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Comments on Preliminary Ontario Selected Private Passenger Vehicles Loss Trend Rates and Reform Factors Report Based on Insurance Industry Data Through December 31, 2019

On July 6, 2020, FSRA posted a preliminary benchmarks report, updated based on insurance industry data through December 31, 2019, on its website for public consultation. This report was produced by Oliver Wyman (OW) and details a comprehensive derivation of loss trend benchmarks, which, once finalized, FSRA will then use as a basis for evaluating future rate filings. To ensure alignment between industry members and FSRA, FSRA has asked industry to review the benchmarks report and to provide feedback on their methodology.

We appreciate this opportunity to provide feedback and hope to continue forging a strong collaborative relationship with FSRA going forward. This document summarizes our observations and comments regarding the methodology and selected preliminary loss trend and reform factors.

Bodily Injury and Accident Benefit Coverages

We observe significant negative post-reform loss trend selection of -7.5% for the Bodily Injury coverage and 0.0% post-reform loss trend selection for Accident Benefits coverage. We continue to have the following concerns on the proposed methodology:

1. Assuming a loss trend change date coinciding with a product change date is inappropriate even though statistical measures may show a better fit;
2. The resulting projected frequency and loss cost values for the time period during which the new premiums will be in effect is not reasonable;
3. The future trend is based on a short experience period which is not desirable;
[redacted]

Each item is described in more detail below.

1. Using a loss trend change date coinciding with reform date is problematic.

Subsequent to any product change, there has always been an adjustment/learning period. This is a well-known phenomenon and was observed subsequent to prior reforms. The frequency showed negative trend immediately after Bill 198 and Bill 34/10, before soaring again as evidenced in the frequency charts on pages 17, 27, 27, 30 and 34 of the consultation document. It is not prudent to interpret this decline as a trend change and that this trend will continue into the future.

2. The future projected values do not seem reasonable

Expecting the BI frequency to continue to go down further by 8.5% each year is difficult to comprehend. If we assume an effective date for our indication of Jan. 1, 2021 and hence an average accident date of Jan. 1, 2022, this implies that the BI frequency will go down by another 20% to 25%, which levels have not been achieved in the historical experience period presented and seems unrealistic when Bills 15/91 did not include explicit changes to the bodily injury coverage that would definitively explain the observed change in frequency trend to a steep declining trend. Similarly, a 0.0% severity trend on AB does not appear to be reasonable given general inflation and rising medical costs.

While the model has a good statistical fit based on the limited post-Bills 15/91 experience, we have to be mindful of the application of the trend factors to extrapolate into the future. Hence, actuarial judgment needs to be applied to avoid projecting unrealistically low BI and AB frequency and/or severity for future periods.

Assuming future (post-reform) trend rates of -7.5% for BI and 0% for AB will unduly lower premiums in the near term, only to be increased substantially later resulting in unstable premium swings. Note that as it has been already three years since the Bill 15/91 reform, the current and future indications will rely on post-reform experience only and hence these negative trends will be fully applied.

3. The post-reform (future) trend estimate is based on a short experience period:

Using Bodily Injury frequency trend analysis as an example, although the model is based on 9 year experience, it appears, the inclusion of a trend rate change parameter essentially means the past trend is based on the experience up to the reform date and the future trend is based exclusively on the post reform experience. Considering there are only 3.5 years' experience since the reform (although there are 7 half-yearly data points still only 3.5 years' experience), the chosen experience period is quite short to determine a reliable long term trend. Although the statistical measures show good fit (which is primarily contributed by pre-Bill 15/91 reform experience), the short experience period considered may be an issue. For example, with 2 data points, any regression fit will be a perfect fit and the R^2 will be 1 (good statistical measures). The result of overfitting the recent data points would lead to a poor predictor of the future trend.

As mentioned in the OW report, the 2016 reform was effective for policies written or renewed on or after June 2016 and will take several years to emerge. Based on historical patterns of Bill 198 and Reg 34/10, the loss cost shows decline immediately following the implementation of the reform but starts to increase again after several accident periods. This phenomenon should be factored into the future trend consideration. Since ratemaking is a prospective exercise, the selection of future trend must not be solely based on past data observations alone.

An alternative approach is to not assume a loss trend change, as there are several uncertainties including uncertainties about how these post-reform historical experience will develop etc., and fit one loss trend rate for the entire period in order to capture the long-term pattern.

In addition, both BI and AB are long tail lines which are subject to significant loss development. Given the limited experience post 15/91 reform, most of the loss development factors would be based on pre-15/91 reform experience, which might not appropriately reflect the current environment. We observed that the loss development patterns changed significantly subsequent to the prior two reforms.

Based on the above, we believe actuarial judgment should be applied when making future trend selections for BI and AB rather than relying on statistical fit alone. Upon reviewing results of various model parametrizations in Appendix E, we recommend a **BI future trend in the range of -2% to -5%**, and an **AB future trend in the range of 1.5% to 4.5%**.

Physical Damage Coverages

The loss cost for all physical damage coverages shows substantial year-over-year increases in recent years, and the statistical fits based on more recent years are similar or better. We attribute this acceleration to rapid and continuous enhancements in technology and expect this to continue in the future. We are of the view that for these short-tailed coverages, a shorter period should be considered to more accurately reflect experience in recent years and to allow for better projection of experience in upcoming years. Moreover, we believe 3 and 4 year regressions (starting at 2016 and 2017) must be tested for short-tailed coverages, however these were not included in the OW analysis.

Collision

By examining Appendix E pages 73-76, it can be seen that the implied trend rates are increasing as the experience period is shortened. We further tested regression models starting at 2016.1, 2016.2, and 2017.1. The implied loss cost trends are similar or higher.

This reflects the deteriorating trends that are observed with this coverage and this is consistent for frequency, severity and loss cost. We attribute this acceleration to rapid and continuous enhancements in technology and expect this to continue in the future. We would therefore recommend selecting a trend based on a shorter experience period that is more responsive to the current environment. A selection in the range of 10.5%-11.5% would be more reflective of recent experience while maintaining strong R^2.

Collision - OW Report Appendix E Pages 73 (Freq) and 74 (Sev)

Starting Half-Year	Frequency R^2	Frequency Trend	Severity R^2	Severity Trend	Implied LC Trend
2013.1	0.659	3.02%	0.974	5.94%	9.1%
2013.2	0.580	2.85%	0.980	6.21%	9.2%
2014.1	0.524	2.91%	0.989	6.55%	9.7%
2014.2	0.751	3.90%	0.985	6.54%	10.7%
2015.1	0.664	3.52%	0.982	6.58%	10.3%
2015.2	0.829	4.54%	0.972	6.50%	11.3%
OW Sel	**0.659**	**3.02%**	**0.974**	**5.94%**	**9.1%**

Comprehensive

For Comprehensive, we believe the OW frequency selection of -1.57% is not well supported. Due to volatility of the past frequency, all of the models had poor statistical fit according to Appendix E page 78. One can observe a general pattern of several consecutive decreasing points followed by a sharp spike.

We believe the OW severity selection of 8.08% does not sufficiently reflect the recent deteriorating experience. On page 53 of the report, 2014-1 to 2017-2 data points all sit below the fitted trend line while 2018-1 to 2019-2 are all above the line. According to Appendix E page 78, severity models starting from more recent years all show increasingly higher trends and higher R^2.

Comprehensive - OW Report Appendix E Pages 77 (Freq) and 78 (Sev)

Starting Half-Year	Frequency R^2	Frequency Trend	Severity R^2	Severity Trend	Implied LC Trend
2013.1	0.165	-1.12%	0.907	8.92%	7.7%
2013.2	0.229	-1.41%	0.882	9.11%	7.6%
2014.1	0.036	-0.76%	0.947	10.62%	9.8%
2014.2	-0.052	-0.54%	0.953	11.40%	10.8%
2015.1	0.006	-0.92%	0.959	12.14%	11.1%
2015.2	-0.013	-1.05%	0.941	12.38%	11.2%
OW Sel	**0.378**	**-1.57%**	**0.904**	**8.08%**	**6.4%**

We further tested regression models starting at 2016.1, 2016.2, and 2017.1. The frequency, severity, and implied loss cost trends are similar or higher. We attribute this to significant increase in theft in recent years, as well as rapid and continuous enhancements in technology, and expect this to continue in the future. We would therefore recommend selecting a trend based on a shorter experience period that is more responsive to the current environment.

- A frequency selection in the range of -1.0% to 0.0%
- A severity selection in the range of 11.5% to 12.5%

Overall a loss cost trend ranging from 10.5% to 12.5% would be more reflective of recent experience while maintaining a strong R^2.

DCPD

By examining Appendix E pages 23-33, it can be seen that the implied trend rates are increasing as the experience period is shortened, particularly for severity. We further tested regression models starting at 2016.1, 2016.2, and 2017.1. The implied loss cost trends are similar or higher.

This reflects the deteriorating trends that are observed with this coverage particularly in severity. We attribute this acceleration to rapid and continuous enhancements in technology and expect this to continue in the future. We would therefore recommend selecting a trend based on a shorter experience period that is more responsive to the current environment. In addition, we feel that an inclusion of a trend shift factor in 2013, despite being statistically significant, is not necessary for trend selection given this coverage is short-tail and a shorter period should be sufficient and reasonable. The table below shows trend numbers without the trend shift factor in 2013. A selection in the range of 9.5%-10% would be more reflective of recent experience while maintaining strong R^2.

DCPD - OW Report Appendix E Pages 23 (Freq) and 24 (Sev)

Starting	Frequency		Severity		Implied
Half-Year	R^2	Trend	R^2	Trend	LC Trend
2013.1	0.682	2.40%	0.990	6.90%	9.47%
2013.2	0.607	2.04%	0.989	7.03%	9.21%
2014.1	0.553	2.09%	0.881	7.25%	9.49%
2014.2	0.599	2.44%	0.988	7.29%	9.91%
2015.1	0.461	2.04%	0.986	7.14%	9.33%
2015.2	0.526	2.51%	0.979	7.12%	9.81%
OW Sel	**0.747**	**2.47%**	**0.990**	**6.58%**	**9.21%**

Conclusion

We continue to express concern on the BI and AB methodology of selecting a future trend solely based on immature post-reform data points. We also believe that DCPD, Collision, and Comprehensive selections are below the reasonable range and do not sufficiently reflect the rapidly increasing costs.

Our suggested selection ranges are summarized below:

Coverage	OW Selection	Suggested Range
BI future	-7.5%	-2% to -5%
AB future	0.0%	1.5% to 4.5%
DCPD	9.2%	9.5% to 10%
COLL	9.1%	10.5% to 11.5%
COMP	6.4%	10.5% to 12.5%

Lastly, we would like to once again thank FSRA for the opportunity to provide feedback and we look forward to collaborating in the future.