

# **REVIEW OF MANDATORY FILING SUBMITTED BY FACILITY ASSOCIATION: TAXI**

Province of Newfoundland and Labrador  
Board of Commissioners of Public Utilities

June 10, 2022

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# 1. EXECUTIVE SUMMARY

## 1.1. Purpose

At the request of the Newfoundland and Labrador Board of Commissioners of Public Utilities (Board or PUB) Oliver, Wyman Limited (Oliver Wyman) reviewed the taxi vehicles rate filing submitted by the Facility Association (FA).

### Rate Indication Summary

FA estimates that its current Newfoundland and Labrador taxi insurance rate level needs to be increased by 12.3%<sup>1</sup>, on average, to achieve a return of 6.0% percent of premium. This is the first taxi filing in which FA has included a profit provision in its proposed rate. We note that the Board approved a profit provision for FA PPV rates in Filing Order No. A.I. 48 (2021).

FA's indicated and proposed rate changes by coverage are as follows:

**Table 1: Indicated Rate Changes**

Coverage	Indicated	Proposed
Bodily Injury Tort	+12.9%	+12.9%
Property Damage Tort	+12.9%	+12.9%
Direct Compensation Property Damage	+12.9%	+12.9%
Accident Benefits	+11.1%	+11.1%
Uninsured Automobile	+14.2%	+14.2%
Collision	+9.5%	+9.5%
Comprehensive	+20.2%	+20.2%
Specified Perils	-33.3%	-33.3%
<b>Total</b>	<b>+12.3%</b>	<b>+12.3%</b>

FA proposes an effective date of 100 days post approval for both new business and renewals. In order to calculate the rate level indications in Table 1, FA assumes an effective date of April 1, 2023 for new business and renewal business.<sup>2</sup>

FA currently has 393 taxi exposures in Newfoundland and Labrador with an average premium per vehicle of \$7,056. If FA's +12.3% increase is approved, the average premium will increase by \$868 to \$7,924 per vehicle.

<sup>1</sup> FA revised its overall rate indication in response to question 6 of IR#2 to correct a double counting oversight. FA stated this change will be reflected in the final indication exhibits that will be submitted after the PUB's decision is rendered. We consider the updated rate indication of +12.3% as the starting point for our review. As FA originally proposed rate changes for each coverage the same as its indicated changes, for purposes of this report, we assumed FA will amend its original +13.3% proposal accordingly.

<sup>2</sup> FA should adjust their final submission to reflect the actual effective date if different than April 1, 2023.

In addition, FA proposes changes to its conviction surcharges to taxis, and well as other classes of vehicles.<sup>3</sup> The rate level impact of these conviction surcharge changes is estimated to be approximately 1.0%, and is not included in the proposed overall rate level increase of +12.3%. Due to limited data, no support is provided by FA for its proposed increases to its conviction surcharges and therefore, we can not opine on the reasonableness. As a result of the changes to the conviction surcharges, FA's overall rate level change will be higher than its overall indication of +12.3% presented in Table 1.

## 1.2. Findings and Conclusions

We reviewed the rate level indications developed by FA, and, in so doing, examined all aspects of FA's ratemaking procedure. There are several aspects of FA's analysis of its rate level need where we believe alternate calculations and/or assumptions should be considered by the Board.

Following FA's general methodology for determining its rate level need, but with alternate assumptions, judgments, and calculations that we believe to be more appropriate, we find its overall rate level change need to be less than the +12.3% change proposed by FA.<sup>4</sup> In this report, we present the basis for our conclusion.

Our findings are based on the information contained in the application, responses provided by FA to our questions, and our review of insurance industry statistical experience in Newfoundland and Labrador as published by the General Insurance Statistical Agency (GISA).

With respect to the COVID-19 pandemic, FA's assumptions limit the consideration of the 2020 accident period, which experienced a significant decline in claims volume associated with the decline in traffic volume during the pandemic. FA derives the rate indications in this application assuming the **future** impact of COVID-19 (beginning April 1, 2023) will be negligible.

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<sup>3</sup> The proposed change for minor convictions is an increase for 2 and 3 convictions from 0% to 5% and 15%, respectively. The proposed change for major convictions is an increase from 15% for the first and 5% for each additional, to 25% for each starting with the first conviction.

<sup>4</sup> We assume FA intends to propose a rate level change to be the same as its corrected overall indicated rate level change of +12.3%.

Please direct all questions related to this report to the undersigned.

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## 2. BACKGROUND

In its letter dated March 31, 2022, Facility Association submitted its taxi rate application to the Board.<sup>5</sup> Oliver Wyman received a copy of the rate application on April 1st from Board staff. On April 19, 2022, we provided our questions on the rate application to FA and received FA's responses on April 28, 2022. Additional follow-up questions were provided to FA on May 9, 2022, and we received FA's responses on May 18, 2022.

FA's most recent taxi filing was approved in December 2019, with an overall rate change of +0.3%.

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<sup>5</sup> For the purpose of establishing a rate indication, an effective date of April 1, 2023 was assumed by FA.

### 3. DETERMINING RATE LEVEL NEEDS

As support for FA's proposed changes, FA calculates and presents a rate level need by coverage based on its Newfoundland and Labrador (NL) loss experience through December 31, 2020 as compiled by GISA. FA presents the experience of the latest ten years, giving weight to the most recent six years. We refer to this six-year period as the experience period. We reviewed the rate level indications developed by FA, and in so doing have examined all aspects of the ratemaking procedure. The key assumptions in FA's rate application are:

- Selection of *Ultimate Losses (Loss Development)* – FA relies upon its non-PPV (commercial, interurban, motorcycles, snow vehicles, taxis, etc.) NL experience<sup>6</sup> in selecting development factors that it applies to its reported incurred losses for the taxi exposure. (FA's reported incurred losses do not include allocated loss adjustment expenses.) FA's selected ultimate losses by accident year and coverage are its Appointed Actuary's (AA) selected ultimate NL non-PPV losses by accident half-year and coverage, evaluated as of September 30, 2021.

These non-PPV losses include the FA claim experience from all vehicles that are not private passenger vehicles; therefore it is not exclusively taxi claim experience. Due to the limited volume of taxi experience, FA finds it necessary to use its non-PPV experience to select ultimate losses for its taxi exposure. While we acknowledge there are few, if any, alternatives, the use of non-PPV loss experience adds to the uncertainty of FA's estimate of its overall rate level change need (+12.3%) for taxi.

The AA considers several methods: Link Ratio, Expected Loss Ratio (ELR), Bornhuetter-Ferguson (B-F), Benktander, Generalized Cape Cod, and Incurred (Zero IBNR). The B-F, Benktander, and Generalized Cape Cod methods are based on implicit weights applied to the Link Ratio and ELR methods, where weights vary by methodology. After consideration of the results of these methods, the AA selects his or her "best estimate"<sup>7</sup> which, in this case, is generally the result of the Link Ratio method for the older accident years and is either the result of the B-F method or ELR method for the more recent accident years. FA uses the AA's ultimate loss selections in estimating its rate level needs.

The AA's selection is their best estimate based on their knowledge and judgment. Another equally qualified actuary could select a different best estimate. Despite this, we note that the selection for bodily injury and accident benefits tends towards the "highest" alternative amongst the methods under consideration. For example, we found the ELR estimates for 2020-2 for bodily injury and accident benefits to be high relative to the other estimates. In the case of bodily injury, for the accident half year 2020-2, FA presents Link Ratio, ELR and B-F ultimate loss amount estimates of \$1.13 million, \$1.78 million, and \$1.20 million, respectively; all evaluated as of September 30, 2021. In addition, three other estimates are presented, all less than \$1.27 million. FA selected the highest estimate: the ELR. As a sensitivity test, we asked FA to substitute the B-F method for the ELR

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<sup>6</sup> In some cases, due to the limited FA data, the Appointed Actuary selects the factors based on industry-wide experience.

<sup>7</sup> The Canadian Institute of Actuaries standards guide the AA and provide a definition of "best estimate" where the best estimate is meant as an unbiased estimate that is neither too conservative or optimistic. Due to the numerous judgments in the process of selecting a best estimate, another actuary fulfilling the AA role for FA would not likely have the identical best estimate.

method for the 2020-2 accident half-year. Making this change, and no other changes in assumptions reduces the taxi overall rate level indication by 0.8 percentage points.

While we are not in full agreement with the selection of the ultimate loss amounts, given the relatively small impact on the rate level indication of the sensitivity test, we do not discuss this issue further but recommend the Board consider this finding in its Decision.

- *Selection of Ultimate Claim Counts (Claim Count Development)* – FA relies upon its non-PPV NL experience<sup>8</sup> in selecting development factors that it applies to its reported claim counts for taxi. We find these selections to be reasonable.
- *Loss Trends* – FA selects loss trend rates based on its review of insurance industry commercial vehicles data as of December 31, 2020 to project its historical loss experience to the average accident date of its proposed rate program. We discuss FA’s selected loss trend rates in Section 4.
- *Premium Trends and On-Level Factors* – FA adjusts its premiums to consider rate level changes in the recent past and premium drift. We find these adjustments to be reasonable.
- *Experience Period Weights* - For each coverage, FA combines its experience over the six accident years by assigning a 20% weight to 2016, 2017, 2018 and 2019, and 10% weight to 2020 and 2015. FA states they assigned 10% weight to 2020 to limit the impact of COVID-19 on the overall rate indication. We find the weights to be reasonable in the circumstance.
- *Loss Adjustment Expense (LAE)* – FA’s LAE provision (for both internal and external claim settlement related expenses) is based on the contractual arrangement between FA and its servicing carriers which, in turn, is based upon the FA’s loss ratio results. We find these estimates to be consistent with the contractual arrangements and, therefore, accept them as reasonable. However, the actual LAE costs are not provided by FA to support these provisions.
- *Health Levy (HL)* – FA has included a fixed per vehicle \$23.99 provision for the HL. This is consistent with the Board’s guidelines.
- *Full Credibility Claim Count Standards* –FA selects full credibility claim count standards consistent with its prior taxi filing, and we therefore accept these as reasonable.
- *Complement of Credibility* - To the extent that FA determines its own loss experience is not statistically credible, FA assigns the balance of credibility using the net trend method. That is, the loss ratio per FA’s prior filing is adjusted by the approved rate change and premium/claims trend. We find this approach reasonable.
- *Expense Provision* – FA assumes a total expense provision of 21.84% allocated as follows:

**Table 2: FA Expense Provisions**

<b>Expense Provision</b>	<b>Percent of Premium</b>
<b>Variable Expenses</b>	<b>18.17%</b>
Standard Commissions	3.00%
Premium Tax	5.00%
Servicing Carrier Operating Costs	9.00%

<sup>8</sup> In some cases, due to the small volume of FA data, the AA selects factors based on the industry-wide experience.



<b>Expense Provision</b>	<b>Percent of Premium</b>
Servicing Carrier Fee	1.00%
Miscellaneous Regulatory Fees	0.17%
<b>Fixed Expenses</b>	<b>3.67%</b>
Driving Record Abstracts (TPL only)	1.75%
Central Office Expenses	1.50%
Health and Other Levy (TPL only)	0.42%

The 3% commission rate is based on the FA Board’s Plan of Operation. The 5% premium tax rate is set by the provincial government.

The servicing carrier fee of 1% and servicing carrier operating costs of 9% are based on a compensation agreement between the FA Board and its servicing carriers, rather than the actual costs and expenses of the servicing carriers for processing policies. The Board may wish to address that the total 10% servicing carrier fees are not supported by actual costs. In addition, with the change to a single servicing carrier, there may be lower actual costs in the future due to savings associated with economies of scale. We do not discuss FA’s total expense provision, 21.84%, further.

- *Contingent Commissions* – In calculating its rate level change need, FA does not include a contingent commission provision as no contingent commission arrangements exist.
- *Finance Fee Revenues* – FA does not consider the fees paid for the monthly payment plans offered by the servicing carrier. We discuss the finance fee revenues in Section 5.
- *Profit Provision (Return on Equity / Percent of Premium)* –FA believes its rate level needs should provide for a target 12% after-tax return on equity (ROE). However, FA presents<sup>9</sup> its (Appendix A summary) indicated rates based on 6% percent of premium provision as it understands this is within the Board’s Guideline of 5% to 6%. We find FA’s proposal is consistent with the recent NL PUB decision on FA’s PPV profit provision, Filing Order No. A.I. 48 (2021).

This is the first tax filing in which FA has included a profit provision in its proposed rate. We estimate the exclusion of this 6% percent of premium provision, and no other changes in assumptions, reduces the overall rate level by approximately 8.6 percentage points.

- *Investment Income on Cash Flow (ROI)* – FA estimates its return on investment rate (ROI) to be +1.31%. However, FA uses a net return on investment rate of 2.8% to determine the alternative indications which is consistent with the recent NL PUB decision for FA’s PPV profit provision Filing A.I. 48 (2021), and for that reason, we find the rate of 2.8% to be reasonable.
- *HST Adjustment* – FA accounts for the change in the HST rate July 1, 2016 (from 13% to 15%) through its determination of loss trend rates. We find this to be reasonable in the circumstances.
- *Reform Adjustment* – FA adjusts the BI historical loss experience for the recent deductible reforms in its loss trend model; which we find to be reasonable.

In the following sections we discuss assumptions for the Board’s consideration regarding: (1) loss trend rates and (2) finance fee revenues.

<sup>9</sup> Within the detailed filing documentation, FA presents rate indication based on both a 12% target ROE and 6% of premium basis.

## 4. ACTUARIAL COMMENTARY: LOSS TRENDS

### 4.1. Summary

As the volume of taxi experience is limited, the loss trend rates applied to the taxi experience are based on the industry commercial vehicle experience. In Table 3, we present the loss cost trend rates selected by FA and the Board’s Guideline loss trend rates; both based on commercial vehicle industry experience as of December 31, 2020.

**Table 3: Summary of Loss Cost Trends**

Coverage(s)	Facility Association	Board Guidelines as of 12/31/2020
Bodily Injury <sup>10</sup>	+0.2% With -25% at Jan 2016	-5.0% <sup>11</sup> With +40% at Jan 2013
Property Damage & DCPD	+0.9%	-0.5%
Accident Benefits	+0.0% With +105% at July 2011	+6.0% <sup>12</sup>
Uninsured Auto	+0.0%	Same as Accident Benefits
Collision	+2.4%	+3.0% <sup>13</sup>
Comprehensive	+2.5%	+3.0% <sup>14</sup>
Specified Perils	+0.0%	Same as Comprehensive
Underinsured Motorist	+0.0%	+0.0%

As presented in Table 3, the widest differences in the selected loss trend rates between FA and the Board Guidelines, prepared by Oliver Wyman, are for bodily injury, accident benefits, and collision.

### 4.2. Trend Determination Issues

We presented our rationale for our December 2020 trend rates that we selected in our Commercial Vehicle Loss Trend Report filed with the Board; and we do not repeat our rationale and support for our loss trend selections in this report. As we have stated in our trend reports to the Board, there is considerable volatility in the industry commercial experience which makes the trend patterns difficult to identify.

FA determined loss cost trend rates using its estimate of the industry accident half-year ultimate frequency, severity and loss costs as of December 31, 2020 for all coverages. FA excluded the 2020-1

<sup>10</sup> FA includes a -4% reform adjustment for the change in the BI deductible as a parameter within its regression model beginning 2020-1.

<sup>11</sup> The Board’s more recent guidelines as of June 30, 2021 is -4.0%.

<sup>12</sup> The Board’s more recent guidelines as of June 30, 2021 is +4.0%.

<sup>13</sup> The Board’s more recent guidelines as of June 30, 2021 is +3.5%.

<sup>14</sup> The Board’s more recent guidelines as of June 30, 2021 is +2.0%.

and 2020-2 accident semesters from their trend models due to the uncertainty of the COVID-19 pandemic impact. We take a similar approach in our frequency and loss cost trend analysis for coverages where a significant impact is observed. We find severity has been generally unaffected by the pandemic and therefore we consider the 2020 observations in our severity model. Although we do not agree with excluding the 2020 observations for severity, we expect the impact on the indicated trend rate to be minimal.

FA's loss trend models are based on indemnity only data, whereas our loss trend models include allocated and unallocated loss adjustment expense (ALAE and ULAE). The difference in ultimate claim frequency, severity and loss cost estimates, as well as the exclusion of ALAE and ULAE, contributes to the difference in the loss cost trend rates between Oliver Wyman and FA. However, the majority of the difference is due to different judgements in regression model design driven by relatively limited and volatile commercial vehicle data.

Regarding model design, the differences between the trend rates of Oliver Wyman and those of FA are mainly due to different judgments regarding: (1) trend measurement period, (2) point at which trend rates change, (3) point at which there is a sustained level change up or down in experience, and (4) inclusion/exclusion of specific data points considered outliers.

As a sensitivity test, we asked FA to provide the rate level indications using the Board's Guideline loss trend rates. FA estimates substituting the Board's Guideline loss trend rates as of December 31, 2020 instead of those selected by FA, and no other changes in assumptions, decreases its overall rate level indication by 8.5 percentage points.<sup>15</sup> It appears FA may have inadvertently dropped the 2020 bodily injury reform adjustment when calculating the impact of substituting the Board's Guidelines. We calculate that if the Board's Guideline loss trend rates were used **in addition to** consideration of a -4.0% bodily injury reform adjustment, the total rate level indication would decrease an additional 0.8 percentage point.

We have no issues with FA's general approach to modelling, however where we are not in agreement with FA's trend rate, it is due to its model design choices.

We discuss our concerns with FA's bodily injury, accident benefits and collision loss trend rates - those coverages with the largest difference from the Board's Guideline loss trend rates.

### 4.3. Bodily Injury

#### FA Bodily Injury Frequency Model

FA's selected frequency trend rate of -2.3% is based on a model fit to semi-annual accident year data from 2001-H1 to 2019-H2.<sup>16</sup> In Figure 1, we present FA's selected bodily injury frequency model. As presented in Figure 1, there is no significant difference between FA's estimated ultimate frequency values and ours, both evaluated as of December 31, 2020. However, our selected annual past and future frequency trend rate is -5.0%.<sup>17</sup>

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<sup>15</sup> FA estimated the overall rate need decreased from 13.3% to 4.8%, (before correcting the double counting issue described in question 6 of IR#2 resulting in a 1 percentage point decrease in the overall rate need).

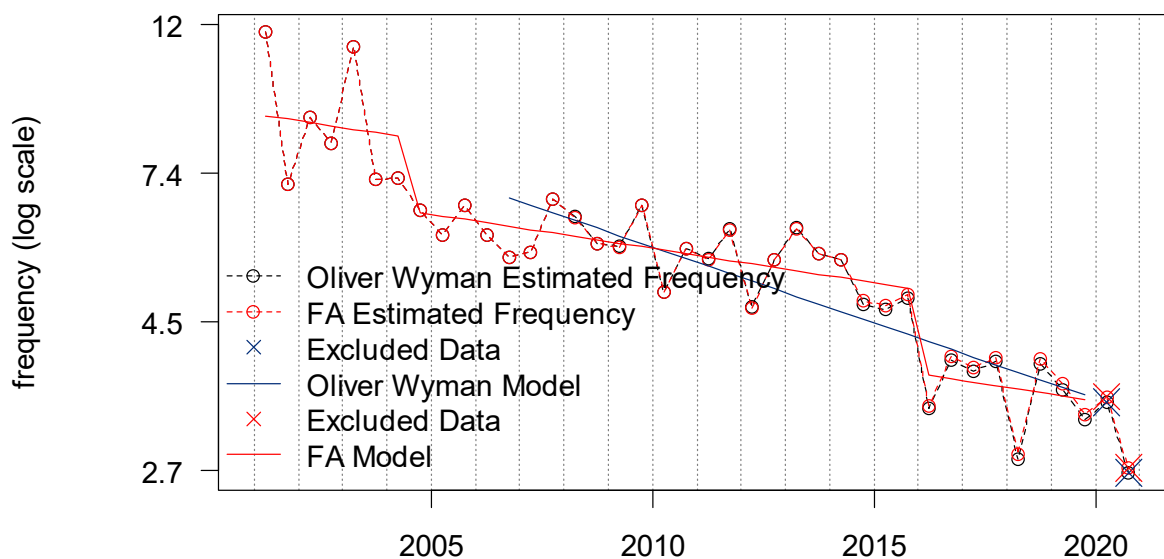
<sup>16</sup> The 2020-1 and 2020-2 accident half year data is excluded due to the impact of the COVID-19 pandemic on claim frequency.

<sup>17</sup> Our selected annual frequency trend only considers accident periods after the introduction of the 2004 reforms.

- FA’s selected frequency trend rate of -2.3% is based on semi-annual accident year data between 2001-1 and 2019-2; and assumes a one-time step decrease of 25% in the frequency level at 2016-1.
- Our model implicitly incorporates this drop at 2016-1, along with the ongoing pattern of decline before and after 2016-1, as part of the trend rate. As a result, our frequency trend rate is therefore a larger negative at -5.0%.
- While FA’s model has merit, we are not in agreement that the frequency level had a one-time sustained shift downward at 2016-1, as there have been other large decreases (e.g., at 2018-1 versus 2017-1 of approximately -30%) that are part of the random pattern of claims frequency.

FA’s approach to its model choice (i.e., a drop at 2016-1) results in a higher trend rate applied to the experience data, and a higher rate level indication.

**Figure 1: FA Bodily Injury Frequency Model**



**FA Bodily Injury Severity Model**

In Figure 2, we present Oliver Wyman’s severity data and selected model; and FA’s severity data<sup>18</sup> and selected severity model.

FA’s selected annual severity trend rate of +2.6% is based on semi-annual accident year data between 2001-1 and 2019-2.<sup>19</sup>

<sup>18</sup> FA’s estimates of the ultimate severity do not include loss adjustment expenses, while Oliver Wyman’s estimated do. This causes our severity estimates to be consistently higher than FA’s; but with little effect on the differences in measured trend rate. As shown in Figure 5, our estimates track consistently with FA’s, with the exception of the most recent immature data points.

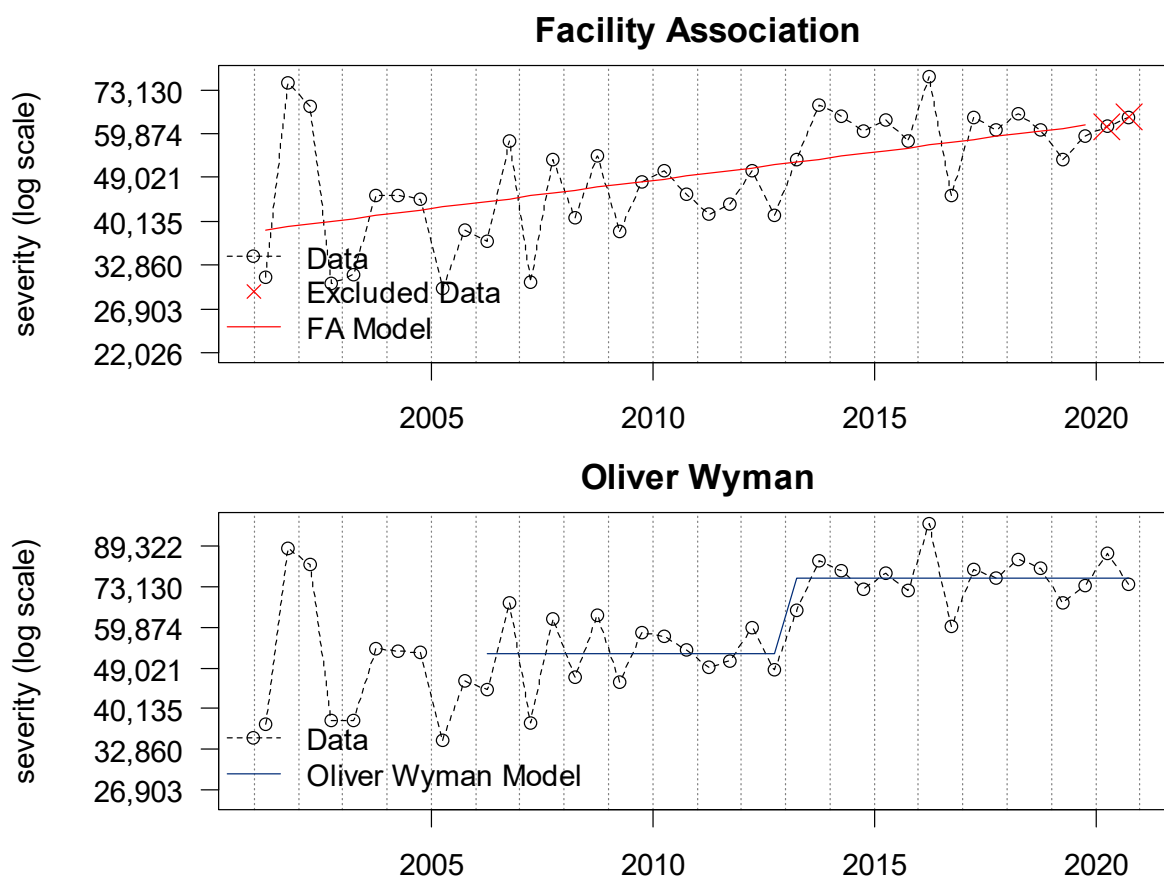
<sup>19</sup> As part of its model design, FA manually adjusted the data with a -4% factor for the 2020 reforms. This adjustment has no impact to the indicated trend rate as FA only considers 2019 and prior in their trend model.

In contrast to FA, we observe a flat trend since 2006 other than a large increase in the 2013 severity level that was sustained thereafter. Using these observations, we selected a severity trend rate of 0.0%, with a scalar level change of +40% at January 1, 2013.

As there is considerable volatility in the severity data for this coverage, and no evidence of seasonality, we also considered the annual data. Our findings are consistent based on the more stable annual data.

In response to our questions, FA provided a similar model structure (a flat trend and 2013-1 scalar) using their severity estimates. In this model prepared by FA, the sustained lift at January 2013 (i.e., scalar parameter) is significant 40% ( $p = 0.000^{20}$ ), as is in our model. Further, this adjusted R-squared value would increase from the 20% range to approximately 80% when based on annual data after the 2004 introduction of the \$2,500 deductible to all bodily injury tort claims.

**Figure 2: FA Bodily Injury Severity Model**



**Oliver Wyman Findings**

A key difference with FA’s frequency model versus our model, is that FA considers there to be a one-time 25% downward shift at 2016-1. While we agree FA’s model has merit, at this time, we consider this

<sup>20</sup> A p-value < 0.05 is generally considered statistically significant.

drop in 2016-1 to be due to the random nature of accidents, and not a sustained one-time shift, as there are other large drops in the data such as at 2018-1 versus 2017-1 of -30%.

The key differences between FA's and our severity models are as follows:

- FA considers all data points since 2001-1, while we consider observations after the 2004 reforms. We believe these earlier accident periods add little predictive value to the model, while adding significant volatility to the data.
- We consider annualized data in addition to the results of semi-annual data in our review.
- Our model design, a flat trend with a one-time upward shift in severity at January 1, 2013, has strong statistical support (all  $p$ -values  $<.05$ ) and a high Adjusted R-squared in excess of 90%. FA selects a standard two-parameter model (trend and intercept), without considering the sustained increase beginning January 2013.

In contrast to FA's model, we find our model to be an excellent fit of the severity data, with adjusted R-squared in excess of 90%, much higher than FA's model with an Adjusted R-squared of 25%.

As a result, we find FA's selected loss cost trend rate of +0.2% to be too high.

#### **4.4. Accident Benefits**

##### **FA Accident Benefits Frequency Model**

FA's selected annual frequency trend rate of 0.0% is based on semi-annual accident year data between 2005-1 and 2019-2. As our frequency trend rate is also 0.0%, we do not discuss this further.

##### **FA Accident Benefits Severity Model**

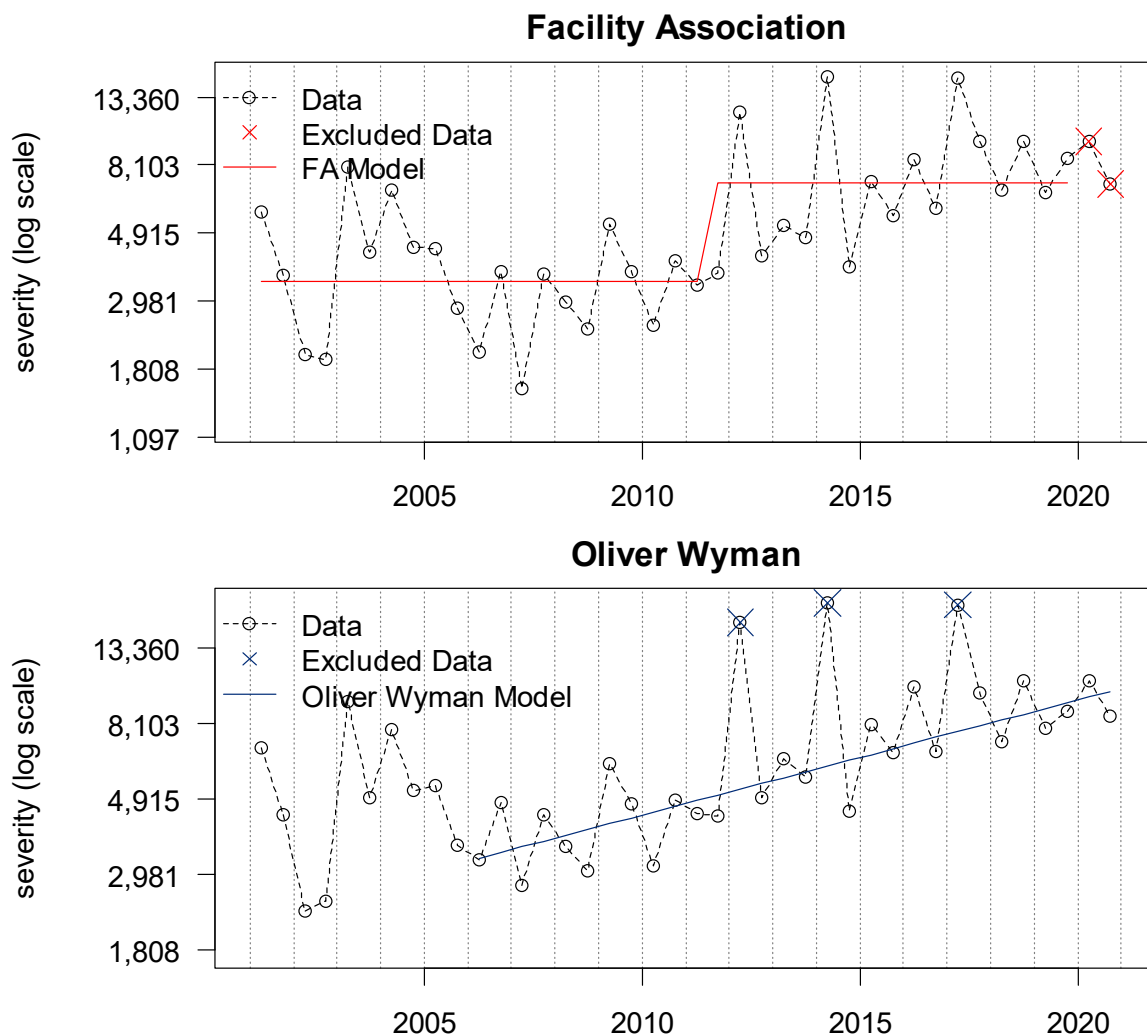
FA's selected annual severity trend rate of +0.0% is based on semi-annual accident year data between 2000-1 and 2019-2, and only includes a scalar parameter at July 1, 2011 in the model (resulting in a flat trend rate, other than a one-time lift upward at July 2011). In Figure 3, we present FA's accident benefits severity model.<sup>21</sup>

In contrast, we observe an increasing accident benefits trend since 2010 with large spikes at 2012-1, 2014-1 and 2017-1, as opposed to a one-time upward shift. As such, our resulting severity trend rate is much larger and excludes these points as they appear to be outliers. We note the models we consider have trend rates that fall in the range of +7.5% to +10.0%, with an adjusted R-square value of approximately 70%, as compared to 40% for FA's model.

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<sup>21</sup> FA's estimates of the ultimate severity do not include loss adjustment expenses, while Oliver Wyman does. This causes our severity estimates to be consistently higher than FA's; but with little effect on the differences in measured trend rate. As shown in Figure 2 and Figure 4, our estimates track consistently with FA's, with the exception of the most recent immature data points.

**Figure 3: FA Accident Benefits Severity Model**



**Oliver Wyman Findings**

We observe FA’s selected severity model does a poor job of fitting observations, as inclusion of the various spikes (2012-1, 2014-1 and 2017-1), and use of a scalar parameter instead of a trend parameter, results in a relatively poor fit.

As a result, we find FA’s selected loss cost trend rate of 0.0% to be low.

**4.5. Collision**

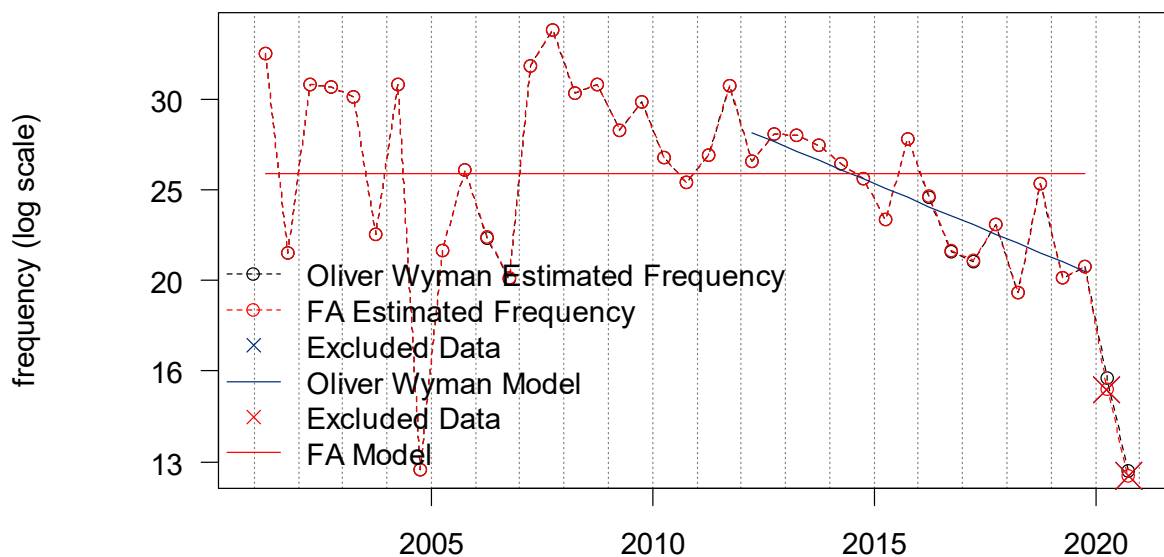
**FA Collision Frequency Model**

FA’s selected an annual past and future frequency trend rate of +0.0%, as it finds no discernable trend. In Figure 4, we present FA’s collision frequency model.

In contrast, we observe a decreasing pattern since 2007, and select an annual frequency trend of -4.0% based on models with adjusted R-squareds in the 70% range. We note any differences between frequency estimates are negligible and have an immaterial impact on trend rate.

Furthermore, we find that FA’s model which does not include a trend parameter result has non-random residuals, which is indicative of a poor fit. We observe such a pattern in the residuals of FA’s collision frequency model on page 45 of Appendix B (Part 1) of the filing.

**Figure 4: FA Collision Frequency Model**



**FA Collision Severity Model**

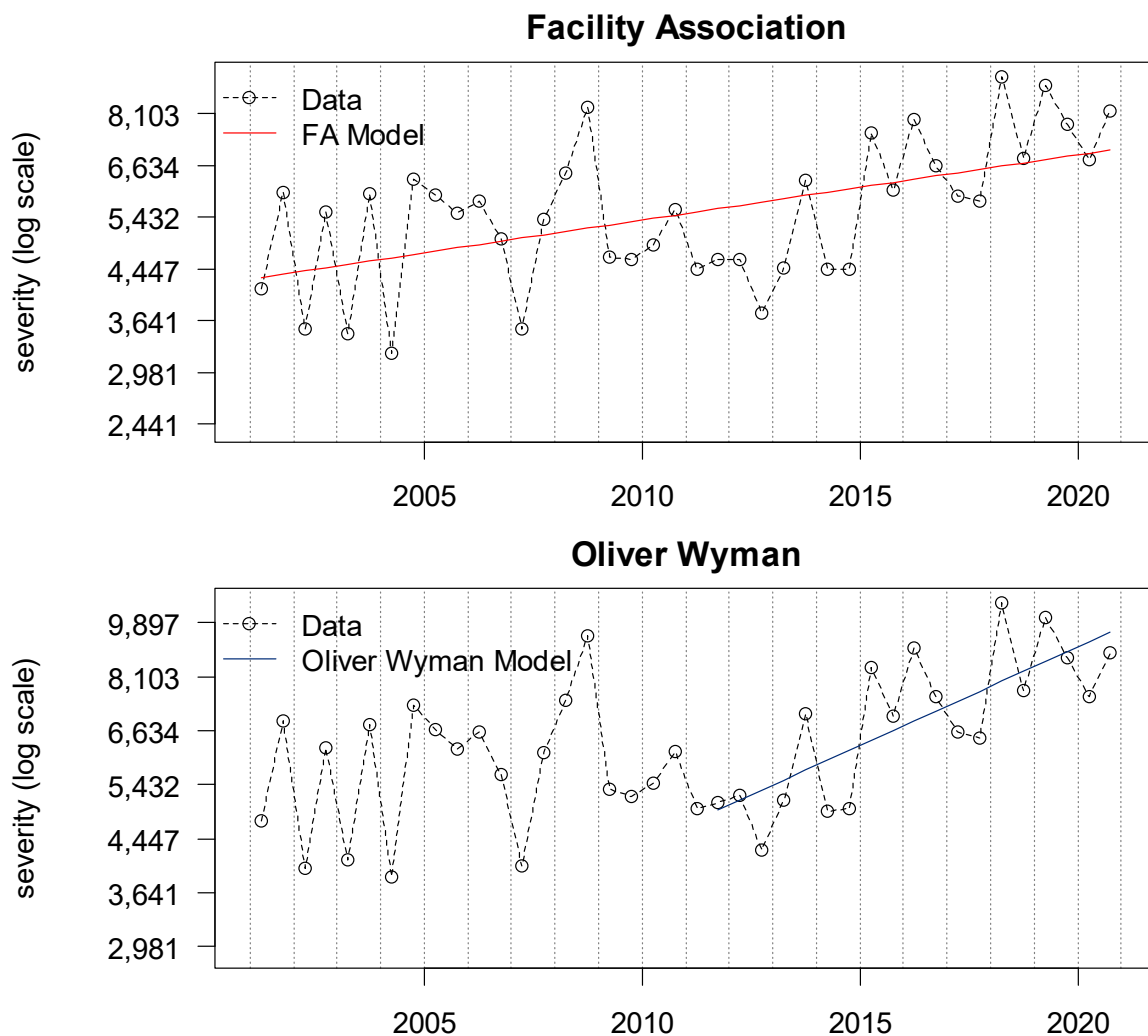
FA’s selected annual past and future severity trend rate of +2.4% is based on semi-annual accident year data between 2001-1 and 2019-2. In Figure 5, we present FA’s collision severity model.<sup>22</sup>

Based upon our review, we find a steeper trend rate beginning 2010-2011, and select a severity trend rate of +7.5%. We note the models we consider have an adjusted R-squared value of approximately 60%, as compared to 5% for FA’s model.

<sup>22</sup> FA’s estimates of the ultimate severity do not include loss adjustment expenses, while Oliver Wyman does. This causes our severity estimates to be consistently higher than FA’s; but with little effect on the differences in measured trend rate. As shown in Figure 5, our estimates track consistently with FA’s, with the exception of the most recent immature data points.



Figure 5: FA Collision Severity Model



**Oliver Wyman Findings**

We find FA’s Collision frequency trend rate to be high, and its severity trend rate to be low. Taken together, we find FA’s loss cost trend rate of +2.6% to be low.

## 5. FINANCE FEES

FA's sole service carrier offers a monthly payment plan option and charges a 3% finance fee. However, FA did not account for these revenues (nor any associated administration, bad debts or cash flow changes) in determining its rate level needs in this rate application. FA's position is that finance fees are collected by the servicing carrier and not the FA; and should not be treated as part of the premium. Instead the finance fees should be considered a loan between the policyholder and servicing carrier.

In the Board's Decision (A.I. 3, 2019) for a prior FA taxi application, the Board stated: "In the Board's view, finance fee revenues should be reflected for in the rates since they are revenues collected by insurers in premiums paid monthly."

In the Board's Decision (A.I. 3, 2019) it directed FA to provide the necessary supporting finance fee revenue information in its subsequent rate applications.

In response to our request for how these fees are taken into consideration in the rate indication model, FA reiterated that it does not consider this information in its calculations.

Hence, unlike other insurers, there is no information provided summarizing these payment plan fees paid by policyholders, nor consideration of the fees in the rate indications model.

We find it appropriate that the FA should be consistent with (i) the Board's prior Decision on finance fee revenues and (ii) the manner in which other insurers determine rate indication by considering these fees in the rate indication calculations.

Given this, we asked FA to provide an estimate of its net finance fee revenues and take these fees into consideration in its rate indication calculations. FA estimates the fees are 1.5% of taxi premiums. FA calculates that this change, and no other changes in assumptions, reduces the overall rate level by approximately 2.3 percentage points.

## 6. SUMMARY

We reviewed the rate level indications as developed by FA and in so doing have examined all aspects of its ratemaking methodology. Changes to the following assumptions would lead to an overall rate level indication that is less than the rate level need that the FA has proposed.

1. The Board’s Guideline loss trend rates as of December 2020.
2. FA’s recognition of finance fee revenues.

Table 4 presents FA’s calculations of its taxi indicated changes and those derived by combining the assumption listed above. We note FA’s rate level indications are subject to additional volatility due to the limited data available for a small volume of risks.

As previously noted, the impact of FA’s proposed changes to its conviction surcharges are not included in the proposed overall rate level increase of +12.3%. As a result of the changes to the conviction surcharges, FA’s overall rate level change will be higher than its overall indication of +12.3%.

**Table 4: Commercial Vehicle Indicated Rate Changes**

<b>Coverage</b>	<b>Facility Association</b>	<b>Alternative Indication</b>
Bodily Injury Tort	+12.9%	-5.9%
Property Damage Tort	+12.9%	-5.9%
Direct Compensation Property Damage	+12.9%	-5.9%
Accident Benefits	+11.1%	+37.1%
Uninsured Automobile	+14.2%	+37.2%
Collision	+9.5%	+9.6%
Comprehensive	+20.2%	+19.5%
Specified Perils	-33.3%	28.4%
<b>Total</b>	<b>+12.3%</b>	<b>-0.8%</b>

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## 8. CONSIDERATIONS AND LIMITATIONS

**Data Verification** – For our analysis, we relied on data and information provided by FA without independent audit. Though we have reviewed the data for reasonableness and consistency, we have not audited or otherwise verified this data. Our review of data may not always reveal imperfections. We have assumed that the data provided is both accurate and complete. The results of our analysis are dependent on this assumption. If this data or information is inaccurate or incomplete, our findings and conclusions might therefore be unreliable.

**Supplemental Data** – Where historical data of FA was either (i) not available, (ii) not appropriate or (iii) not sufficiently credible to develop our actuarial assumptions, we supplemented it with external information, as we deemed appropriate. Although we believe these external sources may be more predictive of future experience of FA than any other data of which we are aware, the use of external data adds to the uncertainty associated with our projections.

**Rounding and Accuracy** – Our models may retain more digits than those displayed. Also, the results of certain calculations may be presented in the exhibits with more or fewer digits than would be considered significant. As a result, there may be rounding differences between the results of calculations presented in the exhibits and replications of those calculations based on displayed underlying amounts. Also, calculation results may not have been adjusted to reflect the precision of the calculation.

**Internal / External Changes** – The sources of uncertainty affecting our estimates are numerous and include factors internal and external to FA. Internal factors include items such as changes in claim reserving or settlement practices. The most significant external influences include, but are not limited to, changes in the legal, social, or regulatory environment surrounding the claims process. Uncontrollable factors such as general economic conditions also contribute to the variability.

**Uncertainty Inherent in Projections** – While this analysis complies with applicable Actuarial Standards of Practice and Statements of Principles, users of this analysis should recognize that our projections involve estimates of future events and are subject to economic and statistical variations from expected values. We have not anticipated any extraordinary changes to the legal, social, or economic environment that might affect the frequency or severity of claims. For these reasons, we do not guarantee that the emergence of actual losses will correspond to the projections in this analysis.

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