



FACILITY ASSOCIATION – RATE REVISION APPLICATION
NEWFOUNDLAND & LABRADOR TAXIS, JITNEYS AND LIVERIES
RESPONSES TO OLIVER WYMAN INFORMATION REQUESTS DATED 6 FEBRUARY 2013

GENERAL

Question 1

The TPL, AB and UM current and proposed base rates are: \$2,148 and \$3,249 respectively; a proposed \$1,101 per vehicle increase in the base rates. Given the large proposed rate increase, explain why FA has not submitted a rate application for Taxi's since its current rate program became effective in May 1993?

Response 1 – Prepared by Facility Association Management

FA has not submitted a rate program since the last filing for Private Passenger vehicles we submitted in 2002. This filing cost the Facility Association over \$1 million due to the public hearing. As we only have \$1.6 million in written premium for Taxis in the province, a costly hearing did not make sense for such a small volume. When Dave Simpson and Jill Hepburn met with Robert Byrne in June of 2012 and explained the need for Taxi rate and FA's concern about the cost of a hearing, they left the meeting feeling optimistic that there would not be a costly hearing, even though no promises were made.

Question 2

How often does FA review its Taxi rate level change need?

Response 2

Recently, Newfoundland & Labrador Taxis have been subject to annual reviews, having been reviewed 5 times in the last 6 years.

Question 3

Given the large proposed rate increase, what consideration has FA given to capping the proposed rate increases?

Response 3 – Prepared by Facility Association Management

As per the filing documentation, we have capped the TPL indication at 50% with the intention of reviewing the rates yearly going forward and, depending on the outcome of this hearing, would file yearly to move the rates towards adequacy. We did not cap AB and UM as they are very small premium coverages. If FA can eventually get the rates adequate, perhaps we can attract other markets to look at the taxi business with the hope of depopulating FA, however there is no guarantee that will happen.

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LOSS TRENDS

Question 4

Bodily Injury Loss Trend Rate: FA selects its past severity trend rate of +5.7% based on its estimate of private passenger industry experience over the 11-year period 2001 to 2011 and a past frequency rate of -3.1% based on its estimate of commercial vehicle industry experience over the 8-year period from 2004 to 2011. And for 2010 and onward, FA selects a frequency trend rate of -1.6%. The past loss cost trend up to 2010 is +2.6%; and from 2010 and onward is +4.1%.

- a) Explain why FA considers the private passenger severity trends relevant to the taxi experience, but commercial experience relevant to the frequency trend.
- b) Given the reforms introduced in 2004- why was the frequency trend rate based on the period including 2004, why not use the period 2005 to 2011 instead? Did FA take the reforms into consideration in reviewing the frequency trend rate?
- c) Why is the selected past frequency trend rate, which is based on experience through to 2011, applied only through accident year 2010? Why is the trend rate not applied through to accident year 2011?
- d) What is the frequency trend rate over the period 2005 to 2010? And why was this rate not selected for frequency, instead of the rate based on 2004 to 2011 (since it is only applied to 2010)?
- e) What consideration was given to correlation between frequency and severity in choosing the very different time periods and different data sources (private passenger versus commercial) upon which the selected trends are based?
- f) Why was the past frequency trend rate reduced by 50% as opposed to some other percentage reduction?
- g) What statistical evidence (regression analysis) supports the -1.6% selected frequency rate for the period 2010 and onward?

Response 4

When selecting trend assumptions, the object is to discern underlying patterns by giving consideration to many models based on different data sets, combinations of variables and/or indicators, length of historical experience, exclusion of outliers, etc. The selected models are those found to produce the best statistically significant fits which produce reasonable and intuitive annual fitted trends. In some cases judgmental adjustments are made to future trends to reflect consideration of the sustainability of these fitted trends going forward after consideration of any early evidence of possible new patterns in the latest experience.

For each coverage, an initial run is done on frequency/severity and loss cost using all available accident years and applicable independent variables to determine whether the selected model will be based on loss cost or a combination of frequency/severity. Once this decision is made, from visual inspection of the graphs consideration is given to inflection points not otherwise explained by a regression variable, and various models are run with different combinations of independent variables and number of accident years, successively dropping variables that are not statistically significant and eliminating outliers. In the

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selection process, consideration is given to the selected models from the prior analysis as well as the various regression statistics produced by the analysis.

For Commercial Vehicles, in situations where a statistically significant and intuitive regression model cannot be found, the corresponding selected Private Passenger model may be adopted.

- a) As mentioned in the filing document, trend assumptions for Taxis are based on an analysis of Newfoundland & Labrador Commercial Vehicles experience. In the case of the Bodily Injury severity trend, no satisfactory statistically significant model could be found based on Commercial Vehicles data, so the Private Passenger selected Bodily Injury severity trend model was adopted. The use of "related experience" (i.e., Commercial Vehicles for Taxis, or Private Passenger Vehicles for Commercial Vehicles) was deemed appropriate to the circumstances as contemplated by Section 2600 of the Standards of Practice of the Canadian Institute of Actuaries.
- b) The impact of the 2004 reforms was considered, and like Oliver Wyman found in its analysis for the Newfoundland & Labrador Board of Commissioners of Public Utilities, the reform variables were not found to be statistically significant. For this frequency trend, inclusion of 2004 strengthened the regression.
- c) In the event a decision is made to temper future trend assumptions in response to possible early evidence of a pattern change in the underlying experience, this requires the selection of a point in time after which the tempering will be applied. In this instance, the extent of the departure of the latest data point from the general downward pattern of the recent past led to the selection of 2010 as the point in time after which tempering will be applied. This is consistent with what was done for Private Passenger for this coverage.
- d) The fitted frequency trend rate over the period 2005 to 2010 is -2.8%, but the strength of the regression deteriorates meaningfully.
- e) The pending rate filing does not include an analysis of correlation between frequency and severity. However, if the objective of discerning the underlying pattern in the experience is successfully achieved for each of frequency and severity, correlation between the two time series does not need to be modeled for forecasting purposes.
- f) The tempering factor was selected judgmentally.
- g) There is no statistical evidence supporting the judgmentally selected future frequency trend of -1.6%.

Question 5

Property Damage Loss Trend Rate: FA selects its past severity trend rate of +3.8% based on its estimate of industry experience over the 15-year period 1997 to 2011, and based on its judgment, selects a severity trend rate of +1.9% for 2010 and onward. And, based on its judgment, FA selects a past and future frequency trend rate of 0%. FA's loss cost trend rate is +3.8% up to 2010, and +1.9% from 2010 and onward.

- a) Explain why FA includes the 2011 data in its selected severity regression, but only applies its selected severity trend rate through to 2010. Does FA think the severity trend pattern, over the

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selection period 1997 to 2011, changed beginning in 2010? Does FA think the severity trend pattern changed at any other time over the selection period?

- b) What consideration was given to the declining frequency trend rate presented in the filing (-3.6%) in assuming/selecting a 0% frequency trend? What statistical evidence (regression analysis) supports the 0.0% selected frequency rate?
- c) What statistical evidence (regression analysis) supports the 0.0% selected frequency rate for the future frequency rate?

Response 5

- a) In the event a decision is made to temper future trend assumptions in response to possible early evidence of a pattern change in the underlying experience, this requires the selection of a point in time after which the tempering will be applied. In this instance, the extent of the departure of the latest data point from the general upward pattern of the recent past led to the selection of 2010 as the point in time after which tempering will be applied.
- b) The -3.6% frequency trend that resulted from the severity model based on experience from 1997 to 2011 was not considered to be sufficiently reflective of the most recent experience. For frequency, consideration was given to the fit to a much shorter history (2004 to 2011) and several other models as well as visual inspection of graphs, from which a frequency trend of 0.0% was selected. There is no statistical evidence supporting the judgmentally selected frequency trend of 0.0%.
- c) There is no statistical evidence supporting the judgmentally selected future frequency trend of 0.0%.

Question 6

Accident Benefits Loss Trend Rate: FA relies upon the private passenger vehicle experience. FA selects its past severity trend rate of +4.2% based on its estimate of industry experience over the 13-year period 1999 to 2011 and a past frequency rate of -2.5% based on its estimate of industry experience over the same 13-year period from 1999 to 2011. The past loss cost trend is +1.6%, and FA selects this loss cost trend rate to apply up to 2009, and then selects +4.2% from 2009 to 2011- based only on the severity trend rate.

- a) Explain why FA considers the private passenger vehicle experience in selecting its severity trend rate, rather than the commercial vehicle experience as was used for Property Damage.
- b) Explain why FA considers the private passenger vehicle experience in selecting its frequency trend rate, rather than the commercial vehicle experience as was used for Bodily Injury.

Response 6

As mentioned in the filing document, trend assumptions for Taxis are based on an analysis of Newfoundland & Labrador Commercial Vehicles experience. The use of "related experience" (i.e., Commercial Vehicles for Taxis, or Private Passenger Vehicles for Commercial Vehicles) was deemed

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appropriate to the circumstances as contemplated by Section 2600 of the Standards of Practice of the Canadian Institute of Actuaries.

- a) In the case of the Accident Benefits severity trend, no satisfactory statistically significant model could be found based on Commercial Vehicles data, so the Private Passenger selected Accident Benefits severity trend model was adopted.
- b) In the case of the Accident Benefits frequency trend, no satisfactory statistically significant model could be found based on Commercial Vehicles data, so the Private Passenger selected Accident Benefits frequency trend model was adopted.

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DISCOUNT RATE

Question 7

The average pre-tax return on investment (ROI) rate for insurers providing automobile insurance in NL is in excess of 4% over each of the 3 years 2009 to 2011 (2012 is not yet available). What consideration was given to the actual pre-tax return on investment rate earned by insurers providing automobile insurance in NL in selecting the ROI (2%) for this rate application?

Response 7

No consideration was given to the actual pre-tax return on investment rate earned by insurers providing automobile insurance in Newfoundland & Labrador over the period 2009 to 2011. The nature of this assumption in a pricing context is such that expected rates of return on "new money" form the basis for selection of this assumption.

The assumed discount rate of interest of 2.00% implicitly took into consideration the improvement in rates of return expected to be achieved by the member companies as a result of Facility Association's 2005 change in cash management practices by looking at forecasted yields on longer term Government of Canada bonds.

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Question 8

Does FA invest the assets that earn the 2% assumed ROI, or do the insurers invest the assets?

Response 8

Since June 2005, funds not required to meet Facility Association's short term cash flow needs have been transferred to member companies, for investment based on their own investment plans and policies.

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OTHER ITEMS

Question 9

Provide supporting calculations for the 0.9% Health Levy variable expense percentage. Why is this Health Levy cost treated as a variable expense, rather than a fixed expense cost?

Response 9

The 0.9% assumption was selected from a review of calculated historical ratios of Health Services Levy dollars to on-level written premiums as shown in the exhibit labeled "Response to Question 9".

Although the Health Services Levy is expressed as a flat dollar per vehicle, the total amount logically varies with the amount of premium written and therefore it was classified as a variable expense.

Question 10

Does FA charge a fee to policyholders for monthly payment plans? If yes,

- a) Provide the estimated fees for all payment plans as a percentage of written premiums for 2010, 2011 and 2012.
- b) Explain how this payment plan fee was considered in the rate level indication calculations.
- c) If the payment fee revenue was not considered in the rate level indication calculations, provide alternative rate level indications (by coverage and overall) including a provision for this finance fee revenue, so as to reduce the selected variable expense ratio by the amount calculated in (a) above, with no other changes in assumptions.

Response 10 – Prepared by Facility Association Management

Facility Association does not provide a payment plan for Taxis in Newfoundland & Labrador or any other jurisdiction.

Question 11

What is the basis for the weights used in Exhibit 9, Sheets 2.1 to 2.3?

Response 11

The underlying weights used in the derivation of the overall average rate level changes are the individual accident years' on-level earned premiums.

**Facility Association
Determination of Expense Loading for the Health Services Levy
Commercial Vehicles
Newfoundland & Labrador**

<u>2008 From 2012.Q2 and On-Level analysis</u>		FA2012.Q2 Written Prem.	Onlevel Factor	
(A)	2008 CV TPL written exposures			328
(B)	2008 per vehicle levy			19.60
(C)	2008 CV TPL on-level written premium	724,111	1.0000	724,111
(D)	Indicated ratio			0.89% = (A) x (B) / (C)
(E)	Selected Ratio			0.90%

2009 From 2012.Q2 and On-Level analysis

(F)	2009 CV TPL written exposures			405
(G)	2009 per vehicle levy			19.96
(H)	2009 CV TPL on-level written premium	854,887	1.0000	854,887
(I)	Indicated ratio			0.95% = (F) x (G) / (H)
(J)	Selected Ratio			0.90%

2010 From 2012.Q2 and On-Level analysis

(K)	2010 CV TPL written exposures			432
(L)	2010 per vehicle levy			20.88
(M)	2010 CV TPL on-level written premium	955,551	1.0000	955,551
(N)	Indicated ratio			0.94% = (K) x (L) / (M)
(O)	Selected Ratio			0.90%

2011 From 2012.Q2 and On-Level analysis

(P)	2011 CV TPL written exposures			452
(Q)	2011 per vehicle levy			19.60
(R)	2011 CV TPL on-level written premium	981,878	1.0000	981,878
(S)	Indicated ratio			0.90% = (P) x (Q) / (R)
(T)	Selected Ratio			0.90%