	2.0%	2.3%

\* Includes Alaska, Arkansas, California, Delaware, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Michigan, Mississippi, Montana, North Dakota, Ohio, Oklahoma, Pennsylvania, Puerto Rico, South Carolina, South Dakota, Texas, Virginia, and Wyoming

VERISK

State Group Data\*  
 Private Passenger Types  
 Physical Damage  
 Vehicle Value Factor Trend Calculation

All Companies  
 Excluding 11th Preceding Model Year and Older Data

Average Vehicle Value Factor

Year Ending:	Other Than Collision	Collision
6/30/2017	1.019	0.926
12/31/2017	1.026	0.930
6/30/2018	1.036	0.935
12/31/2018	1.051	0.941
6/30/2019	1.062	0.943
12/31/2019	1.073	0.949
6/30/2020	1.087	0.957
12/31/2020	1.102	0.962
6/30/2021	1.117	0.966
12/31/2021	1.131	0.972

Exponential Trend (Average Annual Change)

9 Points	2.5%	1.1%
7 Points	2.5%	1.2%
5 Points	2.7%	1.2%
Selected Annual VVF Trend:	2.2%	1.0%

\* Includes Alaska, Arkansas, California, Delaware, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Michigan, Mississippi, Montana, North Dakota, Ohio, Oklahoma, Pennsylvania, Puerto Rico, South Carolina, South Dakota, Texas, Virginia, and Wyoming

VERISK

NORTH DAKOTA  
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
12/31/2010	1,312,646	1,308,728	1,411,812	0.997	1.079
12/31/2011	1,688,512	1,820,413	2,002,294	1.078	1.100
12/31/2012	1,375,592	1,537,190	1,471,971	1.117	0.958
12/31/2013	1,616,402	2,021,065	1,955,396	1.250	0.968
12/31/2014	1,130,112	1,108,841	1,398,084	0.981	1.261
12/31/2015	1,417,537	1,651,637	1,640,928	1.165	0.994
12/31/2016	1,330,674	1,078,694	1,195,236	0.811	1.108
12/31/2017	1,688,592	1,314,030	1,407,893	0.778	1.071
12/31/2018	1,284,218	1,233,533	1,399,703	0.961	1.135
12/31/2019	977,406	1,297,581	1,644,724	1.328	1.268
12/31/2020	930,732	764,004		0.821	
12/31/2021	935,872				

(1) Average Factor (Best 3 of 5) :	(A) State	0.864	1.105
	(B) Multistate	1.398	1.166
(2) Credibility		0.780	0.560
(3) Credibility Weighted Factors		0.981	1.132

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
12/31/2010	2,026,477	1,940,941	1,985,671	0.958	1.023
12/31/2011	2,917,071	2,982,908	3,026,030	1.023	1.014
12/31/2012	3,464,021	3,575,645	3,674,960	1.032	1.028
12/31/2013	3,047,509	3,250,684	3,199,671	1.067	0.984
12/31/2014	3,444,799	3,646,683	3,698,577	1.059	1.014
12/31/2015	3,005,824	3,113,151	3,078,642	1.036	0.989
12/31/2016	2,203,198	2,247,902	2,261,057	1.020	1.006
12/31/2017	2,113,288	2,135,742	2,099,815	1.011	0.983
12/31/2018	2,392,076	2,598,307	2,579,764	1.086	0.993
12/31/2019	2,632,030	2,833,647	2,838,644	1.077	1.002
12/31/2020	1,973,228	1,958,351		0.992	
12/31/2021	1,718,169				

(1) Average Factor (Best 3 of 5) :	(A) State	1.036	0.995
	(B) Multistate	1.050	1.010
(2) Credibility		0.820	0.000
(3) Credibility Weighted Factors		1.039	1.010

Summary of Factors

	Bodily Injury	Property Damage
39 to Ultimate **	1.102	1.005
27 to Ultimate	1.247	1.015
15 to Ultimate	1.223	1.055

\*\* Multistate factors

VERISK

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

Accident Year Ending	\$100,000 Basic Limit				
	15 Months	27 Months	39 Months	51 Months	63 Months
12/31/2010	119,738,260	165,819,387	188,600,502	201,148,710	205,281,870
12/31/2011	130,380,740	177,238,151	203,726,086	217,589,490	221,667,284
12/31/2012	126,219,920	179,937,936	206,287,308	217,322,351	220,498,920
12/31/2013	135,609,371	188,306,717	217,494,063	235,204,730	240,605,555
12/31/2014	143,255,220	198,913,277	232,052,779	246,166,932	251,282,802
12/31/2015	148,395,105	219,144,582	252,923,929	267,729,463	273,127,285
12/31/2016	168,745,437	233,246,579	273,477,708	291,452,528	297,856,646
12/31/2017	171,948,658	240,806,934	282,490,796	300,626,818	305,386,668
12/31/2018	185,679,021	261,913,036	309,321,219	327,454,643	
12/31/2019	193,836,296	273,497,135	313,548,984		
12/31/2020	159,722,045	206,185,410			
12/31/2021	175,935,657				

Ratios

Accident Year Ending	27:15	39:27	51:39	63:51
12/31/2010	1.385	1.137	1.067	1.021
12/31/2011	1.359	1.149	1.068	1.019
12/31/2012	1.426	1.146	1.053	1.015
12/31/2013	1.389	1.155	1.081	1.023
12/31/2014	1.389	1.167	1.061	1.021
12/31/2015	1.477	1.154	1.059	1.020
12/31/2016	1.382	1.172	1.066	1.022
12/31/2017	1.400	1.173	1.064	1.016
12/31/2018	1.411	1.181	1.059	
12/31/2019	1.411	1.146		
12/31/2020	1.291			
Average Factor: ( Best 3 of 5 )	1.398	1.166	1.061	1.021

Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.017
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.038
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.102
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.285
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.796

VERISK

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

Accident Year Ending	\$100,000 Basic Limit				
	75 Months	87 Months	99 Months	111 Months	123 Months
12/31/2010	205,988,801	206,654,357	206,918,868	207,387,938	207,564,760
12/31/2011	222,662,154	222,720,902	223,264,888	223,533,076	223,734,923
12/31/2012	222,095,209	223,123,251	223,200,010	223,089,446	223,152,399
12/31/2013	243,229,612	243,905,041	244,542,830	244,866,163	
12/31/2014	254,520,197	254,889,865	255,865,356		
12/31/2015	274,718,640	276,091,281			
12/31/2016	301,227,013				

Ratios

Accident Year Ending	75:63	87:75	99:87	111:99	123:111
12/31/2010	1.003	1.003	1.001	1.002	1.001
12/31/2011	1.004	1.000	1.002	1.001	1.001
12/31/2012	1.007	1.005	1.000	1.000	1.000
12/31/2013	1.011	1.003	1.003	1.001	
12/31/2014	1.013	1.001	1.004		
12/31/2015	1.006	1.005			
12/31/2016	1.011				
Average Factor: ( Best 3 of 5 )	1.010	1.003	1.002	1.001	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)	=	1.002
87 to Ult:	(99:87) (111:99) (123:111) (123:Ult)	=	1.004
75 to Ult:	(87:75) (99:87) (111:99) (123:111) (123:Ult)	=	1.007

VERISK

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

Accident Year Ending	\$100,000 Basic Limit				
	15 Months	27 Months	39 Months	51 Months	63 Months
12/31/2010	363,253,090	375,128,801	377,852,210	378,963,847	378,633,196
12/31/2011	395,390,670	408,662,563	411,171,067	412,286,856	412,936,177
12/31/2012	397,054,819	411,062,404	414,151,229	414,582,426	414,858,860
12/31/2013	417,462,389	431,704,647	436,616,901	437,033,758	437,931,610
12/31/2014	446,412,826	466,855,938	469,278,939	470,587,268	471,191,087
12/31/2015	487,125,018	506,508,333	512,212,794	513,071,465	514,477,002
12/31/2016	514,805,927	538,460,263	543,187,935	545,364,372	545,682,165
12/31/2017	531,750,871	557,582,237	562,649,144	563,836,456	564,015,921
12/31/2018	571,569,455	604,559,095	611,451,182	612,732,031	
12/31/2019	594,742,524	621,130,358	624,748,578		
12/31/2020	451,943,038	476,238,541			
12/31/2021	543,209,758				

Ratios

Accident Year Ending	27:15	39:27	51:39	63:51
12/31/2010	1.033	1.007	1.003	0.999
12/31/2011	1.034	1.006	1.003	1.002
12/31/2012	1.035	1.008	1.001	1.001
12/31/2013	1.034	1.011	1.001	1.002
12/31/2014	1.046	1.005	1.003	1.001
12/31/2015	1.040	1.011	1.002	1.003
12/31/2016	1.046	1.009	1.004	1.001
12/31/2017	1.049	1.009	1.002	1.000
12/31/2018	1.058	1.011	1.002	
12/31/2019	1.044	1.006		
12/31/2020	1.054			
Average Factor: ( Best 3 of 5 )	1.050	1.010	1.002	1.001

Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.002
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.003
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.005
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.015
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.066

VERISK

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

Accident Year Ending	\$100,000 Basic Limit			
	75 Months	87 Months	99 Months	111 Months
12/31/2010	380,294,286	380,368,666	380,511,017	380,717,685
12/31/2011	412,759,335	412,987,897	413,118,800	413,217,811
12/31/2012	415,671,996	416,143,788	416,264,695	416,371,584
12/31/2013	437,998,115	438,325,423	438,382,258	438,204,304
12/31/2014	471,684,770	471,466,334	471,790,710	
12/31/2015	515,059,715	515,640,156		
12/31/2016	546,287,067			

Ratios

Accident Year Ending	75:63	87:75	99:87	111:99
12/31/2010	1.004	1.000	1.000	1.001
12/31/2011	1.000	1.001	1.000	1.000
12/31/2012	1.002	1.001	1.000	1.000
12/31/2013	1.000	1.001	1.000	1.000
12/31/2014	1.001	1.000	1.001	
12/31/2015	1.001	1.001		
12/31/2016	1.001			
Average Factor: ( Best 3 of 5 )	1.001	1.001	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)	=	1.001

VERISK

NORTH DAKOTA  
 No-Fault Insurance - Trucks, Tractors and Trailers (A)  
 Loss Development

Accident Year	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>
12/31/2012	331,422	309,516	301,349	298,555	298,411
12/31/2013	548,080	503,057	479,581	496,725	504,525
12/31/2014	347,269	293,341	308,496	309,311	309,254
12/31/2015	336,168	353,313	381,259	383,974	383,599
12/31/2016	318,849	329,761	322,466	322,466	322,466
12/31/2017	252,032	222,685	214,220	214,220	214,220
12/31/2018	194,198	178,763	168,763	168,763	
12/31/2019	282,695	244,556	245,397		
12/31/2020	323,297	228,449			
12/31/2021	71,150				

Ratios

Accident Year	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2012	0.934	0.974	0.991	1.000
12/31/2013	0.918	0.953	1.036	1.016
12/31/2014	0.845	1.052	1.003	1.000
12/31/2015	1.051	1.079	1.007	0.999
12/31/2016	1.034	0.978	1.000	1.000
12/31/2017	0.884	0.962	1.000	1.000
12/31/2018	0.921	0.944	1.000	
12/31/2019	0.865	1.003		
12/31/2020	0.707			

Average Factor:

(Best 3 of 5)	0.890	0.981	1.001	1.000
(Latest 3)	0.831	0.970	1.000	1.000
(Latest 5)	0.882	0.993	1.002	1.003

Selected Factor:

0.890	0.981	1.001	1.000
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Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.000
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.000
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.001
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	0.982
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	0.874

(A) Includes Basic Benefits Losses.

VERISK

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

Accident Year Ending	\$100,000 Basic Limit			Loss Development Factors	
	15 Months	27 Months	39 Months	15 to 27 Months	27 to 39 Months
12/31/2010	127,977	159,055	80,458	1.243	0.506
12/31/2011	151,193	136,857	134,895	0.905	0.986
12/31/2012	58,174	28,621	31,465	0.492	1.099
12/31/2013	16,003	27,290	27,290	1.705	1.000
12/31/2014	114,032	195,785	202,962	1.717	1.037
12/31/2015	135,202	106,054	106,054	0.784	1.000
12/31/2016	60,511	80,011	92,511	1.322	1.156
12/31/2017	51,570	61,099	86,506	1.185	1.416
12/31/2018	117,443	107,250	215,214	0.913	2.007
12/31/2019	62,328	71,235	154,888	1.143	2.174
12/31/2020	31,205	28,205		0.904	
12/31/2021	53,999				

(1) Average Factor (Best 3 of 5) :	(A) State	1.080	1.526
	(B) Multistate	1.452	1.170
(2) Credibility		0.230	0.120
(3) Credibility Weighted Factors		1.366	1.213

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
12/31/2010	185,005	179,588	192,010	0.971	1.069
12/31/2011	160,777	176,809	162,879	1.100	0.921
12/31/2012	308,769	355,154	351,546	1.150	0.990
12/31/2013	242,471	216,834	216,834	0.894	1.000
12/31/2014	239,617	246,925	246,925	1.030	1.000
12/31/2015	216,406	236,867	236,867	1.095	1.000
12/31/2016	248,070	246,158	246,158	0.992	1.000
12/31/2017	226,491	228,501	228,501	1.009	1.000
12/31/2018	125,880	131,882	131,882	1.048	1.000
12/31/2019	208,344	222,018	222,018	1.066	1.000
12/31/2020	130,344	131,334		1.008	
12/31/2021	189,470				

(1) Average Factor (Best 3 of 5) :	(A) State	1.022	1.000
	(B) Multistate	1.048	1.008
(2) Credibility		0.440	0.000
(3) Credibility Weighted Factors		1.037	1.008

Summary of Factors

	Bodily Injury	Property Damage
39 to Ultimate **	1.083	1.004
27 to Ultimate	1.314	1.012
15 to Ultimate	1.795	1.049

\*\* Multistate factors

VERISK

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

Accident Year Ending	\$100,000 Basic Limit				
	15 Months	27 Months	39 Months	51 Months	63 Months
12/31/2010	35,011,000	49,525,577	55,609,471	59,684,249	61,674,992
12/31/2011	34,835,820	50,150,194	56,462,285	59,199,384	60,522,982
12/31/2012	38,188,322	51,165,520	60,830,751	64,276,713	65,953,054
12/31/2013	37,697,244	53,346,387	60,748,136	66,511,687	68,424,432
12/31/2014	36,017,482	51,651,792	61,145,636	64,465,008	65,432,725
12/31/2015	33,986,744	50,097,137	57,405,057	60,907,863	62,273,221
12/31/2016	38,860,532	53,248,369	62,773,705	66,762,467	67,407,971
12/31/2017	34,932,604	49,796,653	58,219,404	62,045,378	62,853,658
12/31/2018	33,044,180	49,188,262	58,190,601	62,241,416	
12/31/2019	32,235,876	48,118,477	55,850,116		
12/31/2020	21,706,985	31,295,131			
12/31/2021	26,398,585				

Ratios

Accident Year Ending	27:15	39:27	51:39	63:51
12/31/2010	1.415	1.123	1.073	1.033
12/31/2011	1.440	1.126	1.048	1.022
12/31/2012	1.340	1.189	1.057	1.026
12/31/2013	1.415	1.139	1.095	1.029
12/31/2014	1.434	1.184	1.054	1.015
12/31/2015	1.474	1.146	1.061	1.022
12/31/2016	1.370	1.179	1.064	1.010
12/31/2017	1.426	1.169	1.066	1.013
12/31/2018	1.489	1.183	1.070	
12/31/2019	1.493	1.161		
12/31/2020	1.442			
Average Factor: ( Best 3 of 5 )	1.452	1.170	1.064	1.017

Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.001
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.018
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.083
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.267
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.840

VERISK

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

Accident Year Ending	\$100,000 Basic Limit				
	<u>75 Months</u>	<u>87 Months</u>	<u>99 Months</u>	<u>111 Months</u>	<u>123 Months</u>
12/31/2010	61,876,013	61,957,654	61,891,461	61,969,273	61,915,244
12/31/2011	60,475,325	60,547,775	60,540,456	60,405,385	60,451,738
12/31/2012	66,733,950	66,422,040	66,302,736	66,227,972	66,141,622
12/31/2013	68,001,550	67,952,614	68,041,851	68,004,249	
12/31/2014	65,799,612	66,060,470	66,092,464		
12/31/2015	62,732,404	62,709,297			
12/31/2016	66,929,835				

Ratios

Accident Year Ending	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>	<u>123:111</u>
12/31/2010	1.003	1.001	0.999	1.001	0.999
12/31/2011	0.999	1.001	1.000	0.998	1.001
12/31/2012	1.012	0.995	0.998	0.999	0.999
12/31/2013	0.994	0.999	1.001	0.999	
12/31/2014	1.006	1.004	1.000		
12/31/2015	1.007	1.000			
12/31/2016	0.993				
Average Factor: ( Best 3 of 5 )	1.002	1.000	1.000	0.999	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)	=	0.999
87 to Ult:	(99:87) (111:99) (123:111) (123:Ult)	=	0.999
75 to Ult:	(87:75) (99:87) (111:99) (123:111) (123:Ult)	=	0.999

VERISK

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

Accident Year Ending	\$100,000 Basic Limit				
	15 Months	27 Months	39 Months	51 Months	63 Months
12/31/2010	85,598,807	88,581,044	88,839,113	89,016,543	89,004,570
12/31/2011	91,603,582	94,528,429	94,944,002	95,387,876	95,704,397
12/31/2012	94,922,400	98,595,914	99,334,110	99,623,906	99,588,369
12/31/2013	95,114,132	99,243,815	99,983,096	100,151,373	100,207,433
12/31/2014	94,446,294	98,913,777	99,396,711	99,800,188	99,913,351
12/31/2015	97,803,033	101,980,821	102,627,480	102,962,405	103,123,738
12/31/2016	101,082,198	105,499,678	106,486,159	106,469,788	106,620,833
12/31/2017	96,381,696	101,248,370	102,193,292	102,387,256	102,347,373
12/31/2018	100,380,741	105,170,192	105,959,838	106,302,274	
12/31/2019	95,499,436	100,220,198	100,737,682		
12/31/2020	57,824,097	60,578,653			
12/31/2021	67,385,001				

Ratios

Accident Year Ending	27:15	39:27	51:39	63:51
12/31/2010	1.035	1.003	1.002	1.000
12/31/2011	1.032	1.004	1.005	1.003
12/31/2012	1.039	1.007	1.003	1.000
12/31/2013	1.043	1.007	1.002	1.001
12/31/2014	1.047	1.005	1.004	1.001
12/31/2015	1.043	1.006	1.003	1.002
12/31/2016	1.044	1.009	1.000	1.001
12/31/2017	1.050	1.009	1.002	1.000
12/31/2018	1.048	1.008	1.003	
12/31/2019	1.049	1.005		
12/31/2020	1.048			
Average Factor: ( Best 3 of 5 )	1.048	1.008	1.003	1.001

Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.000
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.001
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.004
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.012
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.061

VERISK

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

Accident Year Ending	\$100,000 Basic Limit			
	75 Months	87 Months	99 Months	111 Months
12/31/2010	89,212,505	89,202,405	89,202,832	89,147,550
12/31/2011	95,789,544	95,858,180	95,858,209	95,858,207
12/31/2012	99,699,852	99,643,171	99,646,404	99,645,136
12/31/2013	100,208,019	100,216,795	100,264,504	100,260,564
12/31/2014	99,901,297	99,883,259	99,905,027	
12/31/2015	103,121,595	103,135,742		
12/31/2016	106,667,969			

Ratios

Accident Year Ending	75:63	87:75	99:87	111:99
12/31/2010	1.002	1.000	1.000	0.999
12/31/2011	1.001	1.001	1.000	1.000
12/31/2012	1.001	0.999	1.000	1.000
12/31/2013	1.000	1.000	1.000	1.000
12/31/2014	1.000	1.000	1.000	
12/31/2015	1.000	1.000		
12/31/2016	1.000			
Average Factor: ( Best 3 of 5 )	1.000	1.000	1.000	1.000

Summary of Factors

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

VERISK

NORTH DAKOTA  
 No-Fault Insurance - Private Passenger Types (A)  
 Loss Development

Accident Year	15 Months	27 Months	39 Months	51 Months	63 Months
Ending					
12/31/2012	48,296	50,526	56,612	56,612	56,612
12/31/2013	49,985	65,740	68,600	67,006	67,006
12/31/2014	31,150	23,696	23,696	23,696	23,696
12/31/2015	22,471	14,022	14,022	14,022	14,022
12/31/2016	58,341	52,639	53,639	52,639	52,639
12/31/2017	31,963	34,419	31,023	31,023	31,023
12/31/2018	60,060	71,439	71,439	66,817	
12/31/2019	14,473	14,473	14,473		
12/31/2020	66,239	66,239			
12/31/2021	37,274				

Ratios

Accident Year	27:15	39:27	51:39	63:51
Ending				
12/31/2012	1.046	1.120	1.000	1.000
12/31/2013	1.315	1.044	0.977	1.000
12/31/2014	0.761	1.000	1.000	1.000
12/31/2015	0.624	1.000	1.000	1.000
12/31/2016	0.902	1.019	0.981	1.000
12/31/2017	1.077	0.901	1.000	1.000
12/31/2018	1.189	1.000	0.935	
12/31/2019	1.000	1.000		
12/31/2020	1.000			

Average Factor:

(Best 3 of 5)	1.026	1.000	0.994	1.000
(Latest 3)	1.063	0.967	0.972	1.000
(Latest 5)	1.034	0.984	0.983	1.000

Selected Factor:

1.026	1.000	0.994	1.000
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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) =	0.994
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) =	1.020

(A) Includes Basic Benefits Losses.

VERISK

Basic Limits Loss Development  
 Auto Dealers - Bodily Injury  
 No Fault States  
 Incurred Losses and Expenses

Accident Year Ending	\$100,000 Basic Limit				
	15 Months	27 Months	39 Months	51 Months	63 Months
12/31/2010	4,341,097	7,126,194	8,188,794	8,567,662	8,982,366
12/31/2011	4,244,880	6,641,496	7,911,294	8,552,752	8,445,129
12/31/2012	3,920,469	5,874,353	7,069,723	7,666,971	8,260,605
12/31/2013	4,405,359	8,181,843	10,003,888	10,553,363	11,435,699
12/31/2014	4,051,735	6,390,500	7,984,202	8,563,409	8,836,800
12/31/2015	3,806,717	6,369,571	7,288,298	8,331,268	8,936,397
12/31/2016	3,361,222	5,185,308	6,334,339	6,999,748	7,419,974
12/31/2017	3,223,427	4,257,069	5,297,203	5,538,423	5,723,560
12/31/2018	2,900,228	3,950,090	4,276,568	4,668,923	
12/31/2019	1,585,559	2,707,983	3,499,792		
12/31/2020	1,435,468	3,281,999			
12/31/2021	2,484,164				

Ratios

Accident Year Ending	27:15	39:27	51:39	63:51
12/31/2010	1.642	1.149	1.046	1.048
12/31/2011	1.565	1.191	1.081	0.987
12/31/2012	1.498	1.203	1.084	1.077
12/31/2013	1.857	1.223	1.055	1.084
12/31/2014	1.577	1.249	1.073	1.032
12/31/2015	1.673	1.144	1.143	1.073
12/31/2016	1.543	1.222	1.105	1.060
12/31/2017	1.321	1.244	1.046	1.033
12/31/2018	1.362	1.083	1.092	
12/31/2019	1.708	1.292		
12/31/2020	2.286			
Average Factor: ( Best 3 of 5 )	1.538	1.203	1.090	1.055

Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.016
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.072
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.168
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.405
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	2.162

VERISK

Basic Limits Loss Development  
 Auto Dealers - Bodily Injury  
 No Fault States  
 Incurred Losses and Expenses

Accident Year Ending	\$100,000 Basic Limit				
	75 Months	87 Months	99 Months	111 Months	123 Months
12/31/2010	9,041,316	9,009,642	9,036,547	9,092,427	9,092,462
12/31/2011	8,528,063	8,627,099	8,749,334	8,627,537	8,633,279
12/31/2012	8,606,321	8,696,824	8,703,437	8,698,257	8,575,520
12/31/2013	11,301,927	11,215,945	11,302,885	11,377,176	
12/31/2014	9,037,611	8,767,619	8,599,041		
12/31/2015	9,265,533	9,262,181			
12/31/2016	7,369,990				

Ratios

Accident Year Ending	75:63	87:75	99:87	111:99	123:111
12/31/2010	1.007	0.996	1.003	1.006	1.000
12/31/2011	1.010	1.012	1.014	0.986	1.001
12/31/2012	1.042	1.011	1.001	0.999	0.986
12/31/2013	0.988	0.992	1.008	1.007	
12/31/2014	1.023	0.970	0.981		
12/31/2015	1.037	1.000			
12/31/2016	0.993				
Average Factor: ( Best 3 of 5 )	1.018	1.001	1.004	0.997	0.996

Summary of Factors

123 to Ult:	(1.000)	=	1.000
111 to Ult:	(123:111) (123:Ult)	=	0.996
99 to Ult:	(111:99) (123:111) (123:Ult)	=	0.993
87 to Ult:	(99:87) (111:99) (123:111) (123:Ult)	=	0.997
75 to Ult:	(87:75) (99:87) (111:99) (123:111) (123:Ult)	=	0.998

VERISK

Basic Limits Loss Development  
 Auto Dealers - Property Damage  
 Multistate  
 Incurred Losses and Expenses

Accident Year Ending	\$100,000 Basic Limit				
	15 Months	27 Months	39 Months	51 Months	63 Months
12/31/2010	13,107,336	13,373,741	13,985,931	14,016,879	13,942,411
12/31/2011	12,855,331	13,255,325	13,682,203	14,320,834	14,566,085
12/31/2012	13,438,805	14,362,563	14,761,094	15,143,294	15,302,113
12/31/2013	12,009,455	12,598,201	13,095,249	13,258,459	13,415,861
12/31/2014	11,983,806	12,962,021	13,514,730	13,954,748	14,319,420
12/31/2015	11,936,309	14,289,022	14,692,337	14,983,324	14,745,064
12/31/2016	13,336,975	14,206,678	14,560,906	14,981,511	15,065,019
12/31/2017	13,322,027	15,109,895	16,438,535	16,783,436	16,897,707
12/31/2018	10,058,709	10,902,066	11,352,212	11,684,467	
12/31/2019	8,293,460	9,228,032	9,588,002		
12/31/2020	5,592,281	6,073,704			
12/31/2021	6,845,870				

Ratios

Accident Year Ending	27:15	39:27	51:39	63:51
12/31/2010	1.020	1.046	1.002	0.995
12/31/2011	1.031	1.032	1.047	1.017
12/31/2012	1.069	1.028	1.026	1.010
12/31/2013	1.049	1.039	1.012	1.012
12/31/2014	1.082	1.043	1.033	1.026
12/31/2015	1.197	1.028	1.020	0.984
12/31/2016	1.065	1.025	1.029	1.006
12/31/2017	1.134	1.088	1.021	1.007
12/31/2018	1.084	1.041	1.029	
12/31/2019	1.113	1.039		
12/31/2020	1.086			
Average Factor: ( Best 3 of 5 )	1.094	1.036	1.026	1.008

Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.002
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.010
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.036
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.074
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.174

VERISK

Basic Limits Loss Development  
 Auto Dealers - Property Damage  
 Multistate  
 Incurred Losses and Expenses

Accident Year Ending	\$100,000 Basic Limit			
	75 Months	87 Months	99 Months	111 Months
12/31/2010	13,953,466	13,956,843	13,956,843	13,957,657
12/31/2011	14,685,712	14,852,725	14,880,728	15,018,907
12/31/2012	15,232,119	15,251,773	15,118,752	15,104,021
12/31/2013	13,502,121	13,528,090	13,398,185	13,366,206
12/31/2014	14,283,601	14,276,875	14,257,730	
12/31/2015	14,789,271	14,770,050		
12/31/2016	15,248,754			

Ratios

Accident Year Ending	75:63	87:75	99:87	111:99
12/31/2010	1.001	1.000	1.000	1.000
12/31/2011	1.008	1.011	1.002	1.009
12/31/2012	0.995	1.001	0.991	0.999
12/31/2013	1.006	1.002	0.990	0.998
12/31/2014	0.997	1.000	0.999	
12/31/2015	1.003	0.999		
12/31/2016	1.012			
Average Factor: ( Best 3 of 5 )	1.002	1.001	0.997	1.002

Summary of Factors

111 to Ult:	(1.000)	=	1.000
99 to Ult:	(111:99) (111:Ult)	=	1.002
87 to Ult:	(99:87) (111:99) (111:Ult)	=	0.999
75 to Ult:	(87:75) (99:87) (111:99) (111:Ult)	=	1.000

## VERISK

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

Accident Year Ending	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>
12/31/2010	167,987,493	171,139,775	171,517,082	171,360,322	171,491,813
12/31/2011	190,336,967	193,857,471	193,999,121	194,107,908	194,077,365
12/31/2012	219,938,917	224,995,154	224,993,230	225,093,794	225,361,197
12/31/2013	176,955,250	181,172,362	181,502,511	181,882,116	181,853,220
12/31/2014	186,148,217	190,748,637	190,950,185	190,878,046	190,839,058
12/31/2015	183,404,256	187,652,270	187,683,668	188,148,667	188,234,019
12/31/2016	234,956,451	239,795,346	240,046,766	240,249,186	240,230,001
12/31/2017	243,274,293	249,190,121	249,244,575	249,555,371	249,455,475
12/31/2018	237,853,277	244,071,084	243,858,104	244,125,923	
12/31/2019	249,046,072	256,095,090	256,193,037		
12/31/2020	248,109,581	255,038,984			
12/31/2021	306,757,026				

## Ratios

Accident Year Ending	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2010	1.019	1.002	0.999	1.001
12/31/2011	1.018	1.001	1.001	1.000
12/31/2012	1.023	1.000	1.000	1.001
12/31/2013	1.024	1.002	1.002	1.000
12/31/2014	1.025	1.001	1.000	1.000
12/31/2015	1.023	1.000	1.002	1.000
12/31/2016	1.021	1.001	1.001	1.000
12/31/2017	1.024	1.000	1.001	1.000
12/31/2018	1.026	0.999	1.001	
12/31/2019	1.028	1.000		
12/31/2020	1.028			
Average Factor: ( Best 3 of 5 )	1.026	1.000	1.001	1.000

## Summary of Factors

63 to Ult:	(75:63) (75:Ult) =	1.000
51 to Ult:	(63:51) (75:63) (75:Ult) =	1.000
39 to Ult:	(51:39) (63:51) (75:63) (75:Ult) =	1.001
27 to Ult:	(39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.001
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.027

## VERISK

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

Accident Year <u>Ending</u>	<u>75 Months</u>	<u>87 Months</u>	<u>99 Months</u>	<u>111 Months</u>	<u>123 Months</u>
12/31/2010	171,587,653	171,643,953	171,635,821	171,633,645	171,621,664
12/31/2011	194,053,540	194,030,815	194,017,042	194,025,632	193,999,667
12/31/2012	225,337,788	225,401,031	225,401,713	225,410,603	225,394,973
12/31/2013	181,905,914	181,936,807	181,924,794	181,902,671	
12/31/2014	190,845,800	190,847,944	190,846,168		
12/31/2015	188,150,862	188,170,089			
12/31/2016	240,222,744				

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>
12/31/2010	1.001	1.000	1.000	1.000	1.000
12/31/2011	1.000	1.000	1.000	1.000	1.000
12/31/2012	1.000	1.000	1.000	1.000	1.000
12/31/2013	1.000	1.000	1.000	1.000	
12/31/2014	1.000	1.000	1.000		
12/31/2015	1.000	1.000			
12/31/2016	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

## VERISK

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

Accident Year Ending	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>
12/31/2010	387,370,801	380,104,359	378,791,460	379,012,272	378,986,587
12/31/2011	419,577,934	411,330,288	409,550,563	409,460,636	409,552,697
12/31/2012	418,367,944	411,853,753	410,784,955	410,271,475	410,298,841
12/31/2013	443,875,033	434,954,633	433,289,814	434,146,707	432,932,016
12/31/2014	492,915,841	483,980,015	481,023,676	480,605,361	480,319,344
12/31/2015	528,870,431	514,135,272	510,954,631	509,922,904	510,056,363
12/31/2016	562,870,914	548,618,350	543,865,272	543,321,568	543,232,724
12/31/2017	580,720,035	560,847,491	556,462,765	555,351,776	555,148,898
12/31/2018	623,146,155	607,140,513	602,393,584	601,554,893	
12/31/2019	646,362,421	625,859,554	623,024,657		
12/31/2020	553,670,095	537,639,095			
12/31/2021	691,473,464				

Ratios

Accident Year Ending	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
12/31/2010	0.981	0.997	1.001	1.000
12/31/2011	0.980	0.996	1.000	1.000
12/31/2012	0.984	0.997	0.999	1.000
12/31/2013	0.980	0.996	1.002	0.997
12/31/2014	0.982	0.994	0.999	0.999
12/31/2015	0.972	0.994	0.998	1.000
12/31/2016	0.975	0.991	0.999	1.000
12/31/2017	0.966	0.992	0.998	1.000
12/31/2018	0.974	0.992	0.999	
12/31/2019	0.968	0.995		
12/31/2020	0.971			
Average Factor: ( Best 3 of 5 )	0.971	0.993	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) =	0.992
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	0.963

VERISK

Physical Damage Loss Development  
 Trucks, Tractors and Trailers - 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>
12/31/2010	378,884,243	378,838,236	378,780,237	378,755,953	378,722,722
12/31/2011	409,523,895	409,530,741	409,503,953	409,496,576	409,472,005
12/31/2012	410,262,724	410,189,581	409,919,908	409,893,277	409,873,023
12/31/2013	432,833,839	432,793,073	432,781,659	432,776,728	
12/31/2014	480,316,770	480,320,176	480,838,595		
12/31/2015	510,085,068	509,948,364			
12/31/2016	543,197,969				

Ratios

Accident Year Ending	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>	<u>123:111</u>
12/31/2010	1.000	1.000	1.000	1.000	1.000
12/31/2011	1.000	1.000	1.000	1.000	1.000
12/31/2012	1.000	1.000	0.999	1.000	1.000
12/31/2013	1.000	1.000	1.000	1.000	
12/31/2014	1.000	1.000	1.001		
12/31/2015	1.000	1.000			
12/31/2016	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

VERISK

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

Accident Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months
12/31/2010	61,150,293	61,504,274	61,480,746	61,475,713	61,478,505
12/31/2011	77,740,205	77,820,258	77,650,810	77,687,346	77,686,548
12/31/2012	87,106,352	85,893,542	85,891,881	85,926,699	85,946,878
12/31/2013	61,721,212	62,301,027	62,512,457	62,524,905	62,515,873
12/31/2014	64,117,874	65,058,808	65,188,174	65,131,158	65,169,188
12/31/2015	55,859,881	56,513,473	56,396,547	56,392,426	56,393,153
12/31/2016	68,310,832	69,078,420	69,053,711	69,017,168	69,012,567
12/31/2017	77,755,702	77,785,863	77,980,756	77,616,679	77,709,188
12/31/2018	64,352,238	65,254,170	65,142,765	65,074,684	
12/31/2019	66,330,985	67,671,350	67,566,859		
12/31/2020	60,944,480	61,455,593			
12/31/2021	71,501,761				

Ratios

Accident Year Ending	27:15	39:27	51:39	63:51
12/31/2010	1.006	1.000	1.000	1.000
12/31/2011	1.001	0.998	1.000	1.000
12/31/2012	0.986	1.000	1.000	1.000
12/31/2013	1.009	1.003	1.000	1.000
12/31/2014	1.015	1.002	0.999	1.001
12/31/2015	1.012	0.998	1.000	1.000
12/31/2016	1.011	1.000	0.999	1.000
12/31/2017	1.000	1.003	0.995	1.001
12/31/2018	1.014	0.998	0.999	
12/31/2019	1.020	0.998		
12/31/2020	1.008			
Average Factor: ( Best 3 of 5 )	1.011	0.999	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) =	0.998
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.009

## VERISK

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>
12/31/2010	61,412,788	61,418,005	61,449,827	61,441,080	61,447,932
12/31/2011	77,682,083	77,701,164	77,695,409	77,700,426	77,700,426
12/31/2012	85,991,094	85,987,982	85,960,208	85,961,435	85,945,822
12/31/2013	62,530,236	62,541,319	62,539,773	62,534,014	
12/31/2014	65,172,986	65,174,677	65,173,328		
12/31/2015	56,395,701	56,456,304			
12/31/2016	69,015,283				

## 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>
12/31/2010	0.999	1.000	1.001	1.000	1.000
12/31/2011	1.000	1.000	1.000	1.000	1.000
12/31/2012	1.001	1.000	1.000	1.000	1.000
12/31/2013	1.000	1.000	1.000	1.000	
12/31/2014	1.000	1.000	1.000		
12/31/2015	1.000	1.001			
12/31/2016	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

VERISK

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

Accident Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months
12/31/2010	154,733,455	147,268,225	146,711,207	146,507,977	146,504,399
12/31/2011	167,226,055	159,852,941	159,370,591	159,145,017	159,117,692
12/31/2012	167,764,190	161,032,962	160,339,066	160,182,728	160,119,464
12/31/2013	169,914,278	162,306,848	161,121,616	161,134,089	161,079,144
12/31/2014	178,419,214	170,342,910	170,103,795	169,883,105	169,825,643
12/31/2015	190,359,452	180,511,258	179,088,574	178,701,553	178,597,354
12/31/2016	193,000,191	183,806,119	182,237,201	181,904,656	181,842,833
12/31/2017	183,372,737	174,222,801	172,805,435	172,561,379	172,473,582
12/31/2018	194,838,404	184,532,300	183,560,657	183,385,686	
12/31/2019	204,122,141	193,562,222	192,742,802		
12/31/2020	147,944,273	140,481,466			
12/31/2021	183,381,235				

Ratios

Accident Year Ending	27:15	39:27	51:39	63:51
12/31/2010	0.952	0.996	0.999	1.000
12/31/2011	0.956	0.997	0.999	1.000
12/31/2012	0.960	0.996	0.999	1.000
12/31/2013	0.955	0.993	1.000	1.000
12/31/2014	0.955	0.999	0.999	1.000
12/31/2015	0.948	0.992	0.998	0.999
12/31/2016	0.952	0.991	0.998	1.000
12/31/2017	0.950	0.992	0.999	0.999
12/31/2018	0.947	0.995	0.999	
12/31/2019	0.948	0.996		
12/31/2020	0.950			

Average Factor: 0.949 0.993 0.999 1.000  
 ( 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) =	1.000
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) =	0.992
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	0.941

## VERISK

Physical Damage Loss Development  
Private Passenger Types - 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>
12/31/2010	146,451,531	146,436,667	146,432,685	146,434,143	146,419,574
12/31/2011	159,034,072	159,021,247	159,006,971	158,991,986	158,973,450
12/31/2012	160,069,358	160,040,943	160,015,754	159,997,584	159,984,916
12/31/2013	161,032,378	161,008,626	160,942,081	160,927,857	
12/31/2014	169,982,296	169,999,190	169,790,259		
12/31/2015	178,634,668	178,568,212			
12/31/2016	181,783,186				

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>
12/31/2010	1.000	1.000	1.000	1.000	1.000
12/31/2011	0.999	1.000	1.000	1.000	1.000
12/31/2012	1.000	1.000	1.000	1.000	1.000
12/31/2013	1.000	1.000	1.000	1.000	
12/31/2014	1.001	1.000	0.999		
12/31/2015	1.000	1.000			
12/31/2016	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

## VERISK

<b>(1)</b>	<b>Public Automobiles Liability</b>	Differentials to Base Loss Cost CSL Liab	PIP
	Taxis & Limos	4.02	5.41
	School and Church Buses	0.38	0.66
	Other Buses	3.16	6.30
	Van Pools	0.95	0.72
<b>(2)</b>	<b>Public Automobiles Physical Damage</b>		
	Taxis, Limos and Van Pools		
	Other Than Collision:	1.52	
	Collision	2.25	
	School, Church, and Other Buses		
	Other Than Collision:	0.68	
	Collision	0.63	
<b>(3)</b>	<b>PIP Relativities</b>		
	Class of Business		
	TTT Covered by Workers' Compensation	0.700	
	PPT principally operated by employees	0.600	
	T&L Other Than Owner Operated	0.780	
	Van Pool Furnished by Employer	0.590	
<b>(4)</b>	<b>Specified Cause of Loss Relativity</b>	0.576	
	This factor is used for Trucks, Tractors, & Trailers and Private Passenger Types.		
<b>(5)</b>	The loss cost for hired autos is set forth in Section E. It applies in all territories and is calculated as 0.25% of the statewide \$100,000 Combined Single Limit average loss cost for all Trucks, Tractors, & Trailers.		

## VERISK

COMMERCIAL AUTOMOBILE PHYSICAL DAMAGE  
CLASS 6614 - HIRED AUTOS  
DETERMINATION OF MULTISTATE\* ADVISORY LOSS COST LEVEL CHANGE

	(1)	(2)	(3)	(4)	(5)
		AGGREGATE			
COVERAGE	ACCIDENT YEAR	LOSS COST AT	INCURRED	EXPERIENCE	NUMBER OF
	ENDING	CURRENT	LOSSES (B)	RATIO (2) /	PAID
		LEVEL (A)		(1)	CLAIMS
O.T.C	03/31/17	\$1,870,852	\$2,358,018	1.260	445
	03/31/18	\$1,424,334	\$2,460,064	1.727	430
	03/31/19	\$1,233,541	\$2,271,727	1.842	521
	03/31/20	\$1,377,505	\$1,726,074	1.253	439
	03/31/21	\$1,394,846	\$1,172,207	0.840	182
5 YEAR TOTAL		\$7,301,078	\$9,988,090	1.368	2,017
COLL.	03/31/17	\$4,104,187	\$12,707,342	3.096	1,629
	03/31/18	\$3,549,939	\$11,007,592	3.101	1,441
	03/31/19	\$3,356,121	\$10,003,508	2.981	1,423
	03/31/20	\$3,524,435	\$8,509,084	2.414	1,253
	03/31/21	\$2,768,330	\$3,411,356	1.232	401
5 YEAR TOTAL		\$17,303,012	\$45,638,882	2.638	6,147
				O.T.C.	COLLISION
(6)	MULTISTATE EXPERIENCE RATIO.			1.368	2.638
(7)	INDICATED PERCENTAGE CHANGE IN ADVISORY LOSS COST LEVEL ( (6) - 1.000).			36.8%	163.8%
(8)	FILED CHANGE.			36.8%	163.8%

\* EXCLUDES MASSACHUSETTS

(A) THE AGGREGATE LOSS COST AT CURRENT LEVEL IS CALCULATED BY DIVIDING THE ANNUAL COST OF HIRE BY ONE HUNDRED AND MULTIPLYING THE RESULT BY THE LOSS COST FOR THE COVERAGE AND DEDUCTIBLE.

(B) LOSSES INCLUDE ALL LOSS ADJUSTMENT EXPENSES FOR O.T.C. AND COLL.  
SEE FOLLOWING PAGE.

VERISK

COMMERCIAL AUTOMOBILE PHYSICAL DAMAGE  
CLASS 6614 - HIRED AUTOS  
DETERMINATION OF PHYSICAL DAMAGE LOSSES

	ACC. YEAR ENDING	O.T.C	COLLISION
(1) PAID LOSSES	03/31/17	\$1,434,187	\$8,545,164
	03/31/18	\$1,578,715	\$7,700,579
	03/31/19	\$1,538,162	\$7,274,167
	03/31/20	\$1,234,083	\$6,514,207
	03/31/21	\$836,747	\$2,667,461
(2) DEVELOPED LOSSES AND ALL LOSS ADJUSTMENT EXPENSES (A)	03/31/17	\$1,620,631	\$9,656,035
	03/31/18	\$1,783,948	\$8,701,654
	03/31/19	\$1,738,123	\$8,219,809
	03/31/20	\$1,393,119	\$7,272,721
	03/31/21	\$998,473	\$3,032,316
(3) SELECTED ANNUAL LOSS TREND		5.5%	4.0%
(4) TRENDED LOSSES AND ALL LOSS ADJUSTMENT EXPENSES (B)	03/31/17	\$2,358,018	\$12,707,342
	03/31/18	\$2,460,064	\$11,007,592
	03/31/19	\$2,271,727	\$10,003,508
	03/31/20	\$1,726,074	\$8,509,084
	03/31/21	\$1,172,207	\$3,411,356

(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.
03/31/17	1.000	1.000
03/31/18	1.000	1.000
03/31/19	1.000	1.000
03/31/20	0.999	0.988
03/31/21	1.056	1.006

(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 10/01/22 WHICH IS ASSUMED FOR THE PURPOSE OF TRENDING BOTH OTC AND COLLISION.

YEAR ENDING	AVERAGE DATE OF ACCIDENT	PROJECTION PERIOD OTC	PROJECTION PERIOD COLL
03/31/17	10/1/16	7.000	7.000
03/31/18	10/1/17	6.000	6.000
03/31/19	10/1/18	5.000	5.000
03/31/20	10/1/19	4.000	4.000
03/31/21	10/1/20	3.000	3.000

VERISK

Physical Damage Loss Development  
 Class 6614 - Hired Autos Other than Collision  
 Multistate  
 Paid Losses

Accident Year Ending	15 Months	27 Months	39 Months	51 Months	63 Months
03/31/2010	1,285,108	1,371,867	1,334,046	1,333,044	1,332,928
03/31/2011	2,119,490	2,072,364	2,104,344	1,981,844	1,981,844
03/31/2012	1,973,654	2,127,182	2,163,929	2,161,130	2,163,377
03/31/2013	2,431,661	2,394,546	2,443,704	2,502,330	2,526,387
03/31/2014	1,357,094	1,291,442	1,291,599	1,292,818	1,292,900
03/31/2015	1,367,205	1,348,485	1,348,248	1,348,248	1,347,493
03/31/2016	1,309,499	1,414,147	1,414,251	1,414,251	1,414,251
03/31/2017	1,393,080	1,446,320	1,442,339	1,434,237	1,434,237
03/31/2018	1,492,485	1,590,431	1,578,687	1,578,715	
03/31/2019	1,468,800	1,537,494	1,538,162		
03/31/2020	1,165,313	1,234,083			
03/31/2021	836,747				

Ratios

Accident Year Ending	27:15	39:27	51:39	63:51
03/31/2010	1.068	0.972	0.999	1.000
03/31/2011	0.978	1.015	0.942	1.000
03/31/2012	1.078	1.017	0.999	1.001
03/31/2013	0.985	1.021	1.024	1.010
03/31/2014	0.952	1.000	1.001	1.000
03/31/2015	0.986	1.000	1.000	0.999
03/31/2016	1.080	1.000	1.000	1.000
03/31/2017	1.038	0.997	0.994	1.000
03/31/2018	1.066	0.993	1.000	
03/31/2019	1.047	1.000		
03/31/2020	1.059			
Average Factor: ( Best 3 of 5 )	1.057	0.999	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) =	0.999
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.056

VERISK

Physical Damage Loss Development  
 Class 6614 - Hired Autos 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>
03/31/2010	1,331,375	1,330,773	1,330,773	1,330,773	1,330,773
03/31/2011	2,030,463	2,037,742	2,037,742	2,037,742	2,037,742
03/31/2012	2,165,790	2,165,790	2,165,790	2,165,790	2,165,790
03/31/2013	2,526,387	2,526,387	2,526,387	2,524,748	
03/31/2014	1,292,900	1,292,900	1,292,900		
03/31/2015	1,349,904	1,349,904			
03/31/2016	1,414,251				

Ratios

Accident Year Ending	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>	<u>123:111</u>
03/31/2010	0.999	1.000	1.000	1.000	1.000
03/31/2011	1.025	1.004	1.000	1.000	1.000
03/31/2012	1.001	1.000	1.000	1.000	1.000
03/31/2013	1.000	1.000	1.000	0.999	
03/31/2014	1.000	1.000	1.000		
03/31/2015	1.002	1.000			
03/31/2016	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

VERISK

Physical Damage Loss Development  
 Class 6614 - Hired Autos Collision  
 Multistate  
 Paid Losses

Accident Year Ending	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>
03/31/2010	5,541,442	5,476,586	5,436,736	5,442,327	5,421,531
03/31/2011	7,395,246	7,124,216	7,052,187	7,022,712	7,021,049
03/31/2012	7,847,913	8,066,066	8,016,194	8,002,310	7,411,632
03/31/2013	7,237,599	7,208,141	7,633,465	7,613,941	7,581,420
03/31/2014	8,304,911	8,502,984	8,476,725	8,494,370	8,499,196
03/31/2015	8,018,911	8,373,250	8,167,327	8,255,027	8,279,449
03/31/2016	7,463,495	7,696,050	7,480,718	7,449,159	7,435,649
03/31/2017	8,748,475	8,684,832	8,603,979	8,529,132	8,545,164
03/31/2018	7,046,439	7,709,671	7,686,166	7,700,579	
03/31/2019	7,057,480	7,259,632	7,274,167		
03/31/2020	6,694,733	6,514,207			
03/31/2021	2,667,461				

Ratios

Accident Year Ending	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>
03/31/2010	0.988	0.993	1.001	0.996
03/31/2011	0.963	0.990	0.996	1.000
03/31/2012	1.028	0.994	0.998	0.926
03/31/2013	0.996	1.059	0.997	0.996
03/31/2014	1.024	0.997	1.002	1.001
03/31/2015	1.044	0.975	1.011	1.003
03/31/2016	1.031	0.972	0.996	0.998
03/31/2017	0.993	0.991	0.991	1.002
03/31/2018	1.094	0.997	1.002	
03/31/2019	1.029	1.002		
03/31/2020	0.973			

Average Factor: 1.018 0.988 1.000 1.000  
 ( 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) =	1.000
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) =	0.988
15 to Ult:	(27:15) (39:27) (51:39) (63:51) (75:63) (75:Ult) =	1.006

VERISK

Physical Damage Loss Development  
 Class 6614 - Hired Autos 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>
03/31/2010	5,421,422	5,421,286	5,421,286	5,419,786	5,419,786
03/31/2011	7,025,718	7,026,860	7,026,711	7,026,711	7,026,711
03/31/2012	7,400,763	7,399,965	7,399,965	7,399,965	7,399,965
03/31/2013	7,590,229	7,556,370	7,553,406	7,554,231	
03/31/2014	8,485,967	8,481,989	8,480,107		
03/31/2015	8,277,625	8,275,058			
03/31/2016	7,434,356				

Ratios

Accident Year Ending	<u>75:63</u>	<u>87:75</u>	<u>99:87</u>	<u>111:99</u>	<u>123:111</u>
03/31/2010	1.000	1.000	1.000	1.000	1.000
03/31/2011	1.001	1.000	1.000	1.000	1.000
03/31/2012	0.999	1.000	1.000	1.000	1.000
03/31/2013	1.001	0.996	1.000	1.000	
03/31/2014	0.998	1.000	1.000		
03/31/2015	1.000	1.000			
03/31/2016	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

VERISK

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

Frequency (expressed as claims per 100 exposures)

Year Ending:	\$500 Deductible		\$1,000 Deductible		\$2,000 Deductible	
	Actual	Change**	Actual	Change**	Actual	Change**
6/30/2016	1.19		0.76		0.57	
12/31/2016	1.16		0.73		0.55	
6/30/2017	1.16		0.72		0.55	
12/31/2017	1.21	4.3%	0.76	4.1%	0.57	3.6%
6/30/2018	1.28		0.79		0.59	
12/31/2018	1.34	10.7%	0.82	7.9%	0.61	7.0%
6/30/2019	1.40		0.85		0.63	
12/31/2019	1.42	6.0%	0.85	3.7%	0.63	3.3%
6/30/2020	1.35		0.82		0.60	
12/31/2020	1.34	-5.6%	0.81	-4.7%	0.58	-7.9%

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

Deductible:	Percent of Losses
Full	0.6%
\$50	0.7%
\$100	2.3%
\$200	0.1%
\$250	9.2%
\$500	34.1%
\$1,000	45.7%
\$2,000	4.5%
\$3,000	1.1%
\$5,000	1.7%

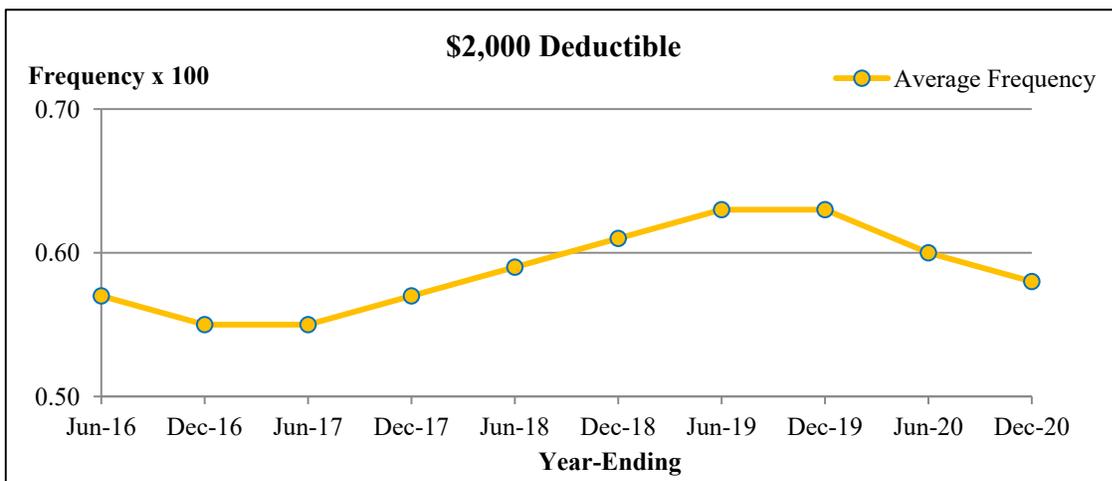
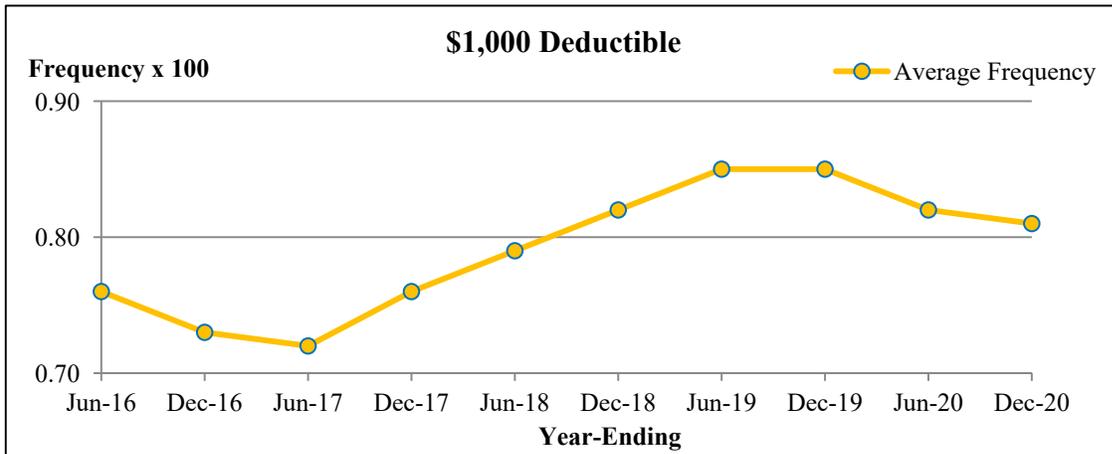
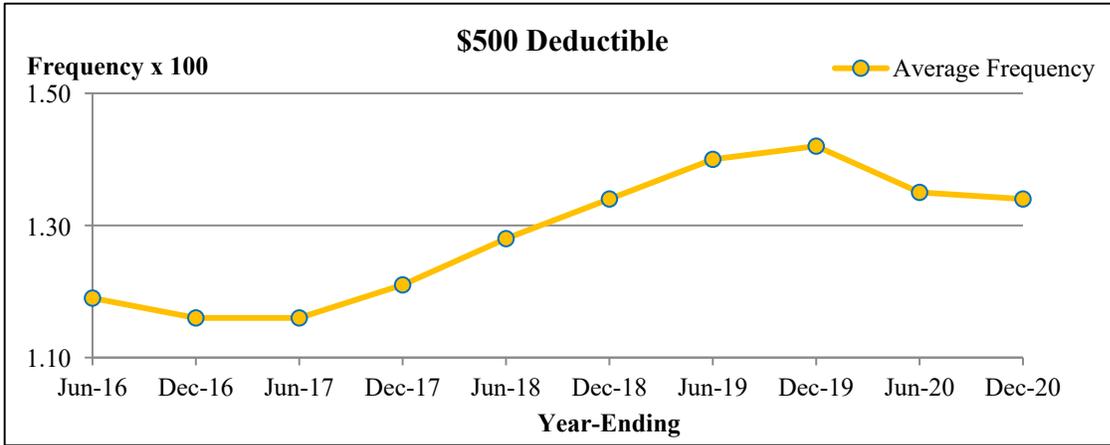
\* Multistate data excludes Massachusetts

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

\*\*\* Deductibles above \$2,000, totaling 2.8% of losses, are excluded from the trend calculations.

VERISK

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



\*Excludes Massachusetts

Selected Other Than Collision Frequency Trend Factor: 0.0%

VERISK

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

Severity Trend

Year Ending:	\$500 Deductible	\$1,000 Deductible	\$2,000 Deductible
6/30/2016	4,398.57	6,753.17	8,059.51
12/31/2016	4,414.93	7,057.00	8,435.77
6/30/2017	4,710.32	7,324.30	8,675.68
12/31/2017	5,047.29	7,593.51	8,909.32
6/30/2018	5,106.87	7,930.04	9,410.02
12/31/2018	5,164.55	8,152.85	9,832.47
6/30/2019	5,233.21	8,317.70	10,214.84
12/31/2019	5,414.01	8,816.26	10,875.04
6/30/2020	5,438.32	8,621.98	10,559.97
12/31/2020	5,488.41	8,514.32	10,452.52

Average Annual Change Using Exponential Fits:

10 point fit:	5.3%	5.9%	6.9%
8 point fit:	4.0%	4.9%	6.5%
6 point fit:	3.2%	3.4%	4.7%

Selected severity trend:	<b>5.5%</b>
Selected frequency trend:	<b>0.0%</b>
Selected pure premium trend:	<b>5.5%</b>

\* Multistate data excludes Massachusetts

VERISK

Multistate\*  
Trucks, Tractors & Trailers Physical Damage  
Collision

Frequency (expressed as claims per 100 exposures)

Year Ending:	\$500 Deductible		\$1,000 Deductible		\$2,000 Deductible	
	Actual	Change**	Actual	Change**	Actual	Change**
6/30/2016	2.18		1.92		1.57	
12/31/2016	2.23		1.96		1.60	
6/30/2017	2.24		1.96		1.61	
12/31/2017	2.21	-0.9%	1.94	-1.0%	1.60	0.0%
6/30/2018	2.24		1.99		1.65	
12/31/2018	2.25	1.8%	2.01	3.6%	1.66	3.7%
6/30/2019	2.25		2.01		1.66	
12/31/2019	2.24	-0.4%	2.01	0.0%	1.66	0.0%
6/30/2020	2.00		1.76		1.47	
12/31/2020	1.86	-17.0%	1.62	-19.4%	1.37	-17.5%

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

Deductible:	Percent of Losses
\$100	0.1%
\$200	0.0%
\$250	1.2%
\$500	32.5%
\$1,000	53.8%
\$2,000	7.0%
\$3,000	1.6%
\$5,000	3.6%

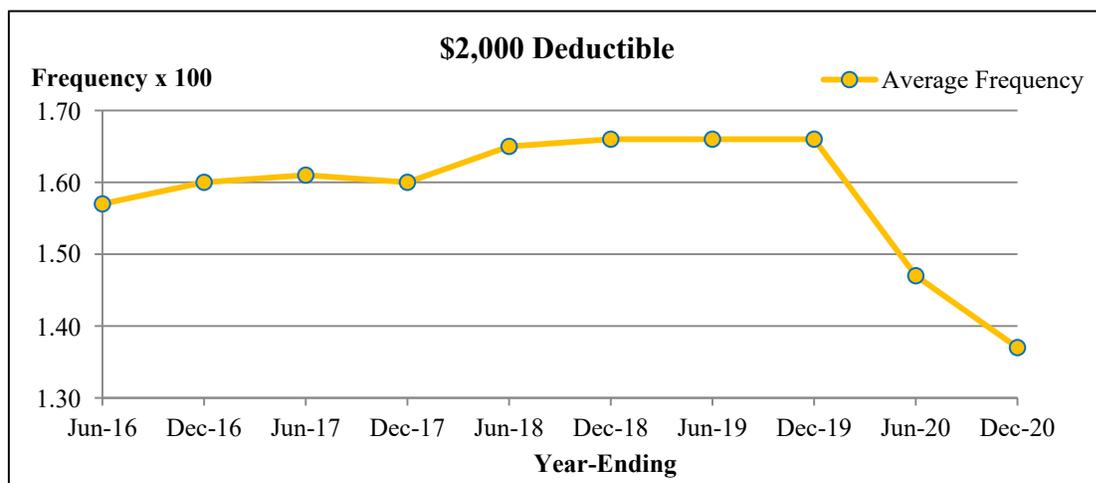
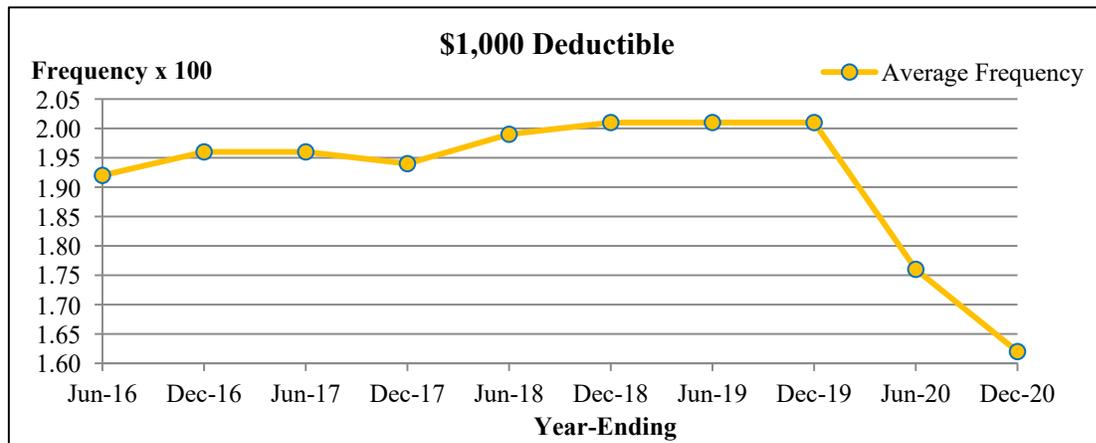
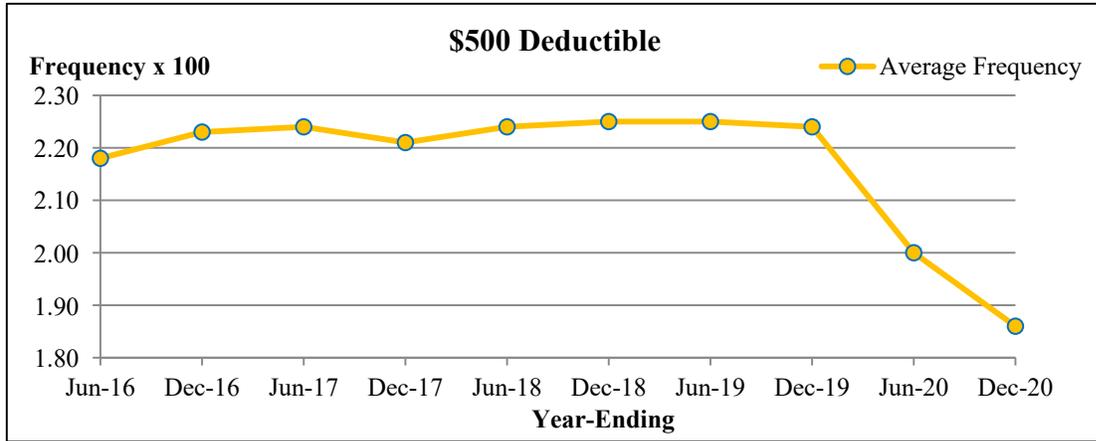
\* Multistate data excludes Massachusetts

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

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

VERISK

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



\*Excludes Massachusetts

Selected Collision Frequency Trend Factor: 0.0%

VERISK

Multistate\*  
Trucks, Tractors & Trailers Physical Damage  
Collision

Severity Trend

Year Ending:	\$500 Deductible	\$1,000 Deductible	\$2,000 Deductible
6/30/2016	9,281.28	10,964.08	11,928.82
12/31/2016	9,493.73	11,239.00	12,206.31
6/30/2017	9,513.79	11,238.62	12,181.06
12/31/2017	9,709.62	11,295.33	12,263.07
6/30/2018	9,906.99	11,561.60	12,598.31
12/31/2018	10,098.28	11,783.35	12,807.24
6/30/2019	10,347.84	12,072.56	13,161.79
12/31/2019	10,423.55	12,122.46	13,246.24
6/30/2020	10,771.39	12,506.12	13,649.25
12/31/2020	11,364.54	13,563.81	14,639.24

Average Annual Change Using Exponential Fits:

10 point fit:	4.2%	4.0%	4.0%
8 point fit:	4.7%	4.9%	4.9%
6 point fit:	5.2%	5.8%	5.6%

Selected severity trend:	<b>4.0%</b>
Selected frequency trend:	<b>0.0%</b>
Selected pure premium trend:	<b>4.0%</b>

\* Multistate data excludes Massachusetts

VERISK

Hired Autos OTC

All Perils (excluding specified causes of loss coverage codes)

Triangle of Shifted Losses

Original Deductible Amount	Shifted to Deductible Amount									
	0	50	100	250	500	1000	2000	3000	5000	
0	670,430	664,830	659,367	645,204	626,628	598,514	551,449	511,985	450,264	
50	-	80,586	74,136	57,262	38,824	28,152	17,989	13,394	7,910	
100	-	-	5,988,943	5,734,102	5,405,626	4,940,276	4,228,035	3,671,705	2,927,337	

Triangle of Relative Loss Ratios

Original Deductible Amount	Deductible Amounts									
	50:0	100:50	250:100	500:250	1000:500	2000:1000	3000:2000	5000:3000		
0	0.992	0.992	0.979	0.971	0.955	0.921	0.928	0.879		
50	-	0.920	0.772	0.678	0.725	0.639	0.745	0.591		
100	-	-	0.957	0.943	0.914	0.856	0.868	0.797		

Weighted Aves:		0.992	0.984	0.957	0.943	0.917	0.862	0.875	0.807
Cumulative:	1.000	0.992	0.976	0.934	0.881	0.808	0.696	0.609	0.491

Hired Autos Collision

All Perils

Triangle of Shifted Losses

Original Deductible Amount	Shifted to Deductible Amount						
	100	250	500	1000	2000	3000	5000
100	782,997	755,379	711,913	640,710	544,485	477,852	390,789
250	-	631,012	596,037	539,003	467,334	420,596	359,068
500	-	-	6,143,504	5,376,364	4,345,678	3,668,339	2,763,772
1000	-	-	-	25,869,421	22,305,578	19,665,125	15,900,026

Triangle of Relative Loss Ratios

Original Deductible Amount	Deductible Amounts						
	250:100	500:250	1000:500	2000:1000	3000:2000	5000:3000	
100	0.965	0.942	0.900	0.850	0.878	0.818	
250	-	0.945	0.904	0.867	0.900	0.854	
500	-	-	0.875	0.808	0.844	0.753	
1000	-	-	-	0.862	0.882	0.809	

Weighted Aves:		0.965	0.943	0.880	0.853	0.876	0.801
Cumulative:	1.000	0.965	0.910	0.801	0.683	0.598	0.479

VERISK

## Indicated Percentage Discounts

Hired Autos Deductible Amount	OTC	Collision
0	-0.025	---
50	-0.016	---
100	0.000	-0.099
250	0.043	-0.060
500	0.097	0.000
1000	0.172	0.120
2000	0.287	0.249
3000	0.376	0.343
5000	0.497	0.474

VERISK

## CALCULATION OF OFF-BALANCE FACTORS

## HIRED AUTOS PHYSICAL DAMAGE

## OTHER THAN COLLISION

The base loss cost for Other Than Collision is the \$100 deductible.

The off-balance factor to be applied to the current Hired Autos OTC base loss cost is 1.003.

$$1.003 \frac{\$ 1,394,846}{\$ 1,390,110}$$

where \$ 1,394,846 = Aggregate Loss Cost at Current  
Level under the current class plan.  
\$ 1,390,110 = Aggregate Loss Cost at Current  
Level under the revised class plan.

## COLLISION

The base loss cost for Collision is the \$500 deductible.

The off-balance factor to be applied to the current Hired Autos Collision base loss cost is 1.056.

$$1.056 \frac{\$ 2,768,330}{\$ 2,621,629}$$

where \$ 2,768,330 = Aggregate Loss Cost at Current  
Level under the current class plan.  
\$ 2,621,629 = Aggregate Loss Cost at Current  
Level under the revised class plan.

VERISK

## DETERMINATION OF REVISED BASE LOSS COSTS

## HIRED AUTOS PHYSICAL DAMAGE

## OTHER THAN COLLISION

Current Multi-State Base Loss Cost	X	Experience Review Loss Cost Level Change	X	Off-Balance Factor	=	Revised Multi-State Base Loss Cost
\$0.31	X	1.368	X	1.003	=	\$0.43

## COLLISION

Current Multi-State Base Loss Cost	X	Experience Review Loss Cost Level Change	X	Off-Balance Factor	=	Revised Multi-State Base Loss Cost
\$0.46	X	2.638	X	1.056	=	\$1.28

\* The base loss cost for Other Than Collision is the \$100 deductible.  
The base loss cost for Collision is the \$500 deductible.

VERISK

## HIRED AUTOS REVISED LOSS COSTS

## Hired Autos

Deductible Amount	OTC			Collision		
	Current	Indicated	Selected	Current	Indicated	Selected
0	0.34	0.44	0.45	---	---	---
50	0.32	0.44	0.44	---	---	---
100	0.31	0.43	0.43	0.51	1.41	1.41
250	---	0.41	0.41	0.49	1.36	1.36
500	---	0.39	0.39	0.46	1.28	1.28
1000	---	0.36	0.36	0.43	1.13	1.13
2000	---	0.31	0.31	---	0.96	0.96
3000	---	0.27	0.27	---	0.84	0.84
5000	---	0.22	0.22	---	0.67	0.67

## Specified Perils

Current	Indicated	Selected
0.16	0.22	0.22

\* The base loss cost for Other Than Collision is the \$100 deductible.  
The base loss cost for Collision is the \$500 deductible.

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

**NORTH DAKOTA (33)  
TERRITORY 101**

LIABILITY	MEDICAL PAYMENTS	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000	Limit Per Person \$5000	Basic Limits	
<b>RULE 223. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
\$ 165	N/A	<b>Not Covered By Workers' Compensation</b> \$ 11	<b>Covered By Workers' Compensation</b> \$ 8
<b>RULE 232. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
\$ 229	N/A	<b>Not Principally Operated By Employees</b> \$ 25	<b>Principally Operated By Employees</b> \$ 15
<b>RULE 240. PUBLIC AUTO CLASSIFICATIONS –</b>			
<b>– TAXICABS AND LIMOUSINES</b>			
\$ 663	N/A	<b>Owner Operated</b> \$ 60	<b>Other Than Owner Operated</b> \$ 47
<b>– SCHOOL AND CHURCH BUSES</b>			
\$ 63	N/A	<b>All Autos</b> \$ 7	
<b>– OTHER BUSES</b>			
\$ 521	N/A	<b>All Autos</b> \$ 69	
<b>– VAN POOLS</b>			
\$ 157	N/A	<b>Employer Furnished</b> \$ 5	<b>All Other</b> \$ 8
<b>RULE 249. AUTO DEALERS – PREMIUM DEVELOPMENT</b>			
\$ 398	Refer to Rule <b>249.</b>	<b>All Autos</b> \$ 23	
<ul style="list-style-type: none"> <li>• For Other Than Zone-rated Trucks, Tractors and Trailers Classifications, refer to Rule <b>222.</b> for premium development.</li> <li>• For Private Passenger Types Classifications, refer to Rule <b>232.</b> for premium development.</li> <li>• For Other Than Zone-rated Public Autos, refer to Rule <b>239.</b> for premium development.</li> <li>• For liability increased limits factors, refer to Rule <b>300.</b></li> <li>• Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>249.</b></li> </ul>			

LIABILITY	MEDICAL PAYMENTS	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000	Limit Per Person \$5000	Basic Limits	
<b>RULE 223. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
\$ 112	N/A	Not Covered By Workers' Compensation \$ 10	Covered By Workers' Compensation \$ 7
<b>RULE 232. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
\$ 111	N/A	Not Principally Operated By Employees \$ 24	Principally Operated By Employees \$ 14
<b>RULE 240. PUBLIC AUTO CLASSIFICATIONS –</b>			
<b>– TAXICABS AND LIMOUSINES</b>			
\$ 450	N/A	Owner Operated \$ 54	Other Than Owner Operated \$ 42
<b>– SCHOOL AND CHURCH BUSES</b>			
\$ 43	N/A	All Autos \$ 7	
<b>– OTHER BUSES</b>			
\$ 354	N/A	All Autos \$ 63	
<b>– VAN POOLS</b>			
\$ 106	N/A	Employer Furnished \$ 4	All Other \$ 7
<b>RULE 249. AUTO DEALERS – PREMIUM DEVELOPMENT</b>			
\$ 271	Refer to Rule <b>249.</b>	All Autos \$ 21	
<ul style="list-style-type: none"> <li>• For Other Than Zone-rated Trucks, Tractors and Trailers Classifications, refer to Rule <b>222.</b> for premium development.</li> <li>• For Private Passenger Types Classifications, refer to Rule <b>232.</b> for premium development.</li> <li>• For Other Than Zone-rated Public Autos, refer to Rule <b>239.</b> for premium development.</li> <li>• For liability increased limits factors, refer to Rule <b>300.</b></li> <li>• Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>249.</b></li> </ul>			

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

**NORTH DAKOTA (33)  
TERRITORY 104**

LIABILITY	MEDICAL PAYMENTS	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000	Limit Per Person \$5000	Basic Limits	
<b>RULE 223. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
\$ 196	N/A	<b>Not Covered By Workers' Compensation</b> \$ 12	<b>Covered By Workers' Compensation</b> \$ 8
<b>RULE 232. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
\$ 185	N/A	<b>Not Principally Operated By Employees</b> \$ 26	<b>Principally Operated By Employees</b> \$ 16
<b>RULE 240. PUBLIC AUTO CLASSIFICATIONS – – TAXICABS AND LIMOUSINES</b>			
\$ 788	N/A	<b>Owner Operated</b> \$ 65	<b>Other Than Owner Operated</b> \$ 51
<b>– SCHOOL AND CHURCH BUSES</b>			
\$ 74	N/A	<b>All Autos</b> \$ 8	
<b>– OTHER BUSES</b>			
\$ 619	N/A	<b>All Autos</b> \$ 76	
<b>– VAN POOLS</b>			
\$ 186	N/A	<b>Employer Furnished</b> \$ 5	<b>All Other</b> \$ 9
<b>RULE 249. AUTO DEALERS – PREMIUM DEVELOPMENT</b>			
\$ 473	Refer to Rule <b>249.</b>	<b>All Autos</b> \$ 25	
<ul style="list-style-type: none"> <li>• For Other Than Zone-rated Trucks, Tractors and Trailers Classifications, refer to Rule <b>222.</b> for premium development.</li> <li>• For Private Passenger Types Classifications, refer to Rule <b>232.</b> for premium development.</li> <li>• For Other Than Zone-rated Public Autos, refer to Rule <b>239.</b> for premium development.</li> <li>• For liability increased limits factors, refer to Rule <b>300.</b></li> <li>• Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>249.</b></li> </ul>			

LIABILITY	MEDICAL PAYMENTS	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000	Limit Per Person \$5000	Basic Limits	
<b>RULE 223. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
\$ 134	N/A	Not Covered By Workers' Compensation \$ 17	Covered By Workers' Compensation \$ 12
<b>RULE 232. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
\$ 121	N/A	Not Principally Operated By Employees \$ 19	Principally Operated By Employees \$ 11
<b>RULE 240. PUBLIC AUTO CLASSIFICATIONS –</b>			
<b>– TAXICABS AND LIMOUSINES</b>			
\$ 539	N/A	Owner Operated \$ 92	Other Than Owner Operated \$ 72
<b>– SCHOOL AND CHURCH BUSES</b>			
\$ 51	N/A	All Autos \$ 11	
<b>– OTHER BUSES</b>			
\$ 423	N/A	All Autos \$ 107	
<b>– VAN POOLS</b>			
\$ 127	N/A	Employer Furnished \$ 7	All Other \$ 12
<b>RULE 249. AUTO DEALERS – PREMIUM DEVELOPMENT</b>			
\$ 323	Refer to Rule <b>249.</b>	All Autos \$ 35	
<ul style="list-style-type: none"> <li>• For Other Than Zone-rated Trucks, Tractors and Trailers Classifications, refer to Rule <b>222.</b> for premium development.</li> <li>• For Private Passenger Types Classifications, refer to Rule <b>232.</b> for premium development.</li> <li>• For Other Than Zone-rated Public Autos, refer to Rule <b>239.</b> for premium development.</li> <li>• For liability increased limits factors, refer to Rule <b>300.</b></li> <li>• Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>249.</b></li> </ul>			

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DIVISION ONE  
AUTOMOBILE  
LOSS COST PAGES**

**NORTH DAKOTA (33)  
TERRITORY 106**

LIABILITY	MEDICAL PAYMENTS	PERSONAL INJURY PROTECTION	
Limit Of Liab. \$100,000	Limit Per Person \$5000	Basic Limits	
<b>RULE 223. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
\$ 160	N/A	Not Covered By Workers' Compensation \$ 12	Covered By Workers' Compensation \$ 8
<b>RULE 232. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
\$ 131	N/A	Not Principally Operated By Employees \$ 20	Principally Operated By Employees \$ 12
<b>RULE 240. PUBLIC AUTO CLASSIFICATIONS – – TAXICABS AND LIMOUSINES</b>			
\$ 643	N/A	Owner Operated \$ 65	Other Than Owner Operated \$ 51
<b>– SCHOOL AND CHURCH BUSES</b>			
\$ 61	N/A	All Autos \$ 8	
<b>– OTHER BUSES</b>			
\$ 506	N/A	All Autos \$ 76	
<b>– VAN POOLS</b>			
\$ 152	N/A	Employer Furnished \$ 5	All Other \$ 9
<b>RULE 249. AUTO DEALERS – PREMIUM DEVELOPMENT</b>			
\$ 386	Refer to Rule <b>249.</b>	All Autos \$ 25	
<ul style="list-style-type: none"> <li>• For Other Than Zone-rated Trucks, Tractors and Trailers Classifications, refer to Rule <b>222.</b> for premium development.</li> <li>• For Private Passenger Types Classifications, refer to Rule <b>232.</b> for premium development.</li> <li>• For Other Than Zone-rated Public Autos, refer to Rule <b>239.</b> for premium development.</li> <li>• For liability increased limits factors, refer to Rule <b>300.</b></li> <li>• Other Than Auto losses for Auto Dealers risks are subject to an aggregate limit equal to three times the liability limit. For additional limits, refer to Rule <b>249.</b></li> </ul>			

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DIVISION ONE  
AUTOMOBILE  
LOSS COST PAGES

PHYSICAL DAMAGE Original Cost New Range \$25,000 – 29,999			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 223. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks			
	\$ 89	\$ 154	\$ 258
<b>RULE 232. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 116	\$ 201	\$ 255
<b>RULE 240. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 135	\$ 234	\$ 581
– SCHOOL AND CHURCH BUSES			
	\$ 61	\$ 105	\$ 163
– OTHER BUSES			
	\$ 61	\$ 105	\$ 163
– VAN POOLS			
	\$ 135	\$ 234	\$ 581
<ul style="list-style-type: none"> <li>• For Other Than Zone-rated Trucks, Tractors and Trailers Classifications, refer to Rule <b>222. for premium development.</b></li> <li>• For Private Passenger Types Classifications, refer to Rule <b>232. for premium development.</b></li> <li>• For Other Than Zone-rated Publics Autos, refer to Rule <b>239. for premium development.</b></li> <li>• For Deductible factors, refer to Rule <b>298.</b></li> <li>• For Vehicle Value factors, refer to Rule <b>301.</b></li> </ul>			

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DIVISION ONE  
AUTOMOBILE  
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**NORTH DAKOTA (33)  
TERRITORY 102**

<b>PHYSICAL DAMAGE</b>			
<b>Original Cost New Range</b>			
<b>\$25,000 – 29,999</b>			
	<b>Specified Causes Of Loss</b>	<b>Comp.</b>	<b>\$500 Ded. Coll.</b>
<b>RULE 223. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks	\$ 110	\$ 191	\$ 253
<b>RULE 232. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 162	\$ 281	\$ 268
<b>RULE 240. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 167	\$ 290	\$ 569
– SCHOOL AND CHURCH BUSES			
	\$ 75	\$ 130	\$ 159
– OTHER BUSES			
	\$ 75	\$ 130	\$ 159
– VAN POOLS			
	\$ 167	\$ 290	\$ 569
<ul style="list-style-type: none"> <li>• For Other Than Zone-rated Trucks, Tractors and Trailers Classifications, refer to Rule <b>222. for premium development.</b></li> <li>• For Private Passenger Types Classifications, refer to Rule <b>232. for premium development.</b></li> <li>• For Other Than Zone-rated Publics Autos, refer to Rule <b>239. for premium development.</b></li> <li>• For Deductible factors, refer to Rule <b>298.</b></li> <li>• For Vehicle Value factors, refer to Rule <b>301.</b></li> </ul>			

COMMERCIAL LINES MANUAL  
DIVISION ONE  
AUTOMOBILE  
LOSS COST PAGES

PHYSICAL DAMAGE Original Cost New Range \$25,000 – 29,999			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 223. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks	\$ 142	\$ 247	\$ 273
<b>RULE 232. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 176	\$ 305	\$ 265
<b>RULE 240. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 216	\$ 375	\$ 614
– SCHOOL AND CHURCH BUSES			
	\$ 97	\$ 168	\$ 172
– OTHER BUSES			
	\$ 97	\$ 168	\$ 172
– VAN POOLS			
	\$ 216	\$ 375	\$ 614
<ul style="list-style-type: none"> <li>• For Other Than Zone-rated Trucks, Tractors and Trailers Classifications, refer to Rule <b>222. for premium development.</b></li> <li>• For Private Passenger Types Classifications, refer to Rule <b>232. for premium development.</b></li> <li>• For Other Than Zone-rated Publics Autos, refer to Rule <b>239. for premium development.</b></li> <li>• For Deductible factors, refer to Rule <b>298.</b></li> <li>• For Vehicle Value factors, refer to Rule <b>301.</b></li> </ul>			

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

**NORTH DAKOTA (33)  
TERRITORY 105**

<b>PHYSICAL DAMAGE</b> Original Cost New Range \$25,000 – 29,999			
	<b>Specified Causes Of Loss</b>	<b>Comp.</b>	<b>\$500 Ded. Coll.</b>
<b>RULE 223. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks	\$ 93	\$ 162	\$ 240
<b>RULE 232. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 124	\$ 216	\$ 241
<b>RULE 240. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 141	\$ 246	\$ 540
– SCHOOL AND CHURCH BUSES			
	\$ 63	\$ 110	\$ 151
– OTHER BUSES			
	\$ 63	\$ 110	\$ 151
– VAN POOLS			
	\$ 141	\$ 246	\$ 540
<ul style="list-style-type: none"> <li>• For Other Than Zone-rated Trucks, Tractors and Trailers Classifications, refer to Rule <b>222. for premium development.</b></li> <li>• For Private Passenger Types Classifications, refer to Rule <b>232. for premium development.</b></li> <li>• For Other Than Zone-rated Publics Autos, refer to Rule <b>239. for premium development.</b></li> <li>• For Deductible factors, refer to Rule <b>298.</b></li> <li>• For Vehicle Value factors, refer to Rule <b>301.</b></li> </ul>			

COMMERCIAL LINES MANUAL  
DIVISION ONE  
AUTOMOBILE  
LOSS COST PAGES

PHYSICAL DAMAGE Original Cost New Range \$25,000 – 29,999			
	Specified Causes Of Loss	Comp.	\$500 Ded. Coll.
<b>RULE 223. TRUCKS, TRACTORS AND TRAILERS CLASSIFICATIONS</b>			
– Local And Intermediate – All Vehicles			
– Long Distance – Light Trucks And Trailers Used With Light Trucks	\$ 103	\$ 178	\$ 276
<b>RULE 232. PRIVATE PASSENGER TYPES CLASSIFICATIONS</b>			
	\$ 130	\$ 226	\$ 303
<b>RULE 240. PUBLIC AUTO CLASSIFICATIONS</b>			
– TAXICABS AND LIMOUSINES			
	\$ 157	\$ 271	\$ 621
– SCHOOL AND CHURCH BUSES			
	\$ 70	\$ 121	\$ 174
– OTHER BUSES			
	\$ 70	\$ 121	\$ 174
– VAN POOLS			
	\$ 157	\$ 271	\$ 621
<ul style="list-style-type: none"> <li>• For Other Than Zone-rated Trucks, Tractors and Trailers Classifications, refer to Rule <b>222. for premium development.</b></li> <li>• For Private Passenger Types Classifications, refer to Rule <b>232. for premium development.</b></li> <li>• For Other Than Zone-rated Publics Autos, refer to Rule <b>239. for premium development.</b></li> <li>• For Deductible factors, refer to Rule <b>298.</b></li> <li>• For Vehicle Value factors, refer to Rule <b>301.</b></li> </ul>			

**290. HIRED AUTOS**

<b>Cost Of Hire Basis – All Territories Liability Base Loss Cost</b>
\$ 0.24

**Table 290.B.3.a.(1)(LC) Cost Of Hire Basis Liability Loss Cost**

Coverage	All Perils Deductible	Loss Cost Per Each \$100 Annual Cost Of Hire
<b>Comprehensive</b>	No Deductible	\$ 0.45
	\$ 50 Deductible	0.44
	100 Deductible	0.43
	250 Deductible	0.41
	500 Deductible	0.39
	1,000 Deductible	0.36
	2,000 Deductible	0.31
	3,000 Deductible	0.27
	5,000 Deductible	0.22
<b>Collision</b>	\$ 100 Deductible	1.41
	250 Deductible	1.36
	500 Deductible	1.28
	1,000 Deductible	1.13
	2,000 Deductible	0.96
	3,000 Deductible	0.84
<b>Specified Causes Of Loss</b>	No Deductible	0.22

**Table 290.C.3.a.(1)(LC) Hired Autos Physical Damage Loss Costs**

## Supplementary Information – North Dakota

### 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 North Dakota

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>
3/31/2018	+4.2%	+4.5%
6/30/2018	+4.4%	+4.3%
9/30/2018	+5.1%	+4.2%
12/31/2018	+5.5%	+4.3%
3/31/2019	+5.7%	+4.6%
6/30/2019	+5.7%	+5.1%
9/30/2019	+5.7%	+5.5%
12/31/2019	+5.9%	+5.9%
3/31/2020	+6.0%	+6.2%
6/30/2020	+5.9%	+6.8%
9/30/2020	+5.7%	+7.3%
12/31/2020	+5.6%	+7.8%
3/31/2021	+5.3%	+8.0%
6/30/2021	+5.7%	+8.0%
9/30/2021	+6.3%	+8.2%
12/31/2021	+7.1%	+8.2%

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 – North Dakota

### 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 2010 - September 2011	2.8%	4.9%
October 2011 - September 2012	4.1%	4.7%
October 2012 - September 2013	2.4%	5.4%
October 2013 - September 2014	2.0%	3.5%
October 2014 - September 2015	2.5%	3.3%
October 2015 - September 2016	4.9%	5.6%
October 2016 - September 2017	1.6%	4.3%
October 2017 - September 2018	1.7%	3.7%
October 2018 - September 2019	3.5%	2.1%
October 2019 - September 2020	4.2%	4.5%
October 2020 - September 2021	0.4%	3.3%
October 2021 - September 2022	6.0%	3.9%

### 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 – North Dakota****North Dakota Trends****Liability Loss Trend**

	<u>Current Trends</u> <u>Data through</u> <u>12/31/2021</u>	<u>Previous Trends</u> <u>Data through</u> <u>12/31/2020</u>	<u>Previous Trends</u> <u>Data through</u> <u>3/31/2020</u>
North Dakota Claim Cost Trends			
Bodily Injury (\$100,000 Limit)	-10.5%	-13.3%	5.4%
Property Damage (\$100,000 Limit)	10.5%	11.5%	4.6%
Credibility-Weighted Claim Cost Trends			
Bodily Injury (\$100,000 Limit)	7.1%	5.6%	5.7%
Property Damage (\$100,000 Limit)	8.3%	8.0%	6.2%
Selected Claim Frequency Trends			
Trucks, Tractors & Trailers			
Bodily Injury	0.0%	0.0%	0.0%
Property Damage	0.0%	0.0%	0.0%
Private Passenger Types			
Bodily Injury	0.0%	0.0%	0.0%
Property Damage	0.0%	0.0%	0.0%
Selected Pure Premium Trends			
Trucks, Tractors & Trailers			
Bodily Injury (\$100,000 Limit)	7.1%	5.6%	5.7%
Property Damage (\$100,000 Limit)	8.3%	8.0%	6.2%
Private Passenger Types*			
Bodily Injury (\$100,000 Limit)	7.1%	5.6%	5.7%
Property Damage (\$100,000 Limit)	8.3%	8.0%	6.2%

\*The Private Passenger Types trend is also used for the Auto Dealers coverage.

**Liability Premium Trend**

	<u>Current Trends</u> <u>Data through 12/31/2021</u>
Trucks, Tractors & Trailers	0.4%
Private Passenger Types	0.0%

North Dakota bodily injury severity trend receives 0% weight when combined with multistate trend in the filing, property damage trend receives 5% weight.

Liability premium trends are being introduced to correspond with the new class plan.

If the prior trends were used to calculate the indicated changes in this document, the Truck, Tractors & Trailers Liability indication would have been 3.5% instead of 6.1%. For the Private Passenger Types coverage, the indication would have been 4.6% instead of 6.5%. For the Auto Dealers coverage, the indication would have been 19.9% instead of 24.8%.

## Supplementary Information – North Dakota

### No-Fault Coverage (PIP)

	Current Trends <u>Data through 6/30/2022</u>	Previous Trends <u>Data through 6/30/2021</u>
North Dakota Claim Cost Trends		
Trucks, Tractors & Trailers	3.1%	3.4%
Private Passenger Types	3.6%	3.7%
Selected Claim Frequency Trends		
Trucks, Tractors & Trailers	0.0%	0.0%
Private Passenger Types	0.0%	0.0%
Selected Pure Premium Trends		
Trucks, Tractors & Trailers	3.1%	3.4%
Private Passenger Types*	3.6%	3.7%

\*The Private Passenger Types trend is also used for the Auto Dealers coverage.

If the prior trends were used to calculate the indicated change in this document, the Truck, Tractors & Trailers PIP indication would have been -6.6% instead of -6.9%. For the Private Passenger Types PIP coverage, the indication would have been 2.8% instead of 2.7%. For the Auto Dealers PIP coverage, the indication would have been 3.7% instead of 3.4%.

### Physical Damage Loss Trend

	Coverage	Current Trends <u>Data through 12/31/2021</u>	Previous Trends <u>Data through 12/31/2020</u>
Trucks, Tractors & Trailers	OTC	6.0%	5.5%
	Collision	7.0%	4.0%
Private Passenger Types	OTC	6.5%	7.0%
	Collision	7.0%	5.0%

### Physical Damage Premium Trend

	Coverage	Current VVF Trends <u>Data through 12/31/2021</u>	Previous OCN Trends <u>Data through 12/31/2020</u>
Trucks, Tractors & Trailers	OTC	1.5%	0.9%
	Collision	2.5%	1.4%
Private Passenger Types	OTC	2.2%	0.9%
	Collision	1.0%	0.5%

Physical Damage premium trends are now based on trends in Vehicle Value Factor (VVF), rather than the previous Original Cost New (OCN) trends, to correspond with the new class plan.

The loss trend has increased by 0.5 points for Trucks, Tractors & Trailers OTC and has decreased by 0.5 points for Private Passenger Types OTC. The premium trend has increased by 0.6 points for Trucks, Tractors & Trailers OTC and has increased by 1.3 points for Private Passenger Types OTC. If the prior loss and premium trends were used, the Trucks, Tractors and Trailers and Private Passenger Types OTC indications in this document would have 6.9%, instead of 6.5%, and 10.0%, instead of 6.3%, respectively.

The loss trend has increased by 3.0 points for Trucks, Tractors & Trailers Collision and has increased by 2.0 points for Private Passenger Types Collision. The premium trend has increased by 1.1 points for Trucks, Tractors, & Trailers Collision and has increased by 0.5 points for Private Passenger Types Collision. If the prior loss and premium trends were used, the Trucks, Tractors & Trailers and Private Passenger Types Collision indications in this document would have been 14.1%, instead of 21.1%, and 4.1%, instead of 7.1%, respectively.

## Supplementary Information – North Dakota

### Loss Development

#### Methodology

For the Trucks, Tractors & Trailers and Private Passenger Types Liability coverages, we continue to employ a credibility-weighted combination of North Dakota 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. Auto Dealers Liability losses are developed using multistate data. 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	1.102	1.093
27 to Ultimate	1.247	1.212
15 to Ultimate	1.223	1.294
Trucks, Tractors and Trailers PD		
39 to Ultimate	1.005	1.004
27 to Ultimate	1.015	1.014
15 to Ultimate	1.055	1.060
Private Passenger Types BI		
39 to Ultimate	1.083	1.084
27 to Ultimate	1.314	1.272
15 to Ultimate	1.795	1.731
Private Passenger Types PD		
39 to Ultimate	1.004	1.003
27 to Ultimate	1.012	1.011
15 to Ultimate	1.049	1.056
Auto Dealers BI		
39 to Ultimate	1.168	----
27 to Ultimate	1.405	----
15 to Ultimate	2.162	----
Auto Dealers PD		
39 to Ultimate	1.036	----
27 to Ultimate	1.074	----
15 to Ultimate	1.174	----

## Supplementary Information – North Dakota

### Other Factors

Unallocated Loss Adjustment Expense factors:

	<u>Data through 12/31/2020</u>	<u>Data through 12/31/2019</u>
Bodily Injury	1.070	1.070
Property Damage	1.100	1.100
Physical Damage	1.130	1.130

### Indicated vs. Filed Changes

An overall change of 9.3% is indicated when each of the coverage indications is weighted by its respective loss cost volume. Staff will file the indications, which reflect a 7/1/2023 proposed effective date, with the following exceptions:

<u>Coverage</u>	<u>Indicated Change</u>	<u>Filed Change</u>
Trucks, Tractors and Trailers PIP	-6.9%	-15.0%
Private Passenger Types PIP	2.7%	N.C.
Auto Dealers PIP	3.4%	-10.0%

The overall filed change is 9.0%.

### Notes

- The Auto Dealers and Garagekeepers Physical Damage coverages are not being reviewed this year.
- The high indication for Trucks, Tractors and Trailers Collision is due to the poor experience in four out of five years in the review.
- The high indication for Auto Dealers Liability is due to the poor experience in two of the five experience years, as well as a higher expected experience ratio caused by a longer period of time since this coverage was last reviewed.