

Financial Services Regulatory Authority
5160 Yonge Street, 17th Floor
North York, ON M2N 6L9

July 27, 2020

Attention: Mr. Bruce Green, Director, Rates Operations, FSRA

RE: OW Preliminary Ontario Selected Private Passenger Vehicle Loss Trend Rates and Reform Factors
(Based on Insurance Industry Data Through December 31, 2019) dated June 22, 2020

Dear Mr. Green,

Facility Association has reviewed the draft Oliver Wyman (“OW”) report entitled “*Preliminary Ontario Selected Private Passenger Vehicle Loss Trend Rates and Reform Factors (Based on Insurance Industry Data Through December 31, 2019)*” dated June 22, 2020.

We are pleased to provide our attached written submission for your consideration and we appreciate the opportunity to provide feedback. Our comments are focused on the availability of automobile insurance in the voluntary market in Ontario, providing consumers in the province choice, both in terms of insurance provider and choice of the type and amount of coverage available¹.

It is challenging to promote both fairness and predictability in automobile insurance rates at a time when the underlying costs of benefits provided by the insurance product are very difficult to predict. This is especially the case following significant reforms, and challenges in the understanding of changes in frequency of accidents and claims, and their associated severity, both in relation to injured parties and to vehicular damage. Nonetheless, we believe promoting fairness and insurers’ ability to set and predict their rates will enhance availability and competition in the marketplace to the ultimate benefit of consumers.

In light of this, we believe it is important for FSRA to use the benchmarking exercise to inform its consideration of rate filings, rather than to set specific targets, caps, or floors with respect to any one particular assumption. This approach opens the opportunity for insurers to reflect their own assessment of future costs in providing their product / service to the consumer, and allows them to set their rates based on their assessment of the competitive market in which they operate. This, we believe results in the greatest consumer choice in both providers and product, while maintaining fairness to all parties.

¹ Consumers in Ontario are required to purchase \$200,000 of third party liability protection. However, it is clear that consumers see value in broader insurance coverage to protect them and their financial wellbeing, as less than 0.05% of individually-rated private passenger vehicles were insured for the required minimum third party liability limit, according to 2018 data found in GISA industry data (the AUTO1101 exhibit for 2019, and related industry statistics for 2019, is not yet available). Further, 89% purchased protection for their vehicle against collision/upset, and 94% purchased protection for their vehicle against theft and non-collision damage. We believe these statistics show a clear consumer appetite in the province for automobile insurance across many of the perils to which owning or operating an automobile exposes consumers.

In contrast, benchmark assumptions as are set values, floors or caps may adversely impact availability of voluntary automobile insurance in the province, to the extent that capital providers in the voluntary market take an adverse view of their ability to charge rates that they have assessed relative to the future costs and risk of providing insurance.

Our concern from a voluntary market availability standpoint, is that benchmarks based on the OW Preliminary Report may act to discourage insurers from filing for rate changes and pull back from the market, reducing competition and availability.

More broadly (i.e. beyond just a focus on reform factors and trends), there are areas of uncertainty where we believe FSRA should allow flexibility for companies selecting assumptions supporting their applications. These include:

- selection of industry ultimate claim counts and amounts supporting their analyses (including trend analyses);
- selection of trend models (including the underlying methodology and approach) and associated estimates of trends or other changes to claims metrics;
- selection of large loss and catastrophe loss loadings and methodologies and reinsurance cost considerations;
- discount rates;
- health cost recovery loadings;
- operational expenses; and
- profit provisions (both in terms of the metric to use, and the level to target).

We believe that it is important to begin laying the foundation for a flexible future system, where insurers are able to include their best estimates of future costs based on their own assumptions, judged by FSRA on their own merit and basis of reasonableness, giving proper consideration to prediction uncertainty.

More specific to the reform factors and trends outlined in the OW Preliminary report, we discuss the following issues and our views more broadly over the following pages:

- selection of ultimates and valuation methodologies (use of GISA published development factors and apparent use of a single valuation methodology);
- use of indemnity + ALAE + ULAE vs use of indemnity alone (ALAE develops differently than indemnity; ULAE is applied as a calendar year factor applied to accident year half data); and
- complexity of models (bias / variance trade off in modeling; stakeholder ease of use)

Any questions related to this submission may be directed to Aidan Chen either by phone (647-619-2965) or email at achen@facilityassociation.com.

Best regards,

Aidan Chen
AVP Data & Analytics

GENERAL COMMENTS

The Oliver Wyman (OW) report entitled “*Preliminary Ontario Selected Private Passenger Vehicles Loss Trend Rates and Reform Factors (Based on Insurance Industry Data Through December 31, 2019)*”, dated June 22, 2020 (“OW Preliminary Report” or “OW Report” or “benchmark report”) is a substantial document, involving an increased level of complexity (in our view) of the analysis in contrast with what had been previously provided by FSRA in support of trend and reform factor benchmarks. We support this approach in general, but regret that we lack resources to provide a detailed assessment of all aspects of the OW Report and their modeling approach.

We have focused our comments on the following areas as a result:

1. SELECTION OF ULTIMATES AND VALUATION METHODOLOGIES

For all coverages, the OW selection of ultimates is based on GISA published (count and amount) development factors (as selected by EY actuaries on behalf of GISA) based on industry data through December 31, 2019².

It is our understanding that **EY does not view their work as selecting ultimates**, but rather selecting factors (parameters) for a specific valuation methodology (chain ladder method).

Furthermore, we believe it is uncommon practice in Canada for a valuation actuary to rely on a **single valuation methodology in completing a valuation** as this introduces significant model risk (the risk that the model employed is not appropriate or has significant shortcomings for the experience being projected). To minimize model risk it is common to employ different models. The strengths and weakness of the chain ladder method are well documented in actuarial literature. Some of the limitations (weaknesses/constraints) of the chain ladder method include:

- dependent on the experience, requiring the past to be predictive of the future – for Ontario PPV, there is evidence that claims reporting and development (link ratios) may be changing for some coverages, particularly in the face of regulatory and product reforms, system changes and acknowledged data reporting quality concerns
- highly-leveraged nature – for Ontario PPV, for coverages with long settlement periods (for example, bodily injury or accident benefits), link ratios tend to have significant levels of volatility, particularly at earlier development ages

As the selection of ultimates is a critical and foundational input of the loss trend analysis, **we believe an actuary should formally sign off on the ultimates being used and relied upon**, and more detail on the valuation selections should be provided to users of the benchmark report to aid in the assessment and use of the analysis.

²“As requested by FSRA, for all coverages, we applied claim count and claim amount development factors based on those published by GISA based on the industry data through to December 31, 2019. We reviewed the factors published by GISA in AUTO 0002 for reasonableness.” [page 10, OW Preliminary Report]

2. USE OF INDEMNITY + ALAE + ULAE VS USE OF INDEMNITY ALONE

OW uses indemnity plus allocated loss adjustment expense (ALAE) plus unallocated loss adjustment expense (ULAE) as the basis³ for loss amounts in their analysis.

We see two primary ways that **ULAE/ALAE shifts over time might impact or distort trend estimates**: due to differences in development patterns for indemnity and ALAE, and the use of a calendar year ULAE factor applied to accident half coverage data.

- **ALAE develops differently than indemnity:** If the proportion of ALAE to indemnity is reasonably constant, using aggregate indemnity & ALAE triangles to determine ultimate levels is not problematic. However, if the relation changes (particularly in Ontario PPV, where we've seen impacts related to technology and claims system changes and, in particular, a legal expense shift from ALAE to ULAE), for any reason, including the situation where ALAE is shifting to or from ULAE, then the aggregate development factors may no longer be appropriate.
- **Calendar year ULAE factors applied to accident half data:** As a calendar year factor, ULAE is made up of the sum of ULAE payments made by insurers during the course of a calendar year (and the change in the estimated unpaid ULAE level). In a steady state, it may be reasonable to assume that this would be stable over time. However, as per the draft benchmark report, the calendar year ULAE ratios are not stable and range from a low of 6.6% for calendar year 2010 to a high of 11.3% for calendar year 2019. Furthermore, applying these calendar year factors to accident half data at a coverage level will inappropriately apply the factor equally to first and second accident halves for a given accident year, as well as equally across all coverages.

If the objective, as indicated in the report, is to minimize any impacts or distortions in the data that may arise from insurers change their mix of ULAE and ALAE over time, this can be achieved by **modeling indemnity only data and recognizing that individual insurers are in a much better position to make direct adjustments** for any shifts in their usage of ULAE vs ALAE over time, as they deem appropriate.

³ “The claim experience includes allocated loss adjustment expenses, and we include a provision for unallocated loss adjustment expenses (ULAE) based on the accident year ULAE factors published by GISA. In doing so, any distortions in the measured trend rate due to possible shifts over time between ULAE and ALAE from year to year is minimized.” [page 11, OW Preliminary Report]

3. MODEL COMPLEXITY

OW has indicated that model complexity (or lack thereof, aka model parsimony) is considered⁴ in their model selection process.

We agree with this approach. FA similarly considers model complexity in our selection process, with a general preference of simple models over more complex models. We would also suggest that complexity reflects stakeholders' ability (ease or difficulty) to explain the model design and use the model output.

Unfortunately with respect to the Accident Benefits reform factor approach, we would assess the OW models as complex. The model design and output is, in our view, difficult to explain as both reform scalars and trends are modeled as changing over a period of time related to the most recent changes. In particular, the output moves the reform benchmarks from a single factor at a coverage level, to several scalars and several trend factors, as highlighted in table 2 from the OW Preliminary Report (page 38) and replicated below:

Table 2 from OW Preliminary Report

Table 2: Accident Benefits Total Medical & Rehabilitation including Attendant Care – Semi-Annual Loss Cost Trend and Reform Factors

Accident Semester	Semi-Annual Trend Rate	Trend Factor to 4/1/2019	Scalar Reform Factor
2015-01	3.7%	1.116	0.778
2015-02	3.7%	1.076	0.778
2016-01	2.5%	1.038	0.780
2016-02	0.7%	1.013	0.846
2017-01	0.1%	1.005	0.957
2017-02	0.1%	1.004	1.000
2018-01	0.1%	1.003	1.000
2018-02	0.1%	1.002	1.000
2019-01	0.1%	1.001	1.000
2019-02		1.000	1.000

We believe the OW reform approach is overly complex in approach, and may lead to low variance / higher bias, resulting in future coefficient estimates that are at risk of significant change. We question whether the additional complexity is necessary. In particular, the OW ME model introduced 2 complexities:

- non-binary explanatory variables for the reform periods – that is, fractional factors applied to accident half data to give weight over time to differentiate between claims arising that were subject to reforms and those that were not

⁴ “Our selected model is based on our assessment of the best model through a wholistic view of the statistical tests, historical data (changes in patterns and spikes) and model parsimony.” [page 16, OW Preliminary Report]

- staggered (non-midpoint starting value (2/12^{ths}), and a non-half year first period (5/12^{ths})) variable for time related to the reform impacts – we recognize that this was set to align with the effective date of the reform, but contend this approach has led to a fragile model.

To review the model, we applied the OW design matrices to the FA ME data set (with data for 2010-H2 and earlier excluded to follow our understanding of the data OW modeled).

To assess whether the additional complexity is necessary, we first tested to see if the temporal differences (staggered time variable for reform impacts) used by OW are influential to the model results, and second we tested whether the 0.01 scalar weight given to 2016-H1 is worthwhile.

We would be happy to further discuss our testing in detail. In sum, we would view 2 takeaways:

1. the additional staggered (non-uniform) temporal differences introduced for trend **do not appear to be necessary from a statistical standpoint** and we believe **replacing them with standard values will make the model easier to interpret and explain**, with no loss in statistical accuracy in the estimation of coefficients; and
2. the **model appears to be fragile** with respect to relatively minor weight given to 2016-H1 (the minor weight applied to 2016-H1 was influential and results in a statistically significant impact on the trend periods selected), as such, we recommend caution in adopting, or, at least, making clear that there should be a wide range of acceptable interpretations for the ME future loss costs.