March 31, 2014

Oliver Wyman
161 Bay Street, 20th Floor
Toronto, ON
M5J 2S5

Attention: Paula Elliott

RE: FA NL **Taxi, Jitney, and Liveries Automobile Rate Application – Category 2** – Response to email Mar 21, 2014 (1:34pm)

Dear Ms. Elliott,

Facility Association (FA) received your email and associated attachment requesting additional information in regard to FA Newfoundland and Labrador Taxi, Jitney, and Liveries Rate Filing. The following is our response to your request.

General

OW Question 1: *As stated in FA's cover letter dated January 23, 2013 for the* prior *rate application, FA's TPL indicated and proposed rate level change was +66.2% and +50% respectively; and the proposed 50% increase was approved. In that prior rate filing, FA estimated the proposed increase in the TPL average written premium for 2012 was $1,200. However, it is our understanding from reviewing this current application that FA's TPL average written premium for 2012 was $1,889, and that the current rate level average written premium for 2012 is $2,833 – an average dollar increase of $944, which is much lower than $1,200. Is our understanding correct – that the actual impact of the 50% increase for TPL was $944, not $1,200 as presented in the prior filing? If so, why is the reason for the change?*

FA Response Question 1:

The prior rate review did not capture exposure counts as part of the rate level indication exercise. As a result, the rate level impact was estimated, for the purpose of the cover letter, based on the estimated premium charged to an insured with a driving record 0, purchasing a $1 million limit. This was estimated to be $2,400, so that the 50% rate increase was estimated to have had an estimated $1,200 dollar amount increase.

We have included exposure counts in our indication work this year. While we only provided written exposure and premium for accident year 2012 in exhibits C-1 and C-2, accident year 2011 data (which would be comparable to the AIX experience data used last year, but being as at December 31, 2012 as opposed to December 31, 2011) shows an average written TPL premium of $1,858, and a 50% increase on this premium would have been $929. This is comparable with the $944 shown for accident year 2012.

OW Question 2: *In FA's prior filing, FA presented an indicated TPL rate increase of 66% (without a cost of capital provision). In the current filing, approximately one year following the approval of a 50% increase, FA presents a rate level indication for TPL of +67.3% (without a cost of capital provision). What has changed to cause such a material difference in the TPL rate indication from the prior review? Specifically, please describe any changes in methodology and assumptions, and the reasons for any changes that would explain the significant change in the TPL rate indication from the prior review. Please provide a quantitative impact of each change – what the rate indication would be with and without the change.*

FA Response Question 2:

A note of clarification: our current rate filing does not present a rate level indication for TPL of +67.3% (without a cost of capital provision) – the rate level change presented was +75.4% (see row [29] of Exhibit C-1). The 67.3% ratio indicated in the question is the projected nominal loss ratio associated with a rate change of +75.4%.

We respond to this question in two parts. Part 1 will deal with changes in methodology. Part 2 deals with the reality that:

- the "base line" or "credibility complement" projected loss ratio and the experience projected loss ratios as very far apart,
- the experience data is not fully credible, and
- the credibility weighted loss ratio may change from one review to the next in a way that is consistent with the credibility weighting methodology, but not necessarily consistent with how one would expect using the "from the prior analysis to this analysis" approach outlined in Question 2.

Response Part 1:

As we described in our rate filing, we have updated several aspects of our rate level indication approach to be consistent with approaches used in the major rating classes (private passenger, commercial, and interurban), to improve the accuracy the resulting estimation, and to make the "base line" projected loss ratio (or "complement of credibility") directly derived from the prior analysis (where the prior analysis was completed / filed "recently"). Of particular impact:

- The prior approach determined an indication based on FA's experience, then **credibility-weighted this <u>indication</u>** against a 1-year claims trend. As described in our filing, we do not believe that an indication should be credibility weighted (as our rationale is laid out in the filing, we will not reiterate it here). We now credibility-weight projected nominal loss ratios, and determine indications from that starting claims level. The approach used in this filing is

consistent with the approach FA uses for all jurisdictions for private passenger, commercial, and interurban. The prior approach was used for public and recreational vehicles only, and has been discontinued for all jurisdictions with the rate indications completed in the fall of 2013.

- The credibility complement (which we interpret to be equivalent to being the "permissible loss ratio" in relation to our updated methodology) was changed specifically account for changes in the projected loss ratio to account for prior indicated and approved rate changes and trends over a more appropriate period[1]. This is consistent with the approach taken for private passenger and commercial in all jurisdictions, and will be used in general going forward as described in our filing.

- The full credibility standard was updated to the standard we use elsewhere for TPL, where TPL is not divisible into its component kinds-of-loss.

The table below presents our estimates of the TPL rate level indication assuming the prior assumptions around the two other aspects described above.

TPL indications under various assumptions

Assumption Set	TPL indication
A. Prior approach, prior cred. complement, prior cred. std	51.1%
B. New approach, prior cred. complement, prior cred. std	42.4%
C. New approach, Curr cred. complement, prior cred. std	68.7%
D. Curr assumptions	**75.4%**

Source: internal indication worksheets

Under the previous methodology, the complement of credibility (being claims trend) was effectively implying that current rates are adequate. This is akin to assuming that the current rates generate a loss ratio that is equivalent to the "target" loss ratio. We have used this assumption in assumption set A in the table above.

Given that our previous rate level indication for TPL was more than the rate level proposed, it is clear that the assumption underlying the above approach is inconsistent with the difference between the indicated and approved rate changes. Further, rather than using a pre-determined 1-year or 2-year trend, we trend from the average accident date underlying policy term of the "current rate" program to the future date for the proposed program.

---

[1] Where the prior analysis / submitted filing is not considered "recent" (i.e. within 2 to 3 calendar years), we revert back to assuming the expiring rates are adequate with respect to the expiring cost structure / assumption set.

The derivation of the loss ratio estimated to be underlying the current rates is presented in the filing in Exhibit C-2. We have reproduced the TPL section here for quick reference. (Note that several of the initial steps are needed to remove the discounting impact – under the new methodology, the discount rate is applied to the credibility-weighted projected nominal loss ratio. As a result, in future, these steps would not be necessary as the nominal projected loss ratio is directly available.)

Exh C-2			
Derivation of Loss Ratios Underlying Current Rates			
Prior Analysis / Filing	Date of analysis: 2012 Q4, assumed effective July 1, 2013 new business & for renewals; Filed Jan 2013; approved eff date Aug 1, 2013	Formulae	TPL (indivisible)
[1]	Distribution Used	Jan 2013 filing	89.60%
[2]	Projected ultimate loss ratio (discounted), FA experience, prior to rate change	jan 2013 filing, Exh 9, col 17 of sheets 2.1, 2.2, 2.3	219.32%
[3]	Rate Level Change associated with FA experience projected ultimate loss ratio (discounted)	jan 2013 filing, Exh 9, col 18 of sheets 2.1, 2.2, 2.3	181.30%
[4]	Implied target loss ratio (discounted)	=[2]/(1+[3])	77.97%
[5]	Credibility weighted rate change	jan 2013 filing, Exh 9, col 18 of sheets 2.1, 2.2, 2.3	66.20%
[6]	Implied Projected discounted LR prior to target rate change	=[4]*(1+[5])	129.59%
[7]	Discount Rate, prior to rate change	Jan 2013 filing	0.9203
[8]	Projected ultimate loss ratio (nominal), prior to rate change	=[6]/[7]	140.81%
[9]	Indicated rate level change @ 0% Cost of Capital	=[5]	66.20%
[10]	Projected Loss Ratio (nominal) @ indicated rate change	=[8]/(1+[9])	84.70%
[11]	FA Written Rate Level Factor at time of last review (Sep 30 2012)	rate level factor exhibit	1.0000
[12]	FA Written Rate Level Factor - current	=[30]	1.5000
[13]	Rate changes post last review	=[12]/[11]-1	50.00%
[14]	loss ratio (nominal) at current rates	=[10]*(1+[9])/(1+[13])	93.8%
[15]	Modeled loss cost projected to average accident date, prior analysis	Exh D-5	442.62
[16]	Modeled loss cost projected to average accident date, current analysis	Exh D-5	461.86
[17]	indemnity projection factor between average accident date underlying current rates and future average accident date	=[16]/[15]	1.0435
[18]	annualized indemnity change	=[17]^(365/Exh B-1, row [4])-1	4.00%
[19]	annualized premium trend factor	1+annual trend found in Exh D-4a, col [4]	1.0010
[20]	premium trend period in days (change in avg written date between rate programs)	Exh B-1, row [2]	396
[21]	projected indemnity loss ratio (nominal) at current rates	=[14]*[17]/{[19]^([20]/365)}	97.8%

As indicated in row [14] above, the nominal loss ratio at current rates for TPL was estimated at 93.8%, which increased to 97.8% when projected forward.

Response Part 2:

In our rate indication process, the credibility-weighted projected loss ratio (LR) is a ***best estimate*** of the projection period LR, being derived from a weighting of two potential indicators of that LR. The first potential indicator is based on our final selection from the previous analysis (the "base line" projected LR used as the complement of credibility in the weighting process). The second is based on the most recent five years of experience. From one annual review to the next, these will get updated to lead us

toward the "true underlying" LR. How long it takes to reach a "steady state" will depend on the difference between the ratios, and where the "true underlying" LR lies. Furthermore, there is potential that the change in the projected LR from this credibility weighting process from one period to the next would not be consistent with an assumption that the projected claims cost increase only in relation to trend. This is particularly relevant where there is a significant difference in the "base line" projected loss ratio (that is, the initial assumption of the projected loss ratio, determined from the previous analysis, taking into account approved rate changes since the last analysis, and net trends between the average accident periods associated with the two reviews). In the case of FA's NL Taxi review, this is certainly the case, as summarized in the table below (taken from the filings Exhibit C-1).

Exh C-1			[E]	[F]	[G]
Derivation of Indicated Change in Overall Rate Level					
($1s) unless otherwise indicated			TPL (indivisible)	Accident Benefits	Uninsured Automobile
Updated Projected Loss Ratio (indemnity only, nominal) @ Current Rates					
[7]	Updated projected loss ratio (indemnity only, nominal), prior analysis	Exh C-2,row[21]	97.8%	190.2%	187.5%
Projected Loss Ratio (indemnity only, nominal) based on FA experience					
[8]	FA projected ultimate loss ratio (indemnity only, nominal)	Exh D-1, col [17]	143.8%	517.9%	1,376.3%
Credibility-Weighted Projected Loss Ratio (indemnity only, nominal)					
[9]	FA experience credibility	Exh E-1, col [8]	46.3%	30.1%	10.7%
[10]	Credibility-weighted projected Loss Ratio (indeminty only, nominal)	=[8]*[9]+[7]*(1-[9])	119.1%	288.8%	314.7%

It is easiest to show this through illustration. For this, we show below 3 "potential futures" of results of our "future" analyses[2] for each of TPL, AccBen, and UA. Under the first future, the experience period is updated annually, replacing the oldest accident year used in the previous analysis with the newest available accident year (for instance, for the Aug 1, 2015 effective date review, accident year 2008 is dropped and accident year 2013 is added). The future rate level indications depend critically on the "path" the new experience years take – will they be consistent with the "base line" loss ratios shown in row [7] of the table above? Or the 2008-2012 experience LRs shown in row [8]? Or perhaps the credibility-weighted LR in row [10]? We look at each in turn below:

TPL

Key Assumptions for Potential Future Indications:

Facility Association Residual Market (FARM)
NL Taxi
Potential Future Indications

TPL	net trend: 4.0%	experience credibility: 46.3%	target LR consistent with 0 CoC: 67.9%
			max proposed change: 50.0%

The above key assumptions are used under each of the 3 Potential Future Indication determinations discussed below.

---

[2] For this exercise, we keep all other assumptions unchanged to focus attention on future indications as future "experience" rolls in.

Potential Future 1: Accident Years 2013 onward have experience LR consistent with Aug 1, 2014 base line projection LR

Effective for	period index	base line projected LR	experience projected LR	cred wghted projected LR	indication	proposed / approved	LR post rate chg	accumulative rate factor
01-Aug-14		97.8%	143.8%	119.1%	75.4%	50.0%	79.4%	150.0%
01-Aug-15	1	82.6%	93.3%	87.6%	29.0%	29.0%	67.9%	193.5%
01-Aug-16	2	70.6%	70.1%	70.4%	3.7%	3.7%	67.9%	200.7%
01-Aug-17	3	70.6%	65.1%	68.1%	0.3%	0.3%	67.9%	201.3%
01-Aug-18	4	70.6%	62.2%	66.7%	(1.8%)	(1.8%)	67.9%	197.7%
01-Aug-19	5	70.6%	60.2%	65.8%	(3.1%)	(3.1%)	67.9%	191.6%
01-Aug-20	6	70.6%	64.6%	67.8%	(0.1%)	(0.1%)	67.9%	191.4%
01-Aug-21	7	70.6%	67.2%	69.0%	1.6%	1.6%	67.9%	194.5%
01-Aug-22	8	70.6%	68.8%	69.8%	2.8%	2.8%	67.9%	199.9%
01-Aug-23	9	70.6%	69.6%	70.1%	3.2%	3.2%	67.9%	206.3%
01-Aug-24	10	70.6%	70.2%	70.4%	3.7%	3.7%	67.9%	213.9%
01-Aug-25	11	70.6%	70.4%	70.5%	3.8%	3.8%	67.9%	222.0%
01-Aug-26	12	70.6%	70.5%	70.6%	4.0%	4.0%	67.9%	230.9%

The first potential future summarized above has accident years 2013 and beyond with loss costs consistent with those considered the "base line" in our current review. Note that the indication shown for next year (Aug 1, 2015 effective) is not 4.0% (the net trend) but instead 29.0%. Part of this is in recognition that we do not take the full indication for rates effective Aug 1, 2014 (and so the "base line" projected for Aug 1, 2015 is higher than 70.6% - the target LR adjusted for net trend).

Also note, however, that the indications do not reach "steady state" at 4.0% (the net trend) until 12-years out. This is due to the credibility-weighting impact, as we "flush out" the "unrepresentative experience period" and rely solely on accident years 2013 and later (which, by assumption, were set consistent with the Aug 1, 2014 base line projected LR). Further, it doesn't happen as soon as we are only using 2013 and later years – because the "drag" caused by the base line projected LR – in effect, we would "over-shoot" the indications early on (again, assuming the future accident years are as per the underlying assumption described above). Note that at the final review period shown, rates are 2.3 times higher than they were at expiry on July 31, 2013.

Potential Future 2: Accident Years 2013 onward have experience LR consistent with Aug 1, 2014 experience projection LR

Effective for	period index	base line projected LR	experience projected LR	cred wghted projected LR	indication	proposed / approved	LR post rate chg	accumulative rate factor
01-Aug-14		97.8%	143.8%	119.1%	75.4%	50.0%	79.4%	150.0%
01-Aug-15	1	82.6%	99.7%	90.5%	33.3%	33.3%	67.9%	200.0%
01-Aug-16	2	70.6%	77.8%	73.9%	8.8%	8.8%	67.9%	217.6%
01-Aug-17	3	70.6%	74.3%	72.3%	6.5%	6.5%	67.9%	231.7%
01-Aug-18	4	70.6%	72.6%	71.5%	5.3%	5.3%	67.9%	244.0%
01-Aug-19	5	70.6%	71.7%	71.1%	4.7%	4.7%	67.9%	255.5%
01-Aug-20	6	70.6%	71.2%	70.9%	4.4%	4.4%	67.9%	266.7%
01-Aug-21	7	70.6%	71.0%	70.8%	4.3%	4.3%	67.9%	278.2%
01-Aug-22	8	70.6%	70.7%	70.6%	4.0%	4.0%	67.9%	289.3%
01-Aug-23	9	70.6%	70.7%	70.6%	4.0%	4.0%	67.9%	300.9%
01-Aug-24	10	70.6%	70.7%	70.6%	4.0%	4.0%	67.9%	312.9%
01-Aug-25	11	70.6%	70.7%	70.6%	4.0%	4.0%	67.9%	325.4%
01-Aug-26	12	70.6%	70.8%	70.7%	4.1%	4.1%	67.9%	338.7%

Under this second scenario (summarized in the table at the bottom of the previous page), accident years 2013 and beyond have loss costs consistent with those considered the "experience" in our current review. Like the first scenario, the indication shown for next year (Aug 1, 2015 effective) is not 4.0% (the net trend) but instead 33.3%.

Here, the "steady state" is reached sooner as the base line and experience LRs don't "cross" over time. Note that at the final review period shown, rates are 3.3 times higher than they were at expiry on July 31, 2013.

Potential Future 3: Accident Years 2013 onward have experience LR consistent with Aug 1, 2014 cred wghted projection LR

Effective for	period index	base line projected LR	experience projected LR	cred wghted projected LR	indication	proposed / approved	LR post rate chg	accumulative rate factor
01-Aug-14		97.8%	143.8%	119.1%	75.4%	50.0%	79.4%	150.0%
01-Aug-15	1	82.6%	96.3%	88.9%	30.9%	30.9%	67.9%	196.4%
01-Aug-16	2	70.6%	73.8%	72.1%	6.2%	6.2%	67.9%	208.6%
01-Aug-17	3	70.6%	69.6%	70.1%	3.2%	3.2%	67.9%	215.3%
01-Aug-18	4	70.6%	67.4%	69.1%	1.8%	1.8%	67.9%	219.2%
01-Aug-19	5	70.6%	66.1%	68.5%	0.9%	0.9%	67.9%	221.2%
01-Aug-20	6	70.6%	68.1%	69.4%	2.2%	2.2%	67.9%	226.1%
01-Aug-21	7	70.6%	69.3%	70.0%	3.1%	3.1%	67.9%	233.1%
01-Aug-22	8	70.6%	69.9%	70.3%	3.5%	3.5%	67.9%	241.3%
01-Aug-23	9	70.6%	70.3%	70.5%	3.8%	3.8%	67.9%	250.5%
01-Aug-24	10	70.6%	70.4%	70.5%	3.8%	3.8%	67.9%	260.0%
01-Aug-25	11	70.6%	70.5%	70.6%	4.0%	4.0%	67.9%	270.4%
01-Aug-26	12	70.6%	70.5%	70.6%	4.0%	4.0%	67.9%	281.2%

Under this third scenario (summarized in the table above), accident years 2013 and beyond have loss costs consistent with those considered the "credibility-weighted" in our current review (**this is the "best estimate" scenario**). Like the first two scenarios, the indication shown for next year (Aug 1, 2015 effective) is not 4.0% (the net trend) but instead 30.9% - not surprisingly, it falls between that indicated under section 1 and 2.

Here, the "steady state" is reached late like scenario 1, as the base line and experience LRs "cross" after a few periods, causing an "over-shoot" of the changes. Note that at the final review period shown, rates are 2.8 times higher than they were at expiry on July 31, 2013 – again falling between scenario 1 and 2.

All of the above simply highlights that there is not necessarily a "clear-path" to the "final" indication at an annual "net trend" steady state level. Obviously, there are myriad changes that occur impacting other assumptions that would also impact future indications – again, the focus here was only in relation to a specific set of potential loss ratios for accident years 2013 onward.

We include similar tables for Accident Benefits (AccBen) and Uninsured Automobile (UA) over the next several pages. Here, the "steady-state" is much further out, as the experience credibility is so much lower.

AccBen

For AccBen, the "steady state" would have annual indications at the net trend level of 7.6%. Steady state is not reached within 12 years for any of the potential futures considered, due to the lower level of experience credibility relative to TPL.

Key Assumptions for Potential Future Indications:

Facility Association Residual Market (FARM)
NL Taxi
Potential Future Indications

| **AccBen** | net trend: 7.6% | experience credibility: 30.1% | target LR consistent with 0 CoC: 70.9% |
| | | | max proposed change: n/a |

Potential Future 1: Accident Years 2013 onward have experience LR consistent with Aug 1, 2014 base line projection LR

Effective for	period index	base line projected LR	experience projected LR	cred wghted projected LR	indication	proposed / approved	LR post rate chg	accumulative rate factor
01-Aug-14		190.2%	517.9%	288.8%	307.6%	307.6%	70.9%	407.6%
01-Aug-15	1	76.3%	119.4%	89.3%	26.0%	26.0%	70.9%	513.6%
01-Aug-16	2	76.3%	87.2%	79.6%	12.4%	12.4%	70.8%	577.3%
01-Aug-17	3	76.2%	69.3%	74.1%	4.6%	4.6%	70.8%	603.9%
01-Aug-18	4	76.2%	56.8%	70.4%	(0.6%)	(0.6%)	70.8%	600.3%
01-Aug-19	5	76.2%	45.7%	67.0%	(5.4%)	(5.4%)	70.8%	567.9%
01-Aug-20	6	76.2%	52.0%	68.9%	(2.8%)	(2.8%)	70.9%	552.0%
01-Aug-21	7	76.3%	57.5%	70.6%	(0.4%)	(0.4%)	70.9%	549.8%
01-Aug-22	8	76.3%	62.2%	72.1%	1.8%	1.8%	70.8%	559.7%
01-Aug-23	9	76.2%	65.7%	73.0%	3.0%	3.0%	70.9%	576.5%
01-Aug-24	10	76.3%	68.6%	74.0%	4.4%	4.4%	70.9%	601.9%
01-Aug-25	11	76.3%	70.7%	74.6%	5.3%	5.3%	70.8%	633.8%
01-Aug-26	12	76.2%	72.3%	75.0%	5.9%	5.9%	70.8%	671.2%

Potential Future 2: Accident Years 2013 onward have experience LR consistent with Aug 1, 2014 experience projection LR

Effective for	period index	base line projected LR	experience projected LR	cred wghted projected LR	indication	proposed / approved	LR post rate chg	accumulative rate factor
01-Aug-14		190.2%	517.9%	288.8%	307.6%	307.6%	70.9%	407.6%
01-Aug-15	1	76.3%	136.7%	94.5%	33.4%	33.4%	70.8%	543.7%
01-Aug-16	2	76.2%	110.3%	86.5%	22.1%	22.1%	70.8%	663.9%
01-Aug-17	3	76.2%	97.2%	82.5%	16.4%	16.4%	70.9%	772.8%
01-Aug-18	4	76.3%	89.8%	80.4%	13.5%	13.5%	70.8%	877.1%
01-Aug-19	5	76.2%	85.2%	78.9%	11.4%	11.4%	70.8%	977.1%
01-Aug-20	6	76.2%	82.3%	78.0%	10.1%	10.1%	70.8%	1,075.8%
01-Aug-21	7	76.2%	80.4%	77.5%	9.4%	9.4%	70.8%	1,176.9%
01-Aug-22	8	76.2%	79.1%	77.1%	8.8%	8.8%	70.9%	1,280.5%
01-Aug-23	9	76.3%	78.2%	76.9%	8.5%	8.5%	70.9%	1,389.3%
01-Aug-24	10	76.3%	77.5%	76.7%	8.3%	8.3%	70.8%	1,504.6%
01-Aug-25	11	76.2%	77.0%	76.4%	7.8%	7.8%	70.9%	1,622.0%
01-Aug-26	12	76.3%	76.9%	76.5%	8.0%	8.0%	70.8%	1,751.8%

Potential Future 3: Accident Years 2013 onward have experience LR consistent with Aug 1, 2014 cred wghted projection LR

Effective for	period index	base line projected LR	experience projected LR	cred wghted projected LR	indication	proposed / approved	LR post rate chg	accumulative rate factor
01-Aug-14		190.2%	517.9%	288.8%	307.6%	307.6%	70.9%	407.6%
01-Aug-15	1	76.3%	124.6%	90.8%	28.2%	28.2%	70.8%	522.5%
01-Aug-16	2	76.2%	94.5%	81.7%	15.3%	15.3%	70.9%	602.4%
01-Aug-17	3	76.3%	78.7%	77.0%	8.7%	8.7%	70.8%	654.8%
01-Aug-18	4	76.2%	68.5%	73.9%	4.3%	4.3%	70.9%	683.0%
01-Aug-19	5	76.3%	61.0%	71.7%	1.2%	1.2%	70.8%	691.2%
01-Aug-20	6	76.2%	64.8%	72.8%	2.8%	2.8%	70.8%	710.6%
01-Aug-21	7	76.2%	67.9%	73.7%	4.0%	4.0%	70.9%	739.0%
01-Aug-22	8	76.3%	70.2%	74.5%	5.2%	5.2%	70.8%	777.4%
01-Aug-23	9	76.2%	71.8%	74.9%	5.7%	5.7%	70.9%	821.7%
01-Aug-24	10	76.3%	73.1%	75.3%	6.3%	6.3%	70.8%	873.5%
01-Aug-25	11	76.2%	74.0%	75.5%	6.6%	6.6%	70.8%	931.2%
01-Aug-26	12	76.2%	74.7%	75.7%	6.8%	6.8%	70.9%	994.5%

UA

For UA, the steady state of annual indications of 7.5% (the net trend) is not reached within 12 years, due to the low level of experience credibility. In addition, the experience period LR is so high that if scenario 2 is in fact the reality, the projected experience LR does not fall below 100% for 12 years.

Key Assumptions for Potential Future Indications:

Facility Association Residual Market (FARM)
NL Taxi
Potential Future Indications

UA net trend: 7.5% experience credibility: 10.7% target LR consistent with 0 CoC: 70.9%
max proposed change: n/a

Potential Future 1: Accident Years 2013 onward have experience LR consistent with Aug 1, 2014 base line projection LR

Effective for	period index	base line projected LR	experience projected LR	cred wghted projected LR	indication	proposed / approved	LR post rate chg	accumulative rate factor
01-Aug-14		187.5%	1,376.3%	314.7%	343.8%	343.8%	70.9%	443.8%
01-Aug-15	1	76.2%	275.8%	97.6%	37.6%	37.6%	70.9%	610.7%
01-Aug-16	2	76.2%	170.5%	86.3%	21.7%	21.7%	70.9%	743.2%
01-Aug-17	3	76.2%	110.8%	79.9%	12.7%	12.7%	70.9%	837.6%
01-Aug-18	4	76.2%	67.8%	75.3%	6.2%	6.2%	70.9%	889.5%
01-Aug-19	5	76.2%	30.3%	71.3%	0.5%	0.5%	70.9%	893.9%
01-Aug-20	6	76.2%	32.4%	71.5%	0.8%	0.8%	70.9%	901.1%
01-Aug-21	7	76.2%	34.5%	71.7%	1.1%	1.1%	70.9%	911.0%
01-Aug-22	8	76.2%	36.7%	72.0%	1.5%	1.5%	70.9%	924.7%
01-Aug-23	9	76.2%	38.9%	72.2%	1.8%	1.8%	70.9%	941.3%
01-Aug-24	10	76.2%	41.1%	72.4%	2.1%	2.1%	70.9%	961.1%
01-Aug-25	11	76.2%	43.2%	72.7%	2.5%	2.5%	70.9%	985.1%
01-Aug-26	12	76.2%	45.3%	72.9%	2.8%	2.8%	70.9%	1,012.7%

Potential Future 2: Accident Years 2013 onward have experience LR consistent with Aug 1, 2014 experience projection LR

Effective for	period index	base line projected LR	experience projected LR	cred wghted projected LR	indication	proposed / approved	LR post rate chg	accumulative rate factor
01-Aug-14		187.5%	1,376.3%	314.7%	343.8%	343.8%	70.9%	443.8%
01-Aug-15	1	76.2%	333.4%	103.7%	46.2%	46.2%	70.9%	648.8%
01-Aug-16	2	76.2%	245.1%	94.3%	33.0%	33.0%	70.9%	862.9%
01-Aug-17	3	76.2%	198.1%	89.2%	25.8%	25.8%	70.9%	1,085.5%
01-Aug-18	4	76.2%	169.3%	86.2%	21.6%	21.6%	70.9%	1,320.0%
01-Aug-19	5	76.2%	149.7%	84.1%	18.6%	18.6%	70.9%	1,565.5%
01-Aug-20	6	76.2%	135.7%	82.6%	16.5%	16.5%	70.9%	1,823.8%
01-Aug-21	7	76.2%	125.2%	81.4%	14.8%	14.8%	70.9%	2,093.7%
01-Aug-22	8	76.2%	117.2%	80.6%	13.7%	13.7%	70.9%	2,380.5%
01-Aug-23	9	76.2%	110.8%	79.9%	12.7%	12.7%	70.9%	2,682.8%
01-Aug-24	10	76.2%	105.7%	79.4%	12.0%	12.0%	70.9%	3,004.7%
01-Aug-25	11	76.2%	101.5%	78.9%	11.3%	11.3%	70.9%	3,344.2%
01-Aug-26	12	76.2%	98.0%	78.5%	10.7%	10.7%	70.9%	3,702.0%

Potential Future 3: Accident Years 2013 onward have experience LR consistent with Aug 1, 2014 cred wghted projection LR

Effective for	period index	base line projected LR	experience projected LR	cred wghted projected LR	indication	proposed / approved	LR post rate chg	accumulative rate factor
01-Aug-14		187.5%	1,376.3%	314.7%	343.8%	343.8%	70.9%	443.8%
01-Aug-15	1	76.2%	281.9%	98.2%	38.5%	38.5%	70.9%	614.7%
01-Aug-16	2	76.2%	178.9%	87.2%	23.0%	23.0%	70.9%	756.1%
01-Aug-17	3	76.2%	121.5%	81.0%	14.2%	14.2%	70.9%	863.5%
01-Aug-18	4	76.2%	81.5%	76.8%	8.3%	8.3%	70.9%	935.2%
01-Aug-19	5	76.2%	48.3%	73.2%	3.2%	3.2%	70.9%	965.1%
01-Aug-20	6	76.2%	50.3%	73.4%	3.5%	3.5%	70.9%	998.9%
01-Aug-21	7	76.2%	52.3%	73.6%	3.8%	3.8%	70.9%	1,036.9%
01-Aug-22	8	76.2%	54.1%	73.8%	4.1%	4.1%	70.9%	1,079.4%
01-Aug-23	9	76.2%	55.9%	74.0%	4.4%	4.4%	70.9%	1,126.9%
01-Aug-24	10	76.2%	57.6%	74.2%	4.6%	4.6%	70.9%	1,178.7%
01-Aug-25	11	76.2%	59.2%	74.4%	4.9%	4.9%	70.9%	1,236.5%
01-Aug-26	12	76.2%	60.6%	74.5%	5.1%	5.1%	70.9%	1,299.6%

OW Question 3: *In FA's prior filing, FA presented an indicated AB rate increase of 299% (without the cost of capital). In the current filing, following the approval of a 100% increase, FA presents a rate level indication for AB of approximately +294% (without the cost of capital). What has changed to cause such a material difference in the rate AB indication from the prior review? Specifically, please describe any changes in methodology and assumptions, and the reasons for any changes that would explain the significant change in the AB rate indication from the prior review. Please provide a quantitative impact of each change – what the rate indication would be with and without the change.*

FA Response Question 3:

The same changes outlined in our response to Question 2 apply here.

Having updated the approach, the table below presents our estimates of the Accident Benefits rate level indication assuming the prior assumptions around the two other aspects described above.

Accident Benefits (AccBen) indications under various assumptions

Assumption Set	AccBen indication
A. Prior approach, prior cred. complement, prior cred. std	219.4%
B. New approach, prior cred. complement, prior cred. std	194.3%
C. New approach, Curr cred. complement, prior cred. std	307.6%
D. Curr assumptions	**307.6%**

Source: internal indication worksheets

Loss Development Factors

OW Question 4: A) *In Exhibit D-2, the selected incurred loss development factors are calculated as the ratio of the selected ultimate loss amount to the report incurred loss amount as of December 31, 2012, for Non-PPV. However, we do not follow the basis for the selected ultimate loss amounts. Where in the rate filing is the support for these estimated ultimate amounts? For example, where in the rate filing can we find the supporting worksheets that show how the BI estimated ultimate incurred loss amount for accident year 2012 at $4,431,613 is determined? If support for the selected loss developments has not been provided, please provide the support.*

FA Response Question 4 A):

As discussed in Section 2.b.1. (Loss and Claim Count Development) of the filing, we have assumed that the observed development on the FARM Non-Private Passenger vehicle (Non-PPV) reported losses are a good proxy for the development on reported losses for taxis. The FARM Non-PPV valuation by coverage as at June 30, 2013, performed under the direction of Mr. Liam McFarlane, the current FA Appointed Actuary, was used as the basis to estimate indemnity amounts at ultimate. The FARM Non-PPV valuation as at June 30, 2013 ultimate indemnity amounts were selected on a Government Line aggregated level, in Appendix A the exhibit "Allocation of Government Line Selected to Coverage / KOL" presents the Government Line selected ultimate indemnity amounts allocated to coverage levels.

Loss Development factors are calculated as the ratio of the coverage level valuation selected ultimate indemnity amount to recorded indemnity amount (as at December 31, 2012) for each accident year.

Additional supporting valuation summary exhibits as at June 30, 2013 (and previously presented to the FA Actuarial Committee) are attached. Further support and commentary on the valuation approach and methods used, as well as further considerations as at September 30 2013 are documented in the Facility Association Residual Market 2013 Appointed Actuary's Report.

OW Question 4: B) *In Appendix A, the non-PPV selected ultimate incurred loss amounts and ultimate incurred loss amounts based on the Incurred Method are provided; and we understand the "selected" non-PPV values are the basis for taxi loss development factors as presented in Exhibit D-2. We also understand that the Incurred Method is one of several methods considered by FA. Given this, explain:*

i)   *How are the ultimate amounts for the commercial vehicles selected? Explain the methods used and provide supporting worksheets.*

ii)   *How are the BI and PD loss development factors for commercial vehicles combined into a TPL loss development factor for Taxis? What weights are used, and what is the basis for those weights?*

iii) *The accident year 2012 AB ultimate loss amount for non-PPV was selected at $535,639, while the estimate based on the Incurred Method (as selected by FA) is $383,131. Explain why the selected ultimate loss amount is so much higher than the result of the Incurred Method.*

iv)   *For those cases where the result of the Incurred Method was not selected, explain why.*

FA Response Question 4 B i & iv):

The selected ultimate indemnity amounts are consistent with the FARM Non-PPV valuation as at June 30, 2013 and are selected as part of the valuation process using incurred loss development (link ratio) estimates weighted with expected (a priori) loss ratio estimates. Loss Development factors are calculated as the ratio of the coverage level valuation selected ultimate indemnity amount to recorded indemnity amount (as at December 31, 2012) for each accident year. This approach allows for recognition that the valuation process considers alternative methods and assumptions in establishing the final selected ultimate level for indemnity amounts – specifically, while the link ratio method is one of the methods used in the valuation process, it is not the only method. Consideration is given to estimates of ultimate based on various methodologies, with final selected valuation ultimate taking into consideration the strengths and weakness of the various methodologies and associated estimates.

Additional supporting valuation summary exhibits as at June 30, 2013 (and previously presented to the FA Actuarial Committee) are attached. Further support and commentary on the valuation approach and methods used, as well as further considerations as at September 30 2013 are documented in the Facility Association Residual Market 2013 Appointed Actuary's Report.

FA Response Question 4 B ii):

We have assumed that the observed development on the FARM Non-Private Passenger vehicle (Non-PPV) reported losses are a good proxy for the development on reported losses for taxis. For the Third Party Liability incurred development estimate, Bodily Injury and Property Damage incurred development estimates are calculated, these coverage level estimates are summed and implied Third Party Liability (broad coverage) loss development factors are derived.

FA Response Question 4 B iii):

The Accident Year 2012 Accident Benefits selected ultimate indemnity amount was selected using incurred loss development (link ratio) estimates weighted with an expected (a priori) loss ratio estimate. As at the June 30, 2013 valuation date, Accident Year 2012 was still considered immature and more weight was given to our a priori loss ratio estimate.

OW Question 5: *Given FA is the largest provider of Taxi insurance in NL, what consideration was given to the actual historical development of Industry Taxi loss experience in NL to select the loss development factors?*

FA Response Question 5:

We have assumed that the observed development on the FARM Non-Private Passenger vehicle (Non-PPV) reported losses are a good proxy for the development on reported losses for taxis. Specific consideration was not given to the actual historical development of Industry Taxi loss experience in Newfoundland & Labrador, consideration was given to Industry Commercial Vehicle loss experience when selecting loss development factors.

OW Question 6: *The estimates of the TPL and AB ultimate loss amounts for accident years 2008 to 2011 presented in this rate application compared to those presented in the prior application are all lower. Why are the estimates all lower (as opposed to a more random pattern of higher and lower estimates) in this rate application for those four years?*

FA Response Question 6:

The table presented at the top of the next page compares the selected ultimate amounts used in the two filings.

FA NL Taxi Selected Ultimates comparison

	Third Party Liability (Amounts in '000s)				
	Recorded Indemnity As @ 31/12/2011	Selected Ultimate Indemnity As @ 30/6/2012	Recorded Indemnity As @ 31/12/2012	Selected Ultimate Indemnity As @ 30/6/2013	Difference in Selected Ultimate
Acc Year					
2007	1,905	1,985	1,996	1,908	21
2008	2,040	2,195	2,096	2,104	(91)
2009	2,522	2,819	2,911	2,515	(304)
2010	2,875	3,044	3,110	2,754	(291)
2011	2,099	2,955	2,837	2,708	(248)

	Accident Benefits (Amounts in '000s)				
	Recorded Indemnity As @ 31/12/2011	Selected Ultimate Indemnity As @ 30/6/2012	Recorded Indemnity As @ 31/12/2012	Selected Ultimate Indemnity As @ 30/6/2013	Difference in Selected Ultimate
Acc Year					
2007	45	45	42	42	(2)
2008	126	152	122	121	(12)
2009	125	163	100	98	(65)
2010	105	133	118	114	(19)
2011	191	404	176	199	(205)

The Third Party Liability and Accident Benefits selected ultimate indemnity amounts from the prior application were selected by Eckler and based on incurred loss development estimates (loss development factors selected using All Atlantics Commercial Vehicle data and applied to Newfoundland Non-Private Passenger data).

The Third Party Liability and Accident Benefits selected ultimate indemnity amounts from the current application were selected by Ernst & Young and based on Valuation selected ultimate indemnity amounts based on incurred loss development estimates (loss development factors were selected using Non-Private Passenger data and applied to Newfoundland Non-Private Passenger data) – for these mature accident years, less weight was given to expected loss ratio estimates. The change in LDF selection data set from Commercial Vehicle to Non-Private Passenger Vehicle data resulted in a general decrease in the Third Party Liability – Bodily Injury selected loss development factors for older development periods. The change in Accident Benefits coverage Selected Ultimate Indemnity is driven by decreases in recorded indemnity and lower than expected emergence (please refer to the table above).

Loss Trends

OW Question 7: *Bodily Injury and Property Damage Loss Trend Rates: FA selects loss cost trend rates of +4.4% for BI and +2.4% for PD. Explain how these two rates are combined into a TPL trend rate. (What weights are used for each of BI and PD, and what is the basis for those weights?)*

FA Response Question 7:

FA loss trend model generates selected-model loss cost amounts for each coverage projected forward to accident year 2016. Projected loss costs for any combination of coverages is simply the exposure-

weighted sums for the coverages (the projected loss cost for TPL is the simple sum of the projected amounts for BI and PD). A "trend" between any two periods is derived by the ratio of their respective projected loss costs.

OW Question 8: *Although the estimated Industry BI loss cost for accident year 2012 has declined from accident year 2011, FA's selected BI loss cost trend rate has increased from that selected in the prior review. Explain why this is reasonable.*

FA Response Question 8:

Our trend structures are based on regression analysis over selected periods. It is reasonable to expect random variations from a trend line from time-to-time through regular process variance. That said, our overall approach to selecting trend structures was updated during 2013 to allow a longer term view of historical periods of transition / changes in trends (as described by slopes).

OW Question 9: *To show the sensitivity of the rate indications to the selected loss cost trend rates, provide the rate indications for each coverage and overall based on the Board's current guideline commercial auto loss cost trend rates.*

FA Response Question 9:

The following table shows the indication based on the Board's current guideline commercial auto loss cost trend rates issued at September 30, 2013.

	TPL	AccBen	UA	TOTAL
Indicated rate change in the filing	75.4%	307.6%	343.8%	77.6%
Proposed rate change in the filing	50.0%	294.3%	329.3%	54.1%
Indication with NL CV LC Trend, 12% ROE	67.3%	279.7%	316.7%	69.8%
Indication with NL CV LC Trend 0 Cost of Cap.	50.0%	240.5%	273.7%	52.2%

OW Question 10: *In FA's prior rate filing, FA used some private passenger data to select the loss cost trend rates. Explain why FA changed its approach in this filing?*

FA Response Question 10:

We believe the risk characteristics that drive frequency and severity changes over time for Taxis are more akin to those of commercial vehicles than private passenger.

OW Question 11: *The graphs in the loss trend section show, for BI, evidence of an upward frequency trend pattern prior to 2004 and then a decline in frequency trend after 2004. Explain why the period after the change in direction was not chosen as the regression period?*
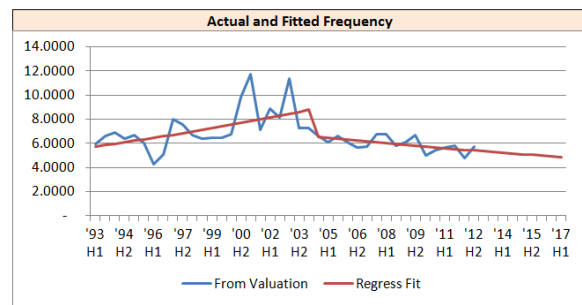
FA Response Question 11:

We are not sure we understand the question. The BI frequency trend structure selected is shown on page 119 of the FA NL Taxi Filing Part 2 ("Appendix B section 1 BI Page 2 of 15), clearly showing that 2 periods were selected for the regression, with the first period ending 2004-H1 and the second starting at 2004-H2 (see next page for summary charts).

REGRESSION STATISTICS							
Multiple R	R2	Adjusted R2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	k	
0.6753	**0.4561**	**0.4108**	0.1571	40	-	4	

	ANOVA				
	df	SS	MS	F	Significance F
Regression	3	0.7455	0.2485	10.0624	0.0001
Residual	36	0.8890	0.0247		
Total	39	1.6345			

Runs-Test Result: 0.1644 **RESIDUALS RUNS RANDOM**

	Coefficients	S.E.	t-Stat	p-value	C.I. Lower	99% Upper	Selected Coeff.	
	1	2						
Intercept	48.4955	31.2562	1.5515	0.1295	(36.505)	133.4963	48.4955	11
Season	-	-	-	1.0000	-	-	-	10
All Years	-	-	-	1.0000	-	-	-	9
Scalar 1	(123.111)	36.9718	(3.330)	0.0020	(223.655)	(22.567)	(123.111)	8
Trend 1	0.0383	0.0099	3.8778	0.0004	0.0114	0.0652	0.0383	7
Scalar 2	-	-	-	1.0000	-	-	-	6
Trend 2	(0.023)	0.0156	(1.495)	0.1437	(0.066)	0.0191	(0.023)	5
Scalar 3	-	-	-	1.0000	-	-	-	4
Trend 3	-	-	-	1.0000	-	-	-	3
Scalar 4	-	-	-	1.0000	-	-	-	2
Trend 4	-	-	-	1.0000	-	-	-	1

Trends are Annual

Actual and Fitted Frequency

OW Question 12: *What is the reform factor measured from the BI loss cost trend regression analysis?*

FA Response Question 12:

The impact of the reform as estimated by the regression can be estimated by comparing the 2004-H2 level to 2003-H2 compared with how 2004-H1 compared with 2003-H1 as shown below.

Estimated Product Reform Impact	'04H1 / '03H1:	1.03398
(as applicable)	'04H2 / '03H2:	0.65001
implied product reform impact factor:		0.62865
one-time reform impact:		(37.1%)

We would point out that as no weight was given to the loss experience prior to 2008, the one-time reform impact estimated above does not influence the resulting indications.

OW Question 13: *Explain the rationale or criteria for including or excluding the BI severity points/ For example, why is 2011-1 excluded, but 2001-2 and 2002-1 not excluded?*

FA Response Question 13:

In general, our preference is not exclude data points. For BI severity, the results prior to the 2004 reforms indicate a significantly high general level of volatility. While it might be argued that several data points may look like outliers, our view is that those points are reflective of the high volatility /

variance of the BI severity under the previous regime. In contrast, we believe the volatility has decreased since reform, but inflationary-type factors are at play (whereas they are not evident pre-reform). Within this view of lower volatility, we deemed 2011-H2 (not 2011-H1 as indicated in the question) as an outlier (as indicated in the fitted residual plot).

Had we excluded all residuals outside of +/-$20,000 (excluding them in order of absolute magnitude, as each elimination changes the residual) would have led to the exclusion of 1993-H1, 1993-H2, 1996-H1, 2001-H2, and 2002-H1, but the loss cost trend applicable to 2004-H2 and beyond would not have changed. Narrowing the band to +/-$10,000 would exclude 2 additional data points (1998-H1 and 2007-H2), but would have increased the resulting selected loss cost trend for 2004-H2 and beyond to 4.7%.

OW Question 14: *Does the T-test statistic consistently show that the parameters used in the models are statistically significant? State the cases where the results of the models were accepted despite parameters used that were not found to be statistically significant.*

FA Response Question 14:

We generally use a p-value test at 0.05 or lower to determine whether to accept the statistic. Exceptions:

- BI severity – p-value for all years was high, but we included it (the model indicates it struggled with fitting the severity prior to 2004-H2; the parameters for the post-reform were fine.
- AccBen severity – p-value for the post-reform period was high, but we included it (the model indicates it struggled fitting the severity post reform);
- CL frequency and severity – p-value over periods selected were high, but we included the two periods aligned with 2004 reforms;
- CM frequency and severity – p-value over periods selected were high, but we included the two periods aligned with 2004 reforms.

For the other coverages, we based the trend selection off another coverage.

OW Question 15: *Why is the reform parameter used for the time period 2004-2 for PD and AB coverages? Given there were no product (or reform) changes in 2004-2 for these coverages, what other time periods were considered (instead of 2004-2) to measure a possible change in the trend pattern?*

FA Response Question 15:

As a matter of course, we start with a single trend period across all coverages, then look at product reform periods across all coverages. In most jurisdictions, we find a correlation in relation to trend changes about the time of product reform across all coverages, even where the reform is not specifically targeted or meant to affect all coverages. In these cases, we let the "data speak", and assume that the reforms have a "halo" effect.

Credibility Weights

OW Question 16: *In the prior rate filing, the full credibility standard for TPL was set at 5,410 claims. In this filing, in Tab 11b, FA states the full credibility standard is 3,246 claims for TPL. Explain why the TPL standard has changed.*

FA Response Question 16:

The full credibility standards in this filing were derived based on an analysis of 2003 AIX Industry Atlantic Commercial size of loss experience, this credibility standard is widely accepted by insurance industry. The previous credibility standard for TPL appears to have been the sum of two times the standard for BI and the standard for PD. For this filing, we sum BI and PD (i.e. BI is not counted twice). This is consistent with the FA standard elsewhere, where TPL is not divisible. We believe the standard used this filing is appropriate.

OW Question 17: *What would the rate indication be if the TPL full credibility standard did not change from the prior filing?*

FA Response Question 17:

Using 5,410 as the standard, the TPL indication would have been 68.7%.

Complement of Credibility

OW Question 18: *What would the rate indication be if the same complement of credibility approach as used in the prior filing was used in this filing?*

FA Response Question 18:

The indication would be 53.6% for TPL, 194.3% for AccBen, and 202.1% for UA if the same complement of credibility approach was used.

OW Question 19: *What would the rate indication be if the same complement of credibility approach and the same TPL full credibility standard as used in the prior filing were used in this filing?*

FA Response Question 19:

The following chart shows the indications if the same complement of credibility approach and the same TPL full credibility standard as used in the prior filing were used in this filing.

	TPL	AccBen	UA
Indication with old credibility standard and old complement of credibility (5,410 for TPL and 1 year LC trend as complement)	42.4%	194.3%	202.1%

Best regards

Liqing Yang, FCAS
Pricing Actuary

attachment