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Mr. Robert Byrne
Director, Regulatory and Advisory Services
Board of Commissioners of Public Utilities
P.O. Box 21040
St. John's, Newfoundland
A1A 5B2

Subject:
Facility Association
Newfoundland and Labrador-Taxis, Jitney's & Liveries
Category 2 Rate Application

Dear Mr Byrne:

Introduction

In accordance with your request, Oliver, Wyman Limited (Oliver Wyman) reviewed the Taxi, Jitney and Liveries (hereafter referred to as Taxi) rate application submitted by Facility Association (hereafter referred to as FA).

Summary of Findings

<u>FA Proposal</u>

As presented in its application, FA proposes to increase its rates for Third Party Liability (TPL) by 50.0%, Accident Benefits (AB) by 294.3%, and Uninsured Auto (UA) by 329.3%; and proposes no changes to its rates for physical damage coverages. (FA's physical damage coverage rates are based on a percentage of its private passenger rates.) FA estimates its proposed overall rate level change for the three independently rated Taxi coverages (TPL, AB and UA) is an increase of 56.7%. (We refer to these three coverages - TPL, AB and UA - as the independently rated coverages through this report.) FA estimates its proposed overall rate level change for all coverages combined (including physical damage) is an increase of 54.1%.

FA Indication

Independently Rated Coverages

FA presents its estimate of its rate level change need on three bases with different return on equity (ROE) targets and different pre-tax return on investment rate (ROI) assumptions:

1. Including a cost of capital at a target ROE of 12% and an assumed ROI of 1.14%
2. No cost of capital (target ROE of 0%) and an assumed ROI of 1.14%
3. No cost of capital (target ROE of 0%) and an assumed ROI of 2.8%

The base with the target ROE at 12% and assumed ROI at 1.14% represents FA's best estimate of its rate level change need. However, the two bases with the target ROE set at 0% are also provided by FA as it understands the Board does not accept a cost of capital provision in the FA rates. The ROI at 2.8% is presented because FA understands the Board's Guideline ROI range is 2.8% to 4.0%. The following table presents these three indications provided by FA.

Table 1

Base	TPL	AB	UA	Independently Rated Coverages
12% ROE & 1.14% ROI	+95.6%	+354.6%	+394.9%	+102.7%
0% ROE & 1.14% ROI	+75.4%	+307.6%	+343.8%	+81.7%
0% ROE & 2.8% ROI	+67.3%	+294.3%	+329.3%	+73.5%

Hence, FA is proposing a rate level change for TPL (+50%) that is less than its estimate of its rate level change need for this coverage as calculated under each of the three bases. FA is proposing a rate level change for each of AB and UA that matches the indicated change based on a 0% target ROE and an assumed 2.8% ROI.

Physical Damage Coverages

FA presents indicated rate level changes of -20.0% for Collision, -1.2% for Comprehensive, +9.6% for Specified Perils, and -13.7% for All Perils; for an overall indicated decrease of 9.1% for the physical damage coverages combined. However, as noted earlier, no changes are proposed by

FA for these coverages as they are rated as a percentage (225%) of the FA's private passenger physical damage rates.

Various changes to underwriting rules are proposed by FA although it provides no information as to the rate level impact of these changes, which we understand to be due to data limitations. Hence we do not offer any comments on these proposed changes.

FA estimates the average proposed increase is approximately +$1,698 per vehicle.[1] The following table presents the current average premiums[2] and the proposed average premiums for TPL, AB and UA.

Table 2

	TPL	AB	UA	Total
Current Average Premium	$2,834	$80	$14	$2,928
Proposed Average Premium	$4,251	$315	$60	$4,626
Proposed Average Change ($)	+$1,417	+$235	+$46	+$1,698

Findings

We find FA's indicated and proposed rate level changes for TPL, AB and UA to be higher than we calculate based on the Board's Auto Insurance Filing Guidelines ("Guidelines") and other assumptions we find to be reasonable. In the table below we present FA's rate level indications as calculated by FA[3], as well as those calculated by Oliver Wyman based on the Board's Guidelines.

[1] This does not consider the impact (if any) of the proposed underwriting rule changes.
[2] The current average premiums are based on those rates effective August 1, 2013.
[3] We exclude FA's calculations based on a target ROE of 12% since the Board does not currently allow FA to include a profit provision in its rates.

Table 3

Coverage	FA's Indicated Rate Changes (ROI at 1.14%)	FA's Indicated Rate Changes (ROI at 2.8%)	FA's Proposed Rate Changes	Board's Guideline Rate Indications
TPL	+75.4%	+67.3%	+50.0%	+19.8%
Accident Benefits	+307.6%	+294.3%	+294.3%	+125.4%
Uninsured Auto	+343.8%	+329.3%	+329.3%	+132.8%
Independently Rated Coverages	+81.7%	+73.5%	+56.7%	+21.5%

Our calculation of the overall rate level change is based on FA's estimate of its on-level current written premium for each coverage as presented in Exhibit A of its rate application.

We also note that FA has made a number of material changes in its approach and assumptions used to calculate its rate level indications from those it used in its prior rate application for which the Board approved a 50.1% rate level increase for the independently rated coverages effective August 1, 2013. The effect of the changes in FA's approach and assumptions is to increase its rate level indication. That is, had FA not changed its approach or assumptions used to determine its rate level indications, its rate level indications – as presented in this application – would be lower.

We discuss more fully later in this report the key changes in assumptions and methods made by FA in this rate application compared to its prior application which affect the rate level indications that are presented. Briefly, the key changes relate to (1) standard for full credibility, (2) complement of credibility base, and (3) the loss trend selection process.

Background

FA submitted a rate application for an overall proposed rate level change of +56.7% (for TPL, AB and UA combined) assumed to be effective August 1, 2014 for new business and renewals.

Oliver Wyman received a copy of the rate application on March 6, 2014 from FA. On March 21 we provided our questions on the rate application to FA, and received FA's responses on March 31. Based on those responses, we sent additional questions to FA on April 9, and received its responses on April 18, 2014. On May 2 we confirmed with Board Staff the treatment of the Health Levy fee for Taxis in this rate application. We now have sufficient information to prepare this report.

FA last revised its rates for the independently rated coverages on August 1, 2013, when it increased its independently rated coverage average rate level by 50.1%. Prior to August 2013, FA's rate manual pages were dated May 1993.

Findings

Introduction

FA calculates three sets of rate level indications for all coverages based on different ROE and ROI targets/assumptions, and proposes changes in rate level for the independently rated coverages only (TPL, AB and UA). For simplicity, for the remainder of this document we only discuss FA rate indications assuming a target 0% ROE (consistent with the Board's Decision) and an assumed ROI of 1.14% (consistent with FA's best estimate rate indications). As well, due to the different rating structure for the physical damage coverages, we focus our discussion on the TPL, AB and UA coverages.

FA's indicated and proposed rate level changes for the TPL, AB and UA coverages are summarized in the following table.

Table 4

Coverage	**FA Indication**	**FA Proposal**
TPL	+75.4%	+50.0%
Accident Benefits	+307.6%	+294.3%
Uninsured Auto	+343.8%	+294.3%
Total	+81.7%	+56.7%

Findings – Rate Level Changes

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 arising from the latest five accident years (2008 to 2012) ending December 31, 2012 as compiled by GISA. We refer to this five 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 following are the key assumptions in FA's rate application.

- *Loss Trends* - FA selects loss trend rates based on its review of Industry data as of December 31, 2012 to project its historical loss experience to the average accident date of its proposed rate program. We discuss FA's selected loss trend rates below.

- *Premium Trends and On-Level Factors* – FA adjusts its premiums to take into consideration its rate level change in 2013. We find these on-level adjustments to be reasonable.

- *Selection of Ultimate Losses (loss development)* - FA relies upon its non-PPV (commercial, motorcycles, snow vehicles, Taxis, etc.) NL experience in selecting development factors that it applies to its reported incurred losses for Taxis. (FA's reported incurred losses do not include allocated loss adjustment expenses.) We discuss its selected loss development factors in the *Other Considerations* section below.

- *Selection of Ultimate Claim Counts (claim count development)* – As claim count development factors are not part of FA's internal valuation process, FA relies upon the Industry Commercial Vehicle (CV) NL experience in selecting development factors. Given the limited data, we find its use of the Industry CV data and its selections to be reasonable in this circumstance.

- *Experience Period Weights* - For each coverage, FA combines its experience over the five accident years by assigning a 20% weight to each year. This is a change from its prior application, whereby the weights assigned to each accident year were based on the on-level earned premium of each of the five years for that coverage. The prior methodology resulted in relatively more weight being assigned to the more recent years. However, the impact of this change in methodology is minor; therefore, we find the change in methodology to be reasonable in this 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. In this application FA includes a provision of approximately 9.5% of premiums for all coverages; plus, for TPL only, an additional provision of 3.6% of the incurred losses. In its prior rate application, FA included an LAE provision of 9.55% of premiums for all coverages; plus for TPL only, an additional provision of 1.7% of TPL premiums. In the circumstances, we find these new estimates in this rate application to be reasonable as they are based on contractual arrangements. However, the actual LAE costs are not provided by FA to support these provisions.

- *Health Levy* – FA has not included a provision for the Health Levy (HL). As we understand, a set dollar amount fee per vehicle is determined each year by the responsible Ministry that applies to all vehicles (or policies) unless the policy premium is determined based on receipts or payroll. In FA's prior application, FA estimated the HL provision to be 0.9% of its TPL premium and included this provision for the HL in calculating its rate level change need. We discuss this issue more fully below.

- *Full Credibility Claim Count Standards* – FA selects full credibility claim count standards for each of TPL, AB and UA of 3,246, 2,164, and 2,164, respectively. In its prior rate application, FA selected full credibility claim count standards for each of TPL, AB and UA of 5,410, 2,164, and 2,164, respectively. FA references its 2003 Atlantic Commercial Vehicle study as the basis for its change in the TPL claim count standard. As we do not follow FA's rationale for changing its TPL claim count full credibility standard, we discuss this issue more fully below.

- *Complement of Credibility* - To the extent that FA determines its own loss experience is not statistically credible, FA assigns the balance of credibility to its estimate of its current permissible loss ratio adjusted for its estimate of the resulting inadequacy in its current rate (due to FA requesting a smaller rate increase than it estimated its rate level change need was, in the prior application) and the net loss/premium trend since the effective date of its last rate change. This differs from FA's use of the one-year loss trend as the complement of credibility in its prior application. We discuss this issue more fully below.

- *Expense Provision* - FA assumes a total expense provision of 23.6% allocated as follows: (a) variable: 6% standard commissions, 4% premium tax, 1% servicing carrier fee, and 9% servicing carrier operating costs - for a total variable expense provision of 20% of premium; and (b) fixed: 1% for driving record abstracts and 2.6% for central office expenses - for a total fixed expense provision of 3.6% of premium. The 6% commission rate is based on an agreement between the FA Board and its servicing carriers. The 4% 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 an agreement between the FA Board and its servicing carriers, rather than the actual costs and expenses of the servicing carriers for processing Taxi policies. The fixed expense costs are based on estimates by FA, taking into consideration its most recent actual costs and proposed rate level change. We discuss the expense provision more fully below.

- *Contingent Commissions* – In calculating its rate level change need, FA does not include a contingent commission provision. We find this assumption to be in keeping with the Board's Guidelines.

- *Finance Fee Revenues* - FA does not offer a monthly payment plan and there are no finance fees paid by the Taxi policyholders.

- *Profit Provision (Cost of Capital)* – As previously directed by the Board, FA presents its rate indications without a provision for profit (target ROE at 0%). Our discussion of FA's rate indication is on this basis.

- *Investment Income on Cash Flow* (ROI) - FA assumes a pre-tax return on investment rate of 1.14% on the cash flow (losses). In its prior rate application FA assumed a pre-tax rate of 2.0%. We discuss this investment rate assumption below.

Based on our review of the application and the responses to the questions we have raised, we present below a discussion of the following methods/assumptions used by FA for the Board's consideration: (1) the loss trend rates, (2) the Health Levy, (3) the full credibility standard for TPL, (4) the basis for the complement of credibility, and (5) the investment income provision (ROI).

The TPL, AB and UA premiums represent approximately 93%, 2% and 0.4%, respectively, of the total premiums for Taxis. (The physical damage coverages represent approximately 4.6% of the total premiums for Taxis and are rated based on the private passenger vehicles rates.) Given the large proportion of TPL premiums to the total premiums, our findings are largely based on the assumptions/methods related to the TPL coverage.

Loss Trend Rates

The Industry experience for Taxis, which are categorized as public vehicles for statistical reporting purposes, is too limited for use in selecting loss trend rates. FA, therefore, bases its selected loss trend rates on the Industry commercial vehicle (CV) loss experience. As the Board has no guideline on the data to be used to select trend rates for Taxis, and FA's use of Industry CV experience for determining loss trends is consistent with its prior approach,[4] we find the use of Industry CV experience to be reasonable.

Based on Industry CV experience in NL as of December 31, 2012, FA selects its CV loss cost trend rates for each of BI, PD, and AB[5] by separately selecting frequency and severity trend rates and then combining these selected trend rates to arrive at its selected loss cost trend rates[6]. FA's selected loss trend rates are presented in the following table.

Table 5

	Frequency	Severity	Loss Cost
Bodily Injury	-2.3%	+6.9%	+4.4%
Property Damage	+0.3%	+2.1%	+2.4%
Accident Benefits	-0.8%	+8.5%	+7.6%

The following table summarizes the CV loss cost trend rates[7] selected by Oliver Wyman and approved by the Board as of December 31, 2012.

Table 6

	Loss Cost
Bodily Injury	-1.5%
Property Damage	0.0%
Accident Benefits	+1.0%

[4] In FA's prior rate application, for some coverages the FA found the CV claims experience too volatile to determine a loss trend rate, and therefore, chose to rely upon its private passenger selected loss trend rates.
[5] Due to the limited data, FA selects the AB loss cost trend rate for the UA coverage.
[6] FA uses the same trend rate for both past and future trend periods.
[7] Oliver Wyman uses the same trend rate for both past and future trend periods.

As presented in the tables above, the CV loss cost trend rates selected by FA are higher than those selected by Oliver Wyman.

We presented our rationale for the CV trends rates that we selected in our report to the Board based on NL Industry CV data as of December 31, 2012. We continue to find our loss trend selections to be reasonable. However, we acknowledge that there is considerable volatility in the Industry CV experience, which makes the trend patterns difficult to identify.

The loss cost trend rate is used to adjust the actual claim experience that occurred in the experience period to the cost level of the period in which the proposed rate program is to be in effect.

Both Oliver Wyman and FA apply loss trend regression models to determine the loss cost trend rate (the average year-to- year change in loss costs). Key considerations in determining the loss cost trend rate include: how well the regression model "fits" (in a statistical sense) the actual historical data, the reasonableness of the parameter values included in the regression model, the time periods over which the trend is measured, and the exclusion of outlying data points from the regression model.

We discuss below general differences in the data and approach used by FA versus Oliver Wyman to select CV loss trend rates, and then discuss the specific issues by coverage.

- FA's loss cost trend rates are based on the Industry CV experience for indemnity costs only (since its claims handling costs compensation model is different than the rest of the Industry). Oliver Wyman's loss cost trend rates are based on the Industry CV experience for both indemnity costs and claim handling costs (LAE), combined. This difference in the inclusion of claim handling costs (by Oliver Wyman) and their exclusion (by FA) does not appear to have a material impact in the loss trend rates; which would mean that the Industry LAE costs are changing at a rate that is close to the rate that the losses are changing each year.[8]

- Both FA and Oliver Wyman independently select the claim count and loss development factors that apply to the Industry CV experience data as of December 31, 2012. But the

[8] If the LAE costs are changing at a slower/faster rate than the losses, then the calculated loss & LAE trend rate would be lower/higher than a trend rate based only on the losses, all else being equal.

factors selected by FA differ from those selected by Oliver Wyman. However, with the exception of AB (discussed below), we find FA's selected development factors to be reasonable.

- FA bases its selected loss trends on a regression analysis of the Industry CV experience over the past 20 years (1993 to 2012), with various data exclusions and parameters that it finds reasonable. Oliver Wyman's selected loss trend rates are based on various regression analyses over different time periods spanning ten years or less, with data exclusions and use of parameters that we find reasonable.

Bodily Injury (BI)

- FA separately determines its frequency and severity trend rates based on its regression analysis of its estimate of Industry CV ultimate losses and claim counts by accident half year over the 20 year period ending December 31, 2012. FA splits this 20 year regression analysis into the time before and after the August 2004 reforms. In our opinion, a 20 year period is too long to serve as a basis for selecting trend rates that apply to the (2008 to 2012) experience period.

- FA does not find evidence to support the inclusion of a "seasonality" parameter to take into consideration the difference in the loss experience between the first and second half of the year. We find there to be evidence of seasonality in the loss cost in the more recent years. The parameter test we apply (referred to as a T-test) indicates that a seasonality parameter should be applied in the regression model over the 2005 to 2012 period.

- From the regression model selected by FA, FA estimates the August 2004 reforms resulted in a reduction in Industry CV loss costs for BI of 37.1% (split between frequency at -27.2% and severity at -13.6%). We do not find this estimate to be reasonable. We observe that the frequency began its decline well before the 2004 reforms were introduced, and do not find evidence that the $2,500 deductible on non-pecuniary loss amounts introduced in August 2004 had a measurable impact on Industry CV loss costs (but possibly contributed to reducing the loss trend rate). In its prior filing FA did not include a parameter in its regression model for the August 2004 reforms, so this represents a change from the prior filing – although FA states this reform estimate is not important to its findings.

- FA does not appear to fully consider that the Industry loss cost trend rate has varied over time and that the measured loss cost trend is quite different if different measurement periods are considered. As an example, for the post reform period, FA states its selected loss cost trend of +4.4% is, effectively, based on the regression model over the time period from 2004-2 to 2012-2[9] (with the high severity data point from 2010-2 excluded). However, using FA's estimate of the Industry CV loss experience, we measure a loss cost trend rate of +1.4% over the period 2008-1 to 2012-2, excluding the high and low loss cost points; and -0.7% over the period 2003-1 to 2012-2, excluding the two high and low loss cost points. We also note that the more recent loss cost estimates (e.g., for the 2012-1 and 2012-2 half-years), in particular, are subject to change (as claims are reported and settled), and therefore, indicated loss trend rates are subject to change over time. We believe that this variability and uncertainty in loss trend rates supports our approach to select loss trend rates that consider several alternate measurement periods.

Property Damage (PD)

- FA separately determines its frequency and severity trend rates based on its regression analysis of its estimate of Industry CV ultimate losses and claim counts by accident half year over the 20 year period ending December 31, 2012. FA splits this 20 year regression analysis into the time before and after the August 2004 reforms. In our opinion, a 20 year period is too long to serve as a basis for selecting trend rates that apply to the (2008 to 2012) experience period.

- FA includes a parameter to take into consideration the difference in the loss experience between the first and second half of the year. Based on the loss experience, we find this to be reasonable.

- From the regression model selected by FA, FA estimates the August 2004 reforms resulted in a reduction in Industry CV loss costs for PD of 17.2% (split between frequency at 13.6% and severity at 4.2%). We do not find this estimate to be reasonable. We observe that the frequency began its decline well before the 2004 reforms were introduced, and do not find evidence that the $2,500 deductible on non-pecuniary loss amounts *for BI* introduced in August 2004 had a measurable impact on Industry CV loss costs *for PD*. In its prior filing FA did not include a parameter in its regression model for the August 2004 reforms, so this represents a change from the prior filing - although FA states this does not have a direct bearing on the rate indications.

[9] In this report we reference the first half and second half of an accident year as XXXX-1 and XXXX-2, respectively.

- FA does not appear to fully consider that the Industry loss cost trend rate has varied over time and that the measured loss cost trend is quite different if different measurement periods are considered. As an example, for the post reform period, FA states its selected loss cost trend of +2.4% is, effectively, based on the regression model over the time period from 2004-2 to 2012-2 (with the low frequency data point from 2004-2 excluded). However, using FA's estimate of the Industry CV loss experience, we measure a loss cost trend rate of +0.9% over the period 2008-1 to 2012-2, excluding the high and low loss cost points; and +2.1% over the period 2003-1 to 2012-2, excluding the two high and low loss cost points. We also note that the more recent loss cost estimates (e.g., for the 2012-1 and 2012-2 half years), in particular, are subject to change (as claims are reported and settled), and therefore, indicated loss trend rates are subject to change over time. We believe that this variability and uncertainty in loss trend rates supports our approach to select loss trend rates that consider several alternate measurement periods.

Accident Benefits (AB)[10]

- FA separately determines its frequency and severity trend rates based on its regression analysis of its estimate of Industry CV ultimate losses and claim counts by accident half year over the 20 year period ending December 31, 2012. FA splits this 20 year regression analysis into the time before and after the August 2004 reforms. In our opinion, a 20 year period is too long to serve as a basis for selecting trend rates that apply to the (2008 to 2012) experience period.

- FA does not include a parameter to take into consideration the difference in the loss experience between the first and second half of the year. Based on the loss experience, we find this to be reasonable.

- From the regression model selected by FA, FA estimates the August 2004 reforms resulted in a reduction in Industry CV loss costs for AB by 72.6% (split between frequency at 50.0% and severity at 45.2%). We do not find this estimate to be reasonable. We observe that the AB frequency is very volatile and do not find evidence that the $2,500 deductible on non-pecuniary loss amounts *for BI* introduced in August 2004 had a measurable impact on Industry CV loss costs *for AB.* In its prior filing FA did not include a parameter in its regression model for the August 2004 reforms, so this represents a

[10] In the case of UA, FA uses the selected AB trend rate.

change from the prior filing - although FA states this does not have a direct bearing on the rate indications.

- As noted, FA independently selects the Industry CV loss development factors to apply to the Industry CV reported losses which it uses to select loss trend rates. We find FA's selection of loss development factors for development periods 18-24 months and 48-54 months to be higher than is suggested by the historical data. In particular, FA's selected loss development factor for the 18 to 24 month development period is 1.149, whereas the various averages of historical factors presented by FA are all less than 1.00. Similarly, FA's selected loss development factor for the 48-54 month development period is 1.035, whereas the various averages of historical factors presented by FA are all less than 1.00. These higher loss development factors selected by FA lead to a higher estimate of the AB loss trend rate.

- FA does not appear to fully consider that the Industry loss cost trend rate has varied over time and that the measured loss cost trend is quite different if different measurement periods are considered. As an example, for the post reform period FA states its selected loss cost trend of +7.6% is, effectively, based on the regression model over the time period from 2004-2 to 2012-2. However, using FA's estimate of the Industry CV loss experience, we measure a loss cost trend rate of +3.5% over the period 2003-1 to 2012-2, excluding the two high and low loss cost points. We also note that the more recent loss cost estimates (e.g., for the 2012-1 and 2012-2 half-years), in particular, are subject to change (as claims are reported and settled), and therefore, indicated loss trend rates are subject to change over time. We believe that this variability and uncertainty in loss trend rates supports our approach to select loss trend rates that consider several alternate measurement periods.

FA calculates that if it had instead selected the Board approved CV loss trend rates (which are those selected by Oliver Wyman) and no other changes in assumptions, its rate level change need would be as follows.

Indicated Rate Changes (ROE at 0% and ROI at 1.14%)

Table 7

Coverage	**FA's Loss Trend Rates**	**Board Approved Loss Trend Rates**
TPL	+75.4%	+50.0%
Accident Benefits	+307.6%	+240.5%
Uninsured Auto	+343.8%	+273.7%
Independently Rated Coverages	+81.7%	+55.2%

The selection of trend rates has a material impact on the rate level indications calculated by FA.

Health Levy

In this rate application FA does not include a Health Levy (HL) provision in its rate level indication calculation. We understand that this is because the GISA exhibits do not include the HL in the published exhibits for Taxis, and it is FA's understanding that the HL fee for Taxis is not paid by insurers to the NL Government.

In its prior rate application, FA included a HL provision based on a percentage of premium at 0.9%.

Based on information provided by Board Staff, we understand Taxis should be subject to the HL fee, and therefore a provision should be included in the rates. The current HL rate is estimated at $26.44 per vehicle.

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We roughly[11] calculate that if FA includes a HL provision of $26.44 per vehicle, and no other changes in assumptions, its rate level change for TPL would increase from +75.4% to +76.8%; and the rate level change for the independently rated coverages would increase from +81.7% to +83.1%.

Full Credibility Standard for TPL

While there is science underlying the selection of the full credibility standard, considerable judgment is exercised by actuaries in selecting full credibility standard for each coverage.

In this rate application FA has changed its full credibility standard for the TPL coverage from the standard it used in its prior application. The Board's Guidelines state any changes to the assumptions from the prior rate application must be fully explained.

In its prior rate application, FA selected a full credibility count standard for TPL of 5,410 claims and referenced its 2003 Atlantic Commercial Study as the basis for its selected standard. In this rate application, FA lowers its full credibility count standard for TPL to 3,264 claims, and again references the same study as the basis for its selected standard. FA does not fully explain why, based on the same 2003 Atlantic Commercial Study, it has changed its full credibility count standard for TPL. For this reason, we do not find FA's new full credibility standard for TPL to be supported.

We note that if FA were to use the same 5,410 standard in this rate application, and make no other changes in methodology or assumptions, its rate level indication for TPL would reduce from +75.4% to +68.7% - approximately a 7 percentage point decrease in rate level for TPL and approximately a 7 percentage point decrease in rate level for the independently rated coverages (from +81.7% to +75.2%).

Complement of Credibility

In this rate application FA has changed its basis for the complement of credibility.

[11] This estimate is subject to change due to the nature of the fixed expenses. The fixed expenses as a percentage of premium will change with the rate level change approved by the Board.

In the prior rate application, to the extent that FA did not find its rate indications based on its own (adjusted and projected) loss ratio data to be fully credible, it applied the balance of the credibility weight to its trend rate for a period of one year.

In this rate application, FA adjusts its target loss ratio for (a) rate inadequacy it believes exists due to the difference between its prior application rate indication compared to the rate change approved by the Board, and (b) the net premium/loss trend rate for the period of time between the effective date of its current rate program and its proposed effective date for its proposed rate program effective dates - a period just over one year. The key difference between the method used by FA in this rate application versus the prior rate application is the adjustment for rate inadequacy that FA believes exists based on its prior analysis.

In its prior rate application, FA estimated its rate level change need to be +70.7% and proposed a rate change of +51.1%. As stated in the Board's Decision A.I.9 (2013) regarding the FA prior application, the Board was not in agreement with FA's selected loss trend rates and return on investment income rate assumptions. Based on the Board's Guideline loss trend rates and return on investment rate of 4%, the Board approved FA's proposed overall rate level change of +51.1% (which was in-line with Oliver Wyman's findings based on the Board's Guidelines).

Hence we do not find it appropriate to make an adjustment for rate inadequacy carried over from its prior application.

In response to our questions on this issue, FA estimates that if it followed the same approach for applying the complement of credibility as was used in the prior rate application, and no other change in assumptions, its indicated rate level change (for TPL, AB, and UA) would reduce from +81.7% to +57.4% - approximately a 24 percentage point decline.

Further, making changes to <u>both</u> the full credibility standard and basis for the complement of credibility would reduce the rate level change indication (for TPL, AB, and UA) from +81.7% to +46.5% - approximately a 35 percentage point decline.

The selection of the credibility standard and complement of credibility have a material impact on the rate level indications calculated by FA.

Investment Income Provision (ROI)

In calculating its rate level change need FA assumes a pre-tax return on investment rate (ROI) of 1.14% on cash flow, which is a lower rate than the rate it assumed in its prior rate application of 2.0%, and lower than the Board's Guideline range of 2.8% to 4.0%.

The FA entity only holds investments or earns investment income to meet its short-term cash needs; all other funds are distributed to the insurers to invest and earn investment income based on their own company specific investment plans and practices. For insurers providing automobile insurance in the Province, we calculate that the Industry average pre-tax ROI was 4.4%, 4.5%, 4.0% and 2.8% for each of the years 2010 to 2013, respectively.

FA states its selected 1.14% return on investment rate reflects the rates for risk-free type Bank of Canada Bonds and does not consider the actual investment portfolios and returns of the insurers in NL that will actually be holding the funds and earning investment income based on their own investment strategy.

The following table presents the FA rate indications based on two ROI assumptions –its estimate at 1.14% and the Board's minimum guideline at 2.8% (and no other changes in assumptions):

Indicated Rate Changes (all at 0% target ROE)

Table 8

Coverage	**1.14% ROI**	**2.8% ROI**
TPL	+75.4%	+67.3%
Accident Benefits	+307.6%	+294.3%
Uninsured Auto	+343.8%	+329.3%
Independently Rated Coverages	+81.7%	+73.5%

The selection of the ROI rate has a material impact on the rate level indications calculated by FA. Based on the Board's minimum guideline ROI rate of 2.8%, the rate indication for the independently rated coverages is approximately 8 percentage points less. The Board's minimum guideline ROI rate of 2.8% is in-line with the actual Industry average ROI rate for 2013.

Rate Level Change Summary

We reviewed the rate level indication as developed by FA and in so doing have examined all aspects of the ratemaking procedure.

As we have discussed, there is considerable volatility in the experience used to determine the rate level indication in this application. The FA Taxi portfolio is small, and the experience can change dramatically from year to year. As well, non-Taxi experience was used to select the loss trend rates and the loss development factors that are used in this application. This also adds to the uncertainty of the findings.

Changes to certain of the FA's assumptions that we believe to be reasonable and within the Board Guidelines would lead to an overall rate level indication (for TPL, AB and UA) that is less than the rate level need that the FA has estimated and proposed. The following alternate assumptions when combined, without any other changes in assumptions, would reduce the overall rate level indication to approximately +21.5%[12]:

- The Board's Guideline CV loss trend rates instead of the CV rates selected by FA
- The Board's Guideline investment income rate assumption of 2.8%, instead of 1.14%
- The same full credibility claim count standard for TPL as used in the prior application
- The same basis for the complement of credibility as used in the prior application
- A provision for the Health Levy

Combining these changes, we derive the following rate level indications as presented in Table 9 as the "Board's Guideline Indications."

[12] This estimate is subject to change, depending upon verification by FA of the Health Levy provision fee estimate.

Table 9

Coverage	**FA's Assumptions Indications**	**FA's Proposed Changes**	**Board's Guideline Indications ROI at 2.8%**
TPL	+75.4%	+50.0%	+19.8%
Accident Benefits	+307.6%	+294.3%	+125.4%
Uninsured Auto	+343.8%	+329.3%	+132.8%
Independently Rated Coverages	+81.7%	+56.7%	+21.5%

Hence, we find the FA's proposed overall rate level change of +56.7% (for TPL, AB and UA) to be higher than we calculate based on other assumptions we find to be reasonable and the Board's Guidelines.

Other Considerations

We discuss three other considerations for the Board in its review of this rate application:

1. Uncertainty in Findings

As we have discussed, due to data limitations and the relatively (in a statistical sense) small number of insured Taxis, there is a higher than normal degree of uncertainty in the calculated rate level indications presented. Below we briefly discuss some of the factors that add to the uncertainty of the findings.

Loss Development Factors

To estimate the ultimate incurred loss amounts for Taxis for each of the five accident years in the experience period (2008 to 2012), FA multiplies the reported Taxi incurred loss amount for each accident year as of December 31, 2012 by a factor that it selects based on its non-PPV[13] loss experience.[14] Selecting loss development factors that are based on non-PPV experience (as opposed to Taxi experience) adds uncertainty to the indicated rate level changes.

FA selects loss development factors by accident year for the BI and PD coverages, separately. Then, because Taxi loss experience is not separately available for BI and PD, FA combines its selected BI and PD loss development factors to arrive at TPL loss development factors that it applies to its Taxi reported incurred loss amounts by accident year. In combining the selected BI and PD loss development factors, FA assumes that the split between BI and PD losses for non-PPV for each accident year is the same for Taxis. It is unlikely that this, in fact, is the case. For example, for non-PPV, in 2006 PD represented 21% of the TPL losses, but in 2008 PD only represented 12% of the incurred losses. (The fact that the composition of TPL losses between BI and PD varies considerably by accident year for non-PPV, alone, makes it unlikely that the BI/PD split for non-PPV would apply to Taxis). This assumption by FA, made necessary due to data limitations adds to the uncertainty of the indicated rate level changes.

Claim Count Development Factors

To estimate the ultimate number of claims for Taxis for each of the five accident years in the experience period (which FA uses to determine the credibility of its experience), FA multiplies claim count development factors based on *Industry CV* data by the reported Taxi claim counts for each accident year as of December 31, 2012. However, the claim count development pattern for Industry CV's may be different than that for FA Taxis. This assumption by FA, made necessary due to data limitations, adds to the uncertainty of the indicated rate level changes.

Loss Trend Rates

As described above, due to data limitations, the Industry CV experience, rather than Industry Taxi experience, is used to determine the Taxi trend rates. This alone adds to the uncertainty of the indicated rate changes. In addition, the selected trend rates for BI and PD must be combined since Taxi TPL loss experience is not available separately for BI and PD – and the split of Industry

[13] As Taxi experience is not available, FA bases its selected loss development factors on its non-PPV experience.

[14] FA uses three generally accepted actuarial methods (Incurred Link Ratio, Expected Loss Ratio and B-F) to derive indicated ultimate non-PPV loss amounts by accident year. Based on its consideration of the various indications resulting from these three methods, FA selects its estimate of the non-PPV ultimate loss amount for each accident year. The ratio of the selected ultimate loss amount to the reported incurred loss amount is what we define as the loss development factor for that accident year.

CV experience between BI and PD may not be the same as for Taxis. This adds to the uncertainty of the indicated rate level changes.

Credibility Standard and Complement of Credibility Base

FA's Taxi experience is not statistically credible. This adds to the uncertainty of the indicated rate level changes.

2. *Expense Provision*

FA assumes a total expense provision of 23.6% allocated as follows: (a) variable: 6% standard commissions, 4% premium tax, 1% servicing carrier fee, and 9% servicing carrier operating costs - for a total variable expense provision of 20% of premium; and (b) a total fixed expense provision of 3.6% of premium.

FA's contractual arrangement with its serving carriers allows for a 10% (1% + 9%) variable expense provision for underwriting and processing. Hence, if FA's current average premium for (TPL, AB, and UA) of $2,928 increases as proposed to $4,626, its servicing carriers will receive an average increase of $170 (from $293 to $463) per Taxi for underwriting and processing. Similarly, with FA's contractual arrangement of 6% commission expense, its average commission for TPL, AB, and UA combined will increase from $176 to $278 per Taxi.

Although we find the expense provision is accurately included in the calculation of the rate level change need presented by FA based on the contractual arrangement with the servicing carriers, given the actual the average allowance per Taxi proposed ($463 to process and underwrite, and $278 for commissions), the Board may wish to confirm the reasonableness of these amounts.

3. Physical Damage Coverages

Based on the Board's Decision from the prior Taxi rate application, FA was directed to reduce its Taxi factor applied to its private passenger rates from 2.50 to 2.25, approximately -10%. Given the 9% indicated rate level decrease (based on a target ROE of 0% and a ROI of 1.14%) that FA calculates in this application for the physical damage coverages (which takes into consideration the prior decrease of -10%), the Board may wish to consider directing FA to reduce the 2.25 factor.

Distribution and Use

- This report was prepared for the sole use of the Newfoundland and Labrador Board of Commissioners of Public Utilities (Board). All decisions in connection with the implementation or use of advice or recommendations contained in this report are the sole responsibility of the Board.
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Considerations and Limitations

- For our review, 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. It should also be noted that 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 may need to be revised.
- Our conclusions are based on an analysis of the FA application and data and on the estimation of the outcome of many contingent events. Future costs were developed from the historical claim experience and covered exposure, with adjustments for anticipated changes. Our estimates make no provision for extraordinary future emergence of new

classes of losses or types of losses not sufficiently represented in historical databases or which are not yet quantifiable.

- 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, no assurance can be given that the emergence of actual losses will correspond to the projections in this analysis.

Please call us if you have any questions or require additional information.

Sincerely,

Paula L Elliott

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