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March 8, 2017

NL Board of Commissioners of Public Utility
120 Torbay Road
P.O. Box 21040
St. John's, NL
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Attention: Cheryl Blundon, Board Secretary

RE: FA NL **Category 2 Taxi Rate Application – OW Report of Findings** – Response to email March 1, 2017

Dear Ms. Blundon,

Facility Association (FA) received a copy of the March 1, 2017 Oliver Wyman Report of Findings for the December 23, 2016 FA Category 2 Taxi rate application with a request to provide comments (if any) to the Board of Commissioners by March 8, 2017. FA appreciates the opportunity to comment, as presented on the pages that follow, and are happy to provide any additional clarification as needed with respect to our comments.

We look forward to a speedy decision by the Board so that the much needed rate increase can be put into place as soon as possible.

Best regards

Shawn Doherty, FCAS, FCIA
SVP Actuarial & CFO

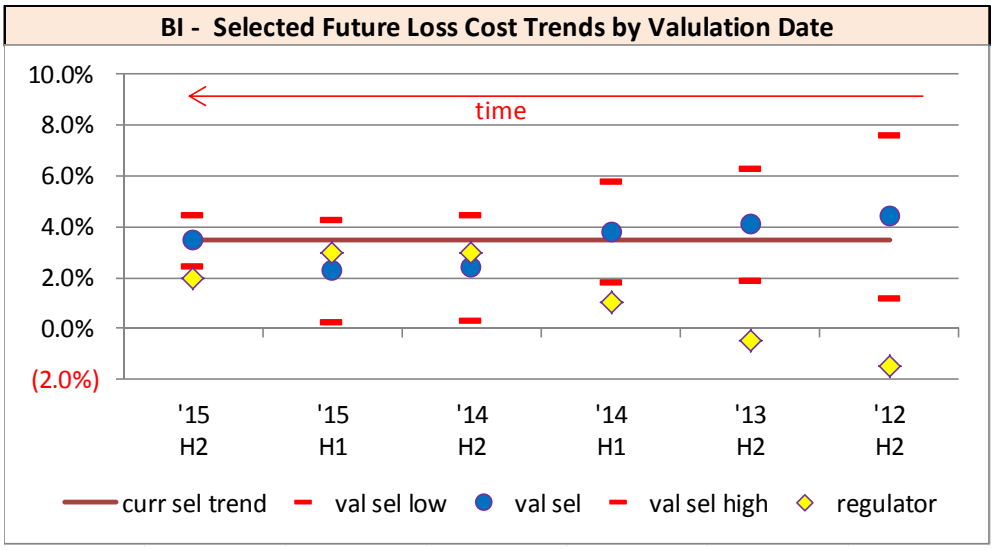
The March 1, 2017 Oliver Wyman ("OW") Report of Findings for Facility Association's December 2016 Category 2 Taxi rate application (the "OW Report") contains 15 findings related to the rate level changes (listed in bullet form on pages 6 through 9), of which 3 (loss trends, claim count for full credibility, and base for complement of credibility) are discussed in detail.

FA's proposed overall rate level change is +29.7%. Using alternate assumptions (including an HST change impact), OW has estimated rate indications ranging from +13.8% to +29.3%. FA continues to believe our proposed rate change is justified, supported and reasonable. Our comments focus on the alternate assumptions (other than the HST change impact) put forward by OW.

1. Loss Trend Rates (OW Report pages 9 to 12):

   The OW Report provides a summary comparison of FA selected industry commercial loss cost trend rates and NL Benchmark industry commercial loss cost trend rates as at December 31, 2015 on page 10 (Table 4). As FA separately provided commentary on the draft Benchmark commercial vehicle trend analysis performed by OW directly on October 5, 2016, we will not go into detail on differences in approach or findings in relation to the NL Benchmark trends.

   We believe that all of our trend model selections are statistically supported by the data and our interpretation of not only the Newfoundland & Labrador Commercial Vehicle experience, but also taking into consideration Private Passenger experience in the jurisdiction. While we will not reproduce our arguments as laid out in our filing and in subsequent responses to OW questions here, we have provided a summary of bodily injury loss cost future trend selections below:



   In the chart above, the time periods reflect the valuation date / data used in the analysis, the blue dots represent FA's selected future loss cost trend rate for commercial vehicle bodily injury in

Newfoundland & Labrador, the red dashes are 1 standard error ranges relative to our selections, and the yellow diamonds represent the Benchmark selections. The burgundy horizontal line was added to allow a quick comparison of our current selected future rate (3.5% +/- 1.0%) with prior selections. In particular, it is clear that the current selection falls within a standard error of our previous selections, indicating that, statistically speaking, our future trend rates selections have been very consistent (as the current selection is within a standard error of all prior selections, we would describe this as showing that our selections have not changed). As the benchmarks are not provided with standard errors in relation to their estimates, we are not able to make any related statement for those selections, but it is clear that the 4.5 point benchmark range (from -1.5% to 3.0%) is larger than FA's 2.1 point range (2.3% to 4.4%). Our trend selections have been consistent and stable, and, we believe, reasonable.

The 2.0% Benchmark BI future loss cost trend is statistically different from the FA selected BI future loss cost trend of 3.5% +/- 1.0%, as it is beyond a standard error of our estimate (as standard error estimates are not included in the Benchmark reports, we cannot comment on whether the FA selection is beyond a standard error of the 2.0% Benchmark). As indicated on page 11, OW estimates that this change reduces the BI indication from +30.7% to +26.2%.

However, the 7.0% Benchmark Accident Benefits future loss cost trend is also statistically different from the FA selected Accident Benefits future loss cost trend of 0.0% (as selected model has no "trend" relationship between loss cost and time for the period 2004-H2 and beyond, although there is a scalar adjustment at 2011-H2). Again, as the Benchmark reports do not include standard error estimates associated with the selected trend coefficient of 7.0%, we cannot comment on whether 0.0% would be within a standard error of the selected Benchmark trend of 7.0%. However, given our prior selections that did include a trend rate (as opposed to only a scalar adjustments), our standard errors for those trends were less than 5 percentage points. As a result, we would be surprised if our current selection would be viewed as "not statistically different from" the Benchmark. OW notes that using the Benchmark would increase the Accident Benefits indication from +22.8% to +44.4% (page11), basically doubling the indication. Yet the conclusion by OW is that "*... we do not find FA's selection unreasonable*" (page 10).

The differing conclusions reached by OW seem inconsistent, and appear to apply a "capping" view, where trend rates lower than the Benchmark are not unreasonable, but rates above are. If this is the case, the approach appears biased.

In determining alternate indications based on alternate assumptions, item 4 on page 18 references only changing the FA BI trend rate to the Benchmark, but not the FA Accident Benefits trend rate. This, in our view, is inconsistent, as we take the same approach for both coverages and believe that the same forces apply to both (and to collision, and to private passenger) as we have

discussed in our various responses to questions on these issues. We believe that adjusting for this would add approximately 1 point of indication to each of the OW Scenario indication estimates.

We believe FA's trend structures should be allowed by the Board without adjustment.

2. Full credibility claim count standards (OW Report pages 12 to 15):

   We are pleased that the overall conclusion in the OW Report is a recommendation to allow FA to use the benchmark levels. However, we do have some comments on the OW Report content.

   The OW Report states on page 14 "*Beginning with its 2014 taxi filing, FA has attempted to move away from the "Eckler Standards" ...*"

   To be clear, FA did not *attempt* to move away from the "Eckler Standards", FA *did* move away from those standards and that move occurred when FA's pricing work was brought in-house during 2013. The credibility standards used in the 2014 NL taxi filing were the standards FA used (and continues to use) in all jurisdictions since 2013 and included in over 60 rate filings requiring actuarial support. Their use has not been an issue in those other jurisdictions.

   The OW Report states their continued position that "*... the explanations and graphs provided by FA was not strong enough rationale to change credibility standards that resulted in a higher rate level indication...*" We can understand this type of rationale where a company frequently changes its standards in such a way as to maximize the rate indication. This is not the case for FA, where the change was not driven by an objective to increase rate indications. We have repeatedly stated this and provided, in several filings, the conclusion that the standard change resulted in reduced rate indications in the majority of 2014 FA rate reviews. In fact, we reiterated this in our response to the OW Report in relation to our March 2016 taxi rate filing, which we reproduce below:

   > *"During the 2014 rate review cycle, FA completed 166 rate reviews across various jurisdictions, rating classes, and rating types. Focusing on the impact of the change in full credibility for third party liability, we have estimated that in 25% of reviews, the change had no impact on the indication and in 55% of the reviews, the change resulted in a lower indication than if the change was not made. In the remaining 20% of reviews, the change resulted in a higher indication (see summary below):*

*Estimated Impact of reducing the full credibility claim count for BI, in relation to the 2014 rating cycle indications – **all jurisdictions***

summary of impacts:	zero	41	24.7%
	lower ind	92	55.4%
	higher ind	33	19.9%
	total # of reviews:	166	

This clearly shows that the overall impact of the change is favourable to FA policyholders. With respect to Newfoundland & Labrador reviews during the 2014 rate review cycle, 18 reviews were completed. Of these, the change was estimated to have no impact on 22% of the reviews (with respect to TPL indications), and 39% of reviews resulted in lower indications and 39% resulted in higher indications (see table below). Again, clearly, this shows that the change is unbiased in this jurisdiction.

*Estimated Impact of reducing the full credibility claim count for BI, in relation to the 2014 rating cycle indications – **Newfoundland & Labrador only***

summary of impacts:	zero	4	22.2%
	lower ind	7	38.9%
	higher ind	7	38.9%
	total # of reviews:	18	

"

Overall, the change resulted in increases in only 20% of the rate reviews. Even for Newfoundland & Labrador, the change caused increased indications in less than 40% of the reviews. Clearly, our intent was not to change the standard to increase rate indications.

The standards change we implemented generally gives more weight to the actual experience – when that experience is better than that implied by the complement of credibility base, it will result in a lower indication; when the experience is worse than that implied by the complement of credibility base, it will result in higher indications; when the experience is the same as that implied by the complement of credibility base, it has no impact.

As we provided in our response to questions posed by OW in its January 9, 2017 question set, Longley-Cook expressed our view very well in the Casualty Actuarial Society's "An Introduction to Credibility Theory":

"...credibility is not a simple property of data which can be calculated by some mathematical formula as can the standard deviation or other measures of the effect of chance variation on a body of statistical data. While credibility and statistical variance are related, the former is meaningful only against a stated or implied background of the

purpose for which the data are to be used and a consideration of the value of the prior knowledge available."

"The standard of full credibility is not normally important in itself, but is important as a means of introducing consistency in the rate making procedure and establishing proper relationships as respects reliability between different volumes of experience."

For our purposes, we wish to ensure that rates ultimately reflect the underlying experience of a class, while recognizing that natural volatility of results, particularly for smaller portfolios, can make it challenging to estimate the underlying exposure to claims. We believe our selected full credibility claim counts achieve this balance, whereas the "Eckler standards" tilted too far away from giving the experience due weight in terms of its inherent "ability" to "predict" its own future experience. It has nothing to do with rate indication levels in general, nor a desire to materially increase or decrease indications, all else being equal. We do not believe that the OW assessment of the FA standards should consider the impact on indications other than acknowledging that the overall impact was actually "favourable" to classes of policyholders overall.

While we do not support the OW Report rationale for recommending allowing FA to at least use the Benchmarks (i.e. because the change doesn't result in a materially higher indication), we prefer the Benchmarks to the "Eckler standards" and appreciate the OW Report recommendation.

3. Complement of Credibility (OW Report pages 16 to 17):

   The OW Report contends that "*While it is not unusual for there to be a difference in view regarding the current rate adequacy level, the difference between the Board's view and FA's view is unusually large. This difference is largely due to the long lag between FA's 2013 rate filing and its previous rates dated 1993, combined with the relatively low level of credibility of FA's experience."*

   While we agree that the difference in views between the Board and FA can be viewed as large, we do not support the OW Report conclusion that this is due to the long lag between the 1993 and 2013 filings, but rather due to differing assumptions used by the Board relative to FA. Specifically, had the Board adopted FA's assumptions in relation to our 2014 and subsequent rate filings, there would be no difference in view regarding the current rate level.

Other Considerations:

While not directly impacting the view on the rate changes proposed as expressed by OW, the OW Report also discusses the following:

"FA proposes an effective date of October 1, 2017. This would be FA's second increase in 2017." (Page 5). This is factually true, but we believe this is reasonable under the circumstances. FA's preference would be to file annually, based on annually-updated data, and have rate change decisions delivered annually so that the likelihood of 2 rate changes occurring in the same calendar year are reduced to an acceptably low level. However, because the FA 2014 rate filing had a significant delay between the submission date and the final decision date, the associated rate effective dates were thrown off of a more regular annual cycle.

FA NL Taxi Filings

submission date	AIX report used in filing	decision date	rate eff date
Jan 2013	2011	Apr 2013	Aug 2013
Mar 2014	2012	Apr 2015	Aug 2015
May 2015	2013	Feb 2016	Jun 2016
Mar 2016	2014	Nov 2016	Mar 2017
Dec 2016	2015		

Specifically, as there was no rate change during 2014, two changes in a single calendar year are needed to get back "on schedule". Assuming a timely decision in relation to this filing, we believe we would be back on schedule for submissions in the November to January timeframe, with rates becoming effective in the June to August timeframe. FA is committed to continuing to submit rate changes as needed until such time as the rates are deemed "adequate".

HST Adjustment– the OW Report (pages 8 and 9) discuss the impact of the increase in HST from 13% to 15% effective July 1, 2016 in Newfoundland & Labrador. The OW Report correctly points out that FA omitted an adjustment to its historical experience for this change (a +1.8% impact, derived as 1.15 / 1/13 – 1). Adjusting for this would increase the original FA indication from +29.7% to +31.9%, assuming the HST change applies equally and completely to all coverages. The OW Report states that their understanding is that the increased HST rate would apply only to the Property Damage portion of TPL and to physical damages coverages (and so would not apply to bodily injury nor to accident benefits claims).

While we acknowledge that the HST impact is not likely to be fully applicable to bodily injury claims under tort, we do not believe it will have no impact. In the table below, we consider the typical heads of damage for bodily injury tort, and our assessment of the HST change applicability:

FA NL Taxi Filings – Tort BI Heads of Damage

head of damage	HST applicable?
non-pecuniary (i.e. pain & suffering)	no
past wage loss	no

head of damage	HST applicable?
future loss of capacity	no
out-of-pocket expenses (i.e. special damages)	yes
future care	yes
loss of housekeeping services	yes
loss of marriageability	no
tax gross up and management fees	yes
costs and disbursements	yes

Based on the above, while certainly some heads of damage would not be affected, some are, so the overall impact to bodily injury would be some non-zero value. We have not determined what that level is at this point, and did not include it in our original proposal.

The same list would apply to uninsured automobile and under-insured motorist coverages (although the latter does not apply to FA taxis, as the coverage is not offered).

For accident benefits, the sub-coverages include:

FA NL Taxi Filings – Accident Benefits Sub-coverages

head of damage	HST applicable?
medical expense	yes
attendant care	yes
rehabilitation	yes
disability income	no
death benefit	no
funeral expense	yes

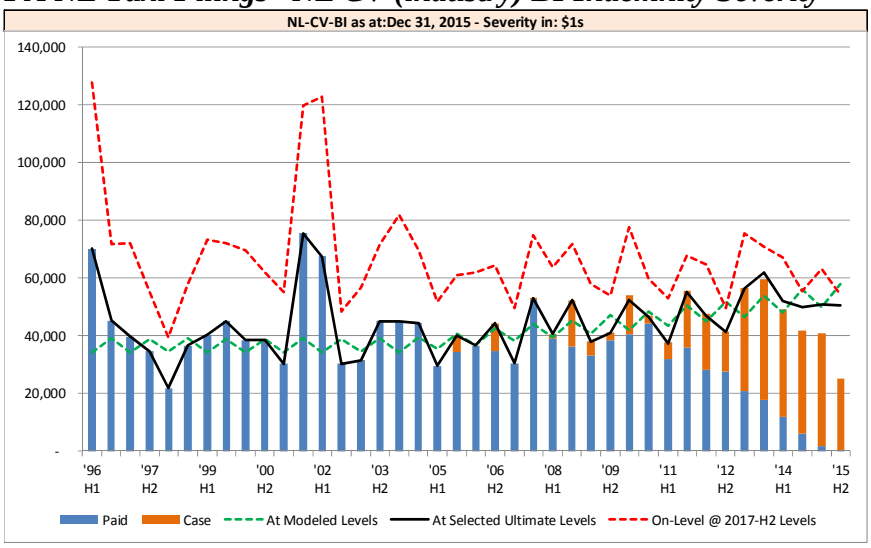
Again, while not all parts of accident benefits would be affected, some would.

One of the challenges, when a relatively small change occurs and where the underlying severity is already quite volatile, is to be able to measure the impact at some future date. In particular, with NL industry commercial vehicle bodily injury indemnity severity, the coefficient of variation (a measure of volatility) is 28% - that is, a standard deviation for severity represents 28% of its average value, when we put severity on-level to the accident half 2017-H2 period using our selected models. Given this level of volatility, it will be very difficult to "see" a +1.8% HST impact – it will be "drowned" in the noisiness of the data (i.e. the "28%" data noise). Summary metrics and a chart of severity for bodily injury (indemnity only, NL industry for commercial vehicles, based on FA's selected trend models) are provided below.

FA NL Taxi Filings – Volatility of Key Metrics – NL CV (industry)

	On-Level @ 2017-H2 Levels		
	Frequency	**Severity**	**Loss Cost**
Actual Periods' Metrics			
average:	5.834	67,366	388
std dev:	0.913	18,668	101
coeff var:	**0.16**	**0.28**	**0.26**
min:	4.252	39,383	232
max:	8.657	127,611	756

FA NL Taxi Filings –NL CV (industry) BI Indemnity Severity



In the chart above, the red-dashed line is NL CV industry bodily injury indemnity severity on-level to accident period 2017-H2 (about the timing of the average accident date used in our filing). The overall average on-level severity is $67,366, but the standard deviation is $18,668. A 1.8% increase would be approximately $1,200 – we believe it would be difficult to detect this within the broader $18,668 expected range of variation.

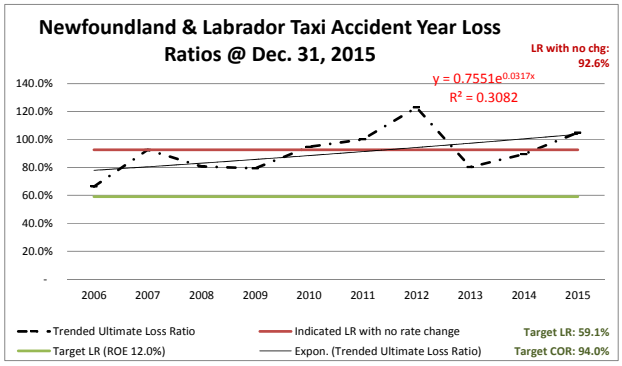
A similar issue, but more extreme, applies to accident benefits, where the overall severity coefficient of variation is 40% (the average on-level severity is $6,357 and the standard deviation is $2,556; a 1.8% increase would be $114, very difficult to "see" alongside annual variations of $2,556).

8 indication scenarios presented: The OW Report presents Tables 6 and 7, on pages 18 and 19, that provide 8 alternate "scenario" indications, ranging from +13.8% (scenario E) to +29.3% (scenario D). The OW Report states "*FA's proposed overall rate level change of +29.7% is higher than the indications we calculate based on these 8 scenarios...*"

This statement is certainly factually true. However, it might lead the erroneous impression that FA has selected the "highest" indication out of all possible indications. That is not true. As a simple example, if OW replaced FA's trend selections with the Benchmarks completely (rather than selectively only changing bodily injury) we estimate that the indications for each Scenario presented by OW would increase by close to 1 percentage point.

Further, it is FA's view that a best estimate's rate indication for NL taxi is +56.6% (associated with a 12% post-tax ROE as directed by the FA Board of Directors, and a RoI of 0.47% net of expenses – at 0% CoC, this decreases to **+39.4%**). Further, while the overall indication associated with a 12% post-tax ROE decreases to +54.1% (**+38.2%** at 0% CoC) if FA's most recent 10 accident years of experience are given full weight, the indication increases to +68.4% (**+50.0%** at 0% CoC) if FA's most recent 5 accident years of experience are given full weight. We discussed this issue in our original cover letter that was attached to our filing and addressed to Ms. Blundon:

> *"Based on the updated experience, 10-year FA taxi experience being given full credibility indicates a rate increase of **38.2%** (consistent with a 0% Cost of Capital provision), but this increases to **50.0%** using 5-year FA taxi experience being given full credibility. The difference in these two "views" is important, as it does suggest a change in loss cost in the experience that has not been reflected in the on-leveling process. That is, if one were to fit an exponential trend line to the on-level loss ratios (as done in the chart to at the top of the next page), the expectation is that no trend would be present that is statistically significant. That is not the case with the 10-year on-level loss ratios – the fitted trend is 3.2% (+/-1.7%) (statistically significant at the 10% level – the p-value is 9.6%) and the regression has adjusted R^2 value of 22% (we show the R^2 value at 31% in the chart to the left). This suggests that there is an underlying "trend" in the FA taxi experience that is not being accounted for through the on-leveling process. This is also reflected in the variation of the on-level loss ratios for the first five years (average ratio of 82.7% with a standard deviation of 11.5%) and the latest five years (average ratio of 99.5% with a standard deviation of 16.2%). As the averages are more than a standard deviation apart, it would seem to suggest a difference in the experience that is not currently reflected in the FA "on-leveling" process.*



> *If the 50.0% experience indication does continue as being the go-forward best estimate (i.e. based on the latest 5 years only and assuming that the potentially "additional" trend of 3.2%*

does not continue) we anticipate that rate adequacy will not be reached for 10 years (i.e. 2026 rate filing) based on the current approval process."

While we believe the credibility-weighted estimate we determined (+38.2% using FA's RoI), is our current best estimate, the Board should bear in mind that the indication based on the most recent five accident years is approximately 12 points higher than this – this additional "indication" may manifest itself over and above "trend" over the next few years.

Note that, if the experience begins to improve (for example, marginal taxi operators that have a higher propensity to cause collisions and generate insurance claims exit the market, or if taxi operators begin to take proactive steps to reduce collision frequencies and / or mitigate claims severities after a collision has occurred), it will take "longer" to reflect that improving experience using the Benchmark full credibility claim counts than if the standard FA full credibility claim counts are used.

"...rate increases alone are not an appropriate solution to this problem, …" This statement is provided in the last paragraph on page 19 of the OW Report. While OW does not clearly articulate what "problem" they are referring to, we would offer that there is a clear issue of misaligned incentives that can be created by artificially holding insurance premiums below a level that provides a return on capital that would be attractive to capital providers:

i) where policyholders do not pay sufficient insurance costs as a class, relative to the insurance exposure they present, any incentive that class of policyholders might have to improve their insurance exposure (through actions to reduce claims frequencies and / or mitigate claims severities) is blunted;

ii) where rates are not adequate, potential insurers who might specialize in a particular class (either directly or in partnership with a broker expert or an expert managing general agency) will not see a potentially profitable business opportunity and therefore not step in to write the business;

iii) even if i) and ii) are dealt with, if FARM rates for other rating classes within the jurisdiction are kept in a loss-position, it creates an additional "tax" on capital for insurers considering opportunities in the jurisdiction.

We believe it starts with the policyholder, and a desire by the policyholder to manage their overall cost of doing business, including insurance costs. To the extent that insurance rates are kept artificially low, creating a subsidy to one industry (taxis) at the expense of the insurance industry, the incentive to reduce claims costs are blunted. As we included in our cover letter with our filing submission, taxis generate 6 times as many TPL claims as private passenger vehicles and almost 8 times as many as commercial vehicles in the province. As these are TPL claims, the taxi drivers involved are at least partially, if not completely, at-fault. Further, when taxis are involved in TPL

actions, the severities tend to be close to 50% more costly. If taxi operators, as a group, are exposed to paying the full cost of these realities, there is a much greater incentive for them to reduce these exposures.

Insurers and/or other expert parties may be in a position to help, but we believe that will only happen if they see a business opportunity that they believe is profitable, particularly if it appears to be a longer term opportunity. FA sees itself as an effective administrator of automobile insurance residual market mechanisms, but we are not experts in loss mitigation for the taxi industry. As long as FA's taxi rates remain below a level that generates an appropriate return on capital required to support the provision of insurance, it is unlikely that taxi insurance experts will see an opportunity in Newfoundland & Labrador and seize that opportunity.