February 28, 2025

Alberta Automobile Insurance Rate Board
2440 Canadian Western Bank Place
10303 Jasper Avenue
Edmonton, AB T5J 3N6

Delivered via email: airb@gov.ab.ca

Attention: Mr. Jamie Hotte, FCIP, Chair

RE: FA Written Submission regarding the Semi-Annual Review of Industry Experience as of June 30, 2024 – Private Passengers Vehicles

Dear Mr. Hotte,

Please find enclosed Facility Association's (FA) submission to the Alberta Automobile Insurance Rate Board regarding the Semi-Annual Review of Industry Experience as of June 30, 2024 – Private Passengers Vehicles.

The comments included addresses the Oliver Wyman ("OW") draft report entitled "*Semi-Annual Review of Industry Experience – Preliminary Report as of June 30, 2024 Private Passenger Vehicles*" dated January 20, 2025 ("OW Report").

Sincerely,

Philippe Gosselin
VP Actuarial & CRO

Encl.

c.c.: Karen Dyberg, Facility Association Board Chair
Saskia Matheson, Facility Association President & CEO

COMMENTS REGARDING THE SEMI-ANNUAL REVIEW OF INDUSTRY EXPERIENCE

This document represents the Facility Association ("FA") written submission to the Alberta Automobile Insurance Rate Board ("AIRB") with respect to the Oliver Wyman draft report entitled "*Semi-Annual Review of Industry Experience – Preliminary Report as of June 30, 2024 Private Passenger Vehicles*" dated January 20, 2025 ("OW Report").

We appreciate the opportunity to provide feedback, and we have focused our comments on the following areas:

- Selection of ultimates and valuation methodologies;
- Use of indemnity + ALAE + ULAE vs use of indemnity alone;
- Reforms and Impact;
- Post-Pandemic Frequency Level and New Normal Factors; and
- Selection of loss trend rates and Uncertainty

Summary of Selection

Our position has not changed that:

> For each coverage, there are many possible models for frequency, severity, and loss costs that are valid and reasonable. The ultimate selection of models by insurers in developing their rates is a matter of judgment and interpretation that can differ among actuaries even when modeling the same data. Differences should be expected and be seen as healthy in a competitive environment. It is the nature of actuarial science.
>
> Specifically, we feel it is important for the Board to consider that valid differences in actuarial judgment and opinion can lead to different selections of ultimates, and different trend results. Indeed, different models can fit actual results equally well, and yet, due to their structure (i.e. the selected parameters included in each), result in divergent forecasts.
>
> We also believe the Board should allow the applicant to set their prices and market share on their views of ultimates and their selections of models describing frequency/severity/loss costs over time and as projected into the future. The rate review process should focus on whether the filing insurer's process to arrive at their forecast was reasonable (and consistent with the insurer's previous views / process / approach unless an explanation is provided as to what has changed and why). If so satisfied, we believe the Board should accept the filing insurer's view, even if it differs from the view of the Board's actuary.
>
> Forcing all participants in the insurance marketplace to adopt a single view introduces systemic risk and potentially detracts from the competitive marketplace should certain participants reduce their risk appetite where they do not agree with the imposed view. This can lead to an overly prescriptive regulatory environment, which we believe is not the intention of the Board.

1. Selection of ultimates and valuation methodologies

For all coverages, the OW selection of ultimates (counts / amounts) is based on the selection of loss development factors (chain ladder method) using industry data through June 30, 2024.

Once again, our position has not changed that we believe it is uncommon practice in Canada for an 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 selection of ultimates is a critical and foundational input of the loss trend analysis, and this is acknowledged on page 22 of the OW Report when they mentioned that "*We note the selection of development factors influences the selected loss trend rates*". We believe there are a number of factors contributing to the uncertainty in estimating Alberta Industry ultimates and that the "range of reasonable" valuation estimates is wide which subsequently leads to a wide range of reasonable trend estimates.

As mentioned in the OW Report,"…*the loss development factors in the latest diagonal are higher than historical factors, contributing to the large increase to the loss costs*.", relying on chain ladder method only may not accurately capture claim changes.

We agree that the Covid pandemic and the current macroeconomic environment are affecting claims development pattern and therefore, the loss development method would be unduly affected.

As the AIRB's vision is for fair and predictable rates, the accuracy of the predictions used for setting benchmarks should be assessed as part of the annual process.

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)[1] as the basis for loss amounts in their trend analysis.

Even though we understand that the combined indemnity and expense data is the norm in the industry, we would like to emphasize that the indemnity and expense data, as well as the underlying development and trend may be significantly different. Consequently, we should consider this if the analysis is based on the combination of both.

If the objective is to minimize any impacts or distortions in the data that may arise from insurers changing 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.

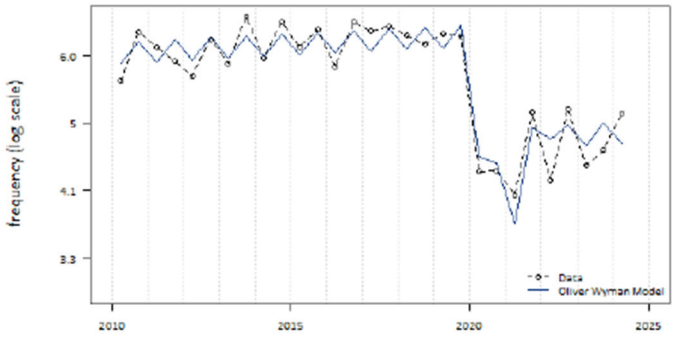
FA is analyzing the Alberta Industry PPV trends on an indemnity basis only and as explained above, this could result in different selections than those made by OW.

3. Reforms and Impact

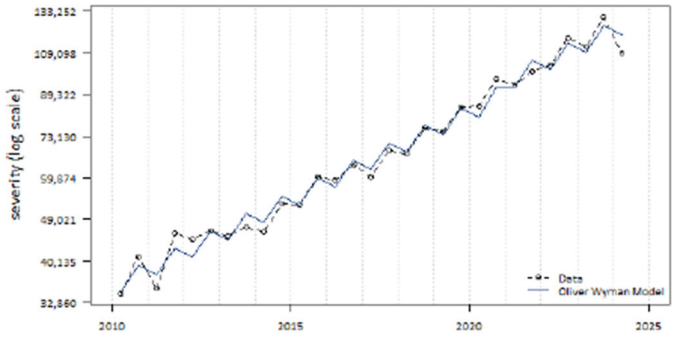
OW states on page 26 of their report "*In this review, we consider the data that has emerged since these reforms were implemented and estimate the actual impact of these reforms to the extent possible – as a preliminary assessment"* and therefore, they revisited their preliminary reform impacts for bodily injury and accident benefits. Their early assessment of the actual impact of the reform is estimated at -4.7% on bodily injury loss cost and +16.0% on accident benefits loss cost (see the charts on the following pages).

[1] GISA published ULAE factors have been used.

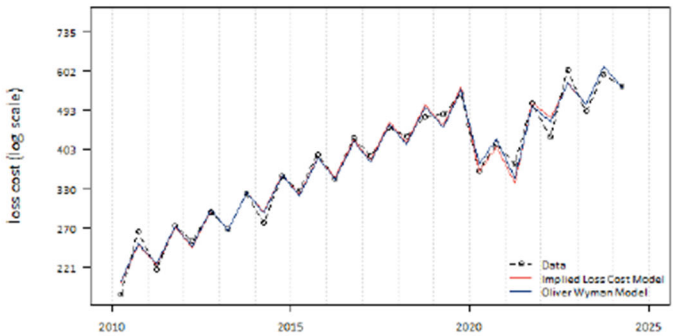
Figure 13: Bodily Injury - Fitted Frequency, Severity and Loss Cost



Parameter	Coefficient	p.value	Adj.R2
Trend	0.005	0.246	0.879
Mobility	0.015	0	
Seasonality	0.063	0.008	
New Normal	-0.245	0.001	
2020 Reform Scalar	-0.066	0.241	
Trend Rate	+0.5%		

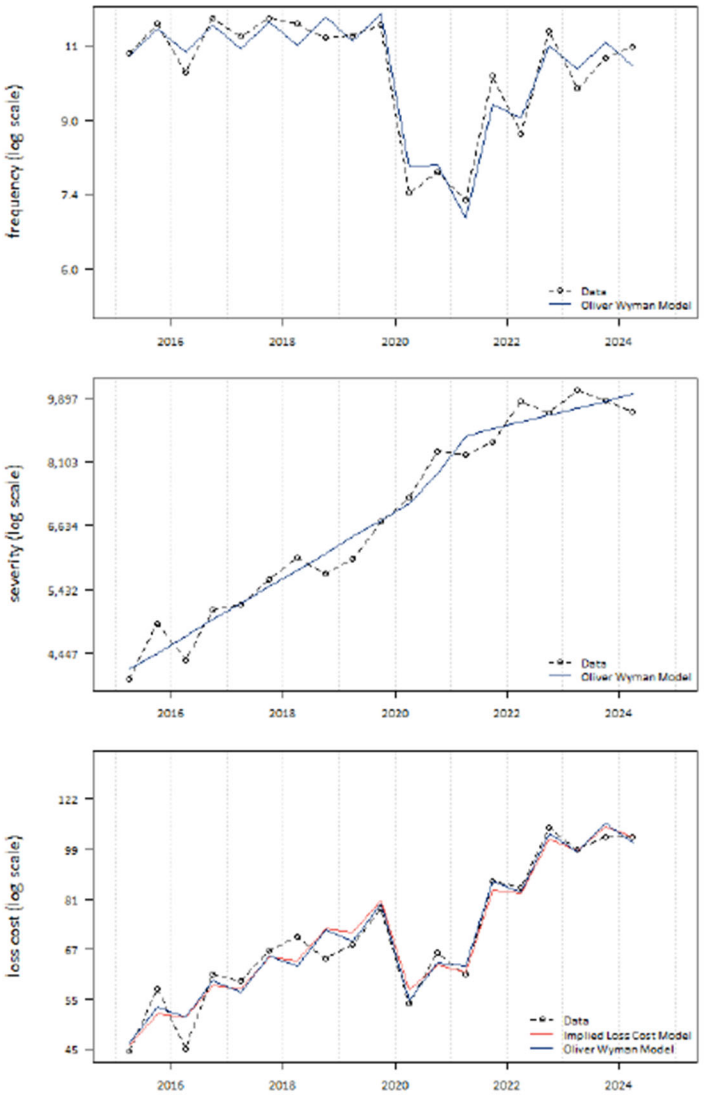


Parameter	Coefficient	p.value	Adj.R2
Trend	0.084	0	0.986
Seasonality	0.084	0	
2020 Reform Scalar	0.061	0.054	
Trend Rate	+8.7%		



Parameter	Coefficient	p.value	Adj.R2
Trend	0.087	0	0.978
Mobility	0.012	0	
Seasonality	0.149	0	
New Normal	-0.179	0.002	
2020 Reform Scalar	-0.049	0.262	
Trend Rate	+9.1%		

Figure 17: Accident Benefits Total - Fitted Frequency, Severity and Loss Cost



Parameter	Coefficient	p.value	Adj.R2
Trend	0.01	0.295	0.902
Mobility	0.016	0	
Seasonality	0.069	0.01	
New Normal	-0.114	0.075	
Trend Rate	+1.0%		

Parameter	Coefficient	p.value	Adj.R2
Trend	0.104	0	0.965
2020 Reform Scalar	0.148	0.03	
2020 Trend Change	-0.06	0.018	
Trend Rate (Period 1)	+10.9%		
Trend Rate (Period 2)	+4.5%		

Parameter	Coefficient	p.value	Adj.R2
Trend	0.102	0	0.933
Mobility	0.015	0	
Seasonality	0.096	0.017	
New Normal	-0.104	0.381	
2020 Reform Scalar	0.217	0.061	
2020 Trend Change	-0.063	0.335	
Trend Rate (Period 1)	+10.8%		
Trend Rate (Period 2)	+4.1%		

We agree with OW's statement (page 4): "*The timing of the reform introduction occurring during the pandemic creates additional challenges to isolating early estimates of the actual claims cost impact of the reforms"* and we believe the current approach to estimate the reform impact on claims is reasonable. With more data emerging, more accurate impacts of COVID-19, 2020 reform, and post pandemic claims level could be estimated but as mentioned above, it will always be difficult to separate the impacts of the pandemic and the 2020 reform due to timing of the two.

During our 2024H1 trend analysis, we tested 2020 reform impacts on BI and AccBen severity models at 2020H2/2021H1 and the scalars for reform impacts on severity at 2020H2 and 2021H1 were not statistically significant for both BI and AccBen severity models.

The OW severity model and loss cost model for BI and loss cost model for AccBen also indicated the scalars for 2020 reforms were not statistically significant at 5% p-value level as shown above.

However, the FA selected frequency models for BI and AccBen indicated the scalar at 2020H1/ 2021H2 / 2022H1, which may capture some reform impacts, were statistically significant, but we are unable to separate COVID-19 impact and reform impact.

We believe the reform should mainly affect severity and the FA selected severity models indicated reform impacts were not statistically significant. As a result, we estimated that the reform impact was 0% based on the data as of June 31, 2024. The FA selected frequency and severity models for BI and AccBen are provided below.

Alberta Industry PPV 2024H1 Trends – FA selected BI models

FITTED TREND STRUCTURE REGRESSION STATISTICS - Frequency

Multiple R	R^2	Adjusted R^2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	# parameters p
0.9636	**0.9285**	**0.9203**	0.0489	40	-	5

Runs-Test Result: 0.4932 RESIDUALS RUNS RANDOM ; residuals normal

parameters with p-value >5% 0 (intercept specifically not included)

	Coefficients	S.E.	t-Stat	p-value	C.I. 95% Lower	C.I. 95% Upper	Selected Coeff.
	1	2					
Intercept	1.985	0.024	83.398	0.0%	1.936	2.033	1.985
Season	0.061	0.016	3.947	0.0%	0.030	0.093	0.061
All Years	-	-	-	n/a	-	-	-
Scalar 1	(0.179)	0.024	(7.477)	0.0%	(0.228)	(0.130)	(0.179)
Trend 1	-	-	-	n/a	-	-	-
Scalar 2	(0.393)	0.030	(13.129)	0.0%	(0.454)	(0.332)	(0.393)
Trend 2	-	-	-	n/a	-	-	-
Scalar 3	0.107	0.035	3.084	0.4%	0.037	0.177	0.107
Trend 3	-	-	-	n/a	-	-	-
Scalar 4	-	-	-	n/a	-	-	-
Trend 4	-	-	-	n/a	-	-	-

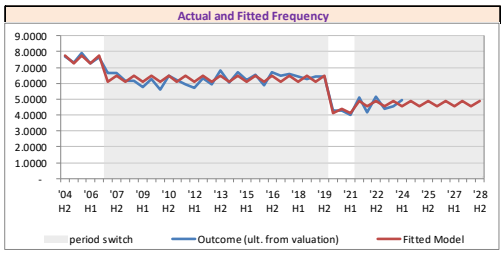
FITTED TREND STRUCTURE REGRESSION STATISTICS - Severity

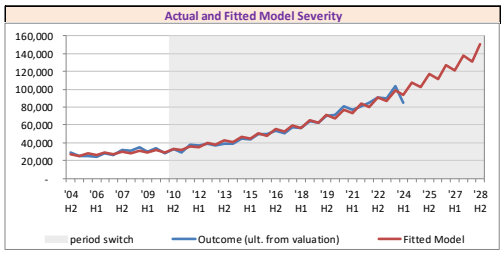
Multiple R	R^2	Adjusted R^2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	# parameters p
0.9909	**0.9819**	**0.9804**	0.0605	40	-	4

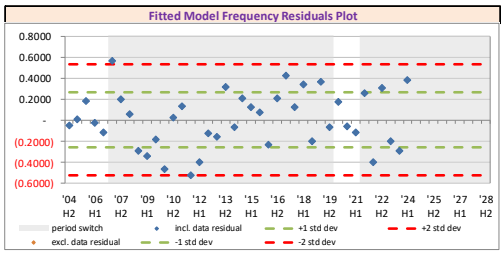
Runs-Test Result: 1.2701 RESIDUALS RUNS RANDOM ; residuals normal

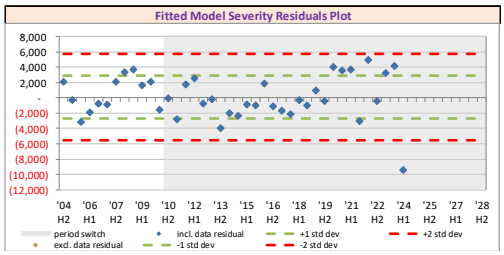
parameters with p-value >5% 0 (intercept specifically not included)

	Coefficients	S.E.	t-Stat	p-value	C.I. 95% Lower	C.I. 95% Upper	Selected Coeff.
	1	2					
Intercept	(53.273)	13.987	(3.809)	0.1%	(81.639)	(24.907)	(53.273)
Season	0.093	0.019	4.841	0.0%	0.054	0.132	0.093
All Years	0.032	0.007	4.541	0.0%	0.017	0.046	0.032
Scalar 1	-	-	-	n/a	-	-	-
Trend 1	0.052	0.009	6.028	0.0%	0.034	0.069	0.052
Scalar 2	-	-	-	n/a	-	-	-
Trend 2	-	-	-	n/a	-	-	-
Scalar 3	-	-	-	n/a	-	-	-
Trend 3	-	-	-	n/a	-	-	-
Scalar 4	-	-	-	n/a	-	-	-
Trend 4	-	-	-	n/a	-	-	-









For BI frequency model, Scalar 1 represented level change at 2007H1, Scalar 2 represented level change at 2020H1, and Scalar 3 represented level change at 2021H2; no Scalar change for BI severity model.

Alberta Industry PPV 2024H1 Trends – FA selected AccBen models

FITTED TREND STRUCTURE REGRESSION STATISTICS - Frequency

Multiple R	R^2	Adjusted R^2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	# parameters p
0.9046	0.8184	0.7917	0.0617	40	-	6

Runs-Test Result: 0.0997 RESIDUALS RUNS RANDOM ; residuals normal

parameters with p-value >5%: 0 (intercept specifically not included)

	Coefficients 1	S.E. 2	t-Stat	p-value	C.I. 95% Lower	C.I. 95% Upper	Selected Coeff.
Intercept	(21.437)	7.578	(2.829)	0.8%	(36.837)	(6.037)	(21.437)
Season	0.085	0.020	4.333	0.0%	0.045	0.125	0.085
All Years	0.012	0.004	3.153	0.3%	0.004	0.020	0.012
Scalar 1	(0.197)	0.039	(5.080)	0.0%	(0.275)	(0.118)	(0.197)
Trend 1	-	-	-	n/a	-	-	-
Scalar 2	(0.387)	0.042	(9.212)	0.0%	(0.473)	(0.302)	(0.387)
Trend 2	-	-	-	n/a	-	-	-
Scalar 3	0.221	0.042	5.215	0.0%	0.135	0.307	0.221
Trend 3	-	-	-	n/a	-	-	-
Scalar 4	-	-	-	n/a	-	-	-
Trend 4	-	-	-	n/a	-	-	-

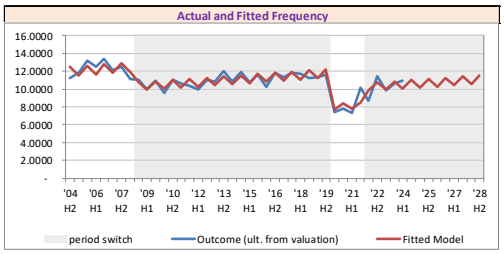
FITTED TREND STRUCTURE REGRESSION STATISTICS - Severity

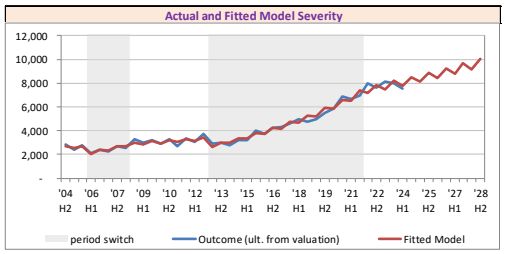
Multiple R	R^2	Adjusted R^2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	# parameters p
0.9907	0.9815	0.9775	0.0607	40	-	8

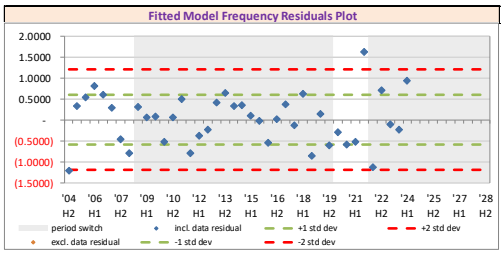
Runs-Test Result: 1.1508 RESIDUALS RUNS RANDOM ; residuals normal

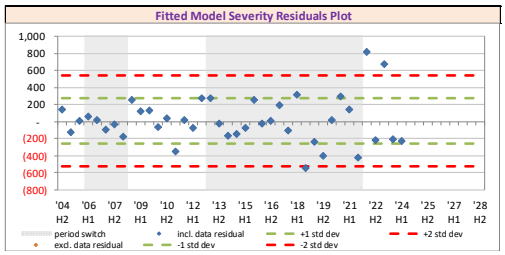
parameters with p-value >5%: 0 (intercept specifically not included)

	Coefficients 1	S.E. 2	t-Stat	p-value	C.I. 95% Lower	C.I. 95% Upper	Selected Coeff.
Intercept	7.842	0.037	209.990	0.0%	7.766	7.918	7.842
Season	0.070	0.019	3.631	0.1%	0.031	0.110	0.070
All Years	-	-	-	n/a	-	-	-
Scalar 1	(0.242)	0.061	(3.931)	0.0%	(0.367)	(0.116)	(0.242)
Trend 1	0.134	0.027	4.893	0.0%	0.078	0.190	0.134
Scalar 2	-	-	-	n/a	-	-	-
Trend 2	(0.103)	0.037	(2.782)	0.9%	(0.178)	(0.028)	(0.103)
Scalar 3	(0.221)	0.048	(4.623)	0.0%	(0.319)	(0.124)	(0.221)
Trend 3	0.081	0.014	5.636	0.0%	0.052	0.110	0.081
Scalar 4	-	-	-	n/a	-	-	-
Trend 4	(0.071)	0.027	(2.577)	1.5%	(0.127)	(0.015)	(0.071)









For AccBen frequency model, Scalar 1 represented level change at 2008H2, Scalar 2 represented level change at 2020H1, and Scalar 3 represented level change at 2022H1.

For AccBen severity model, Scalar 1 represented level change at 2006H1, Scalar 2 at 2008H2 was not statistically significant and was not included in the model, Scalar 3 represented level change at 2013H1, COVID-19 at 2020H1 and reform at 2020H1/2021H1 had no significant impact on AccBen severity.

In 2020, Bill 41 amended the *Insurance Act* of Alberta to change the prejudgment interest (PJI) on general damages from a flat 4% to now having its rate tied to the PJI prescribed by the regulation, which follows changes in bank rates. At the time of the amendment, PJI was 1.5%, dropping over the next two years close to 0%, thus lowering insurer's exposure to PJI. However, in 2023 and 2024 the PJI rate jumped significantly, effectively undoing any benefit Bill 41 provided to insurers regarding PJI. With the rate now subject to the adjustments under the Regulation, high-interest rate environment in recent years maintained by the Bank of Canada results in Bill 41's amendments continuing to cause higher exposure to insurers on PJI for general damages, which is the opposite of what Bill 41 intended. While there have been consecutive interest rate decreases in recent months, the current interest rate is still higher than 1.5% at the time of the amendment. This needs to be monitored closely as it affects various actuarial assumptions.

We agree that rather than having a prescribed benchmark for reform adjustment factor, each insurer should have the ability to determine the appropriate adjustment factor based on emerging data with actuarially sound methods.

4. Post-Pandemic Frequency Level and Combined New Normal Factors

On page 34 of their report, OW states: *"Insurers should consider the degree to which the post-pandemic "new-normal" is expected to impact claim cost during the proposed rate program"*.

OW presents "Combined New Normal Factor" that when applied to historical experience period data, would adjust that experience data for the combination of (1) unwinding the influence of the COVID-19 pandemic, (2) to the cost level under Bill 41 and introduction of DCPD and (3) "new normal" of the post-pandemic era (see summary tables below from OW PPV Report page 82 to 85).

	PPV Combined New Normal Factors - 2024-06			
Accident Semester	BI	PD & DCPD	AccBen	CL
201902	0.729	1.000	0.892	0.642
202001	1.017	1.404	1.263	0.945
202002	1.107	1.497	1.349	1.016
202101	1.252	1.620	1.463	1.112
202102	1.001	1.290	1.158	0.858
202201	0.976	1.256	1.127	0.833
202202	1.000	1.000	1.000	1.000
202301	1.000	1.000	1.000	1.000
202302	1.000	1.000	1.000	1.000
202401	1.000	1.000	1.000	1.000

	PPV Combined New Normal Factors - 2023-12			
Accident Semester	BI	PD & DCPD	AccBen	CL
201901	0.712	1.000	0.859	0.618
201902	0.712	1.000	0.859	0.618
202001	0.985	1.409	1.229	0.910
202002	1.076	1.503	1.314	0.978
202101	1.227	1.628	1.429	1.070
202102	0.987	1.294	1.124	0.826
202201	0.963	1.259	1.093	0.801
202202	1.000	1.000	1.000	1.000
202301	1.000	1.000	1.000	1.000
202302	1.000	1.000	1.000	1.000

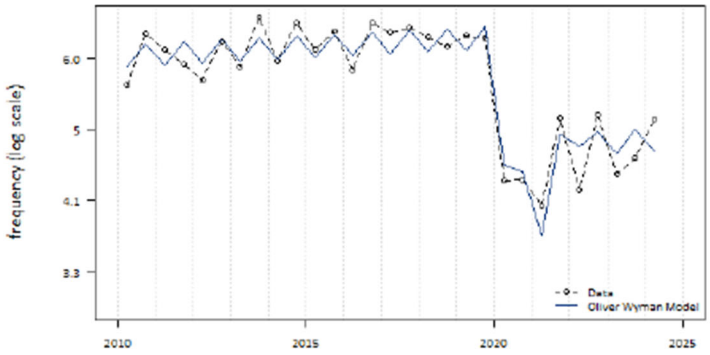
OW has increased the Combined New Normal Factors from the 2024 Annual Review Report to the current 2025 Semi-Annual Review Report (see the table above).

As OW Report provides "Combined New Normal Factors" that reflect the influence of COVID-19, the November 2020 reforms, and the post-pandemic new normal, we would appreciate if OW could provide additional information on how the combined factors were derived based on the selected models outputs, so we can gain more insight on the combined new normal factors and able to determine similar combined new normal factors base on our own selected models and models outputs.

We have tested OW PPV models for BI, PD including DCPD, Accident Benefit, and Collision based on FA dataset to gain more insight on the Combined New Normal Factors.

BI Frequency - OW Figure 13 and model outputs Based on FA's data set - 2010-H1 to 2024-H1 data

Figure 13: Bodily Injury - Fitted Frequency, Severity and Loss Cost



Parameter	Coefficient	p.value	Adj.R2
Trend	0.005	0.246	0.879
Mobility	0.015	0	
Seasonality	0.063	0.008	
New Normal	-0.245	0.001	
2020 Reform Scalar	-0.066	0.241	
Trend Rate	+0.5%		

Model Output – OW PPV BI Frequency Model (with time, seasonality, mobility[2], 2020 Reform Scalar, and New Normal Scalar) applied to FA BI data set - based on 2010-H1 to 2024-H1 data.

FITTED TREND STRUCTURE REGRESSION STATISTICS - Frequency

Multiple R	R^2	Adjusted R^2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	# parameters p
0.9529	0.9079	0.8879	0.0560	29	11	6

Runs-Test Result: 1.3640 RESIDUALS RUNS RANDOM ; residuals normal

parameters with p-value >5%: 2 (intercept specifically not included)

	Coefficients	S.E.	t-Stat	p-value	C.I. 95% Lower	C.I. 95% Upper	Selected Coeff.	
	1	2						
Intercept	(8.327)	8.486	(0.981)	33.7%	(25.882)	9.227	(8.327)	6
Season	0.066	0.021	3.130	0.5%	0.022	0.109	0.066	5
All Years	0.005	0.004	1.193	24.5%	(0.004)	0.014	0.005	4
Scalar 1	0.015	0.002	7.629	0.0%	0.011	0.019	0.015	3
Trend 1	-	-	-	n/a	-	-	-	0
Scalar 2	(0.065)	0.053	(1.226)	23.2%	(0.176)	0.045	(0.065)	2
Trend 2	-	-	-	n/a	-	-	-	0
Scalar 3	(0.251)	0.063	(3.973)	0.1%	(0.382)	(0.120)	(0.251)	1
Trend 3	-	-	-	n/a	-	-	-	0
Scalar 4	-	-	-	n/a	-	-	-	0
Trend 4	-	-	-	n/a	-	-	-	0

SELECTED TREND STRUCTURE REGRESSION STATISTICS - Frequency

Multiple R	R^2	Adjusted R^2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	# parameters p
0.9529	0.9079	0.8879	0.0560	29	11	6

Runs-Test Result: 1.3640 RESIDUALS RUNS RANDOM ; residuals normal

	Fitted Annual	Previous Selected	Selected Annual	selected = fitted
past	0.5%	0.0%	0.5%	'22H1 => last period in "past"
future	0.5%	0.0%	0.5%	

Cumulative Trends (summed coefficients)	fitted coeff	S.E.	t-Stat	p-value	C.I. 95% Lower	C.I. 95% Upper	Selected Coeff.
All Yrs or AY	0.005	0.004	1.193	24.5%	(0.004)	0.014	0.005
AY+1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AY+1+2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AY+1+2+3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AY+1+2+3+4	n/a	n/a	n/a	n/a	n/a	n/a	n/a

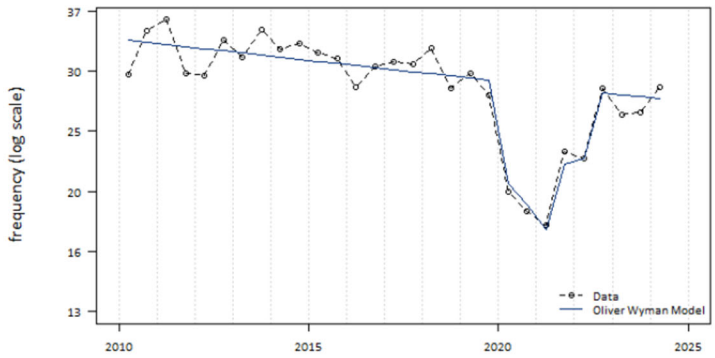
The model outputs based on FA BI data set are consistent with the results from OW report figure 13 (see above), where FA output All Years represents OW Trend, Scalar 1 represents OW Mobility, Scalar 2 represents OW 2020 Reform Scalar, and Scalar 3 represents OW New Normal. The OW BI frequency model is not statistically valid as Trend and 2020 Reform Scalar parameters are not statistically significant at 5% p-value level.

With OW model coefficients of 0.015 for Mobility and mobility variables, -0.066 for 2020 Reform Scalar, and -0.245 for New Normal, we would appreciate more information on how the Combined New Normal Factors are derived to better assess their reasonability.

[2] Include mobility variables of -22.16, -26.32, -31.49, -16.63, and -14.90 for 2020-H1 to 2022-H1 from OW report.

PD including DCPD Frequency - OW Figure 15 and model outputs Based on FA's data set - 2010-H1 to 2024-H1 data

Figure 15: Total PD - Fitted Frequency, Severity and Loss Cost



Parameter	Coefficient	p.value	Adj.R2
Trend	-0.014	0	0.902
Mobility	0.015	0	
Trend Rate	-1.4%		

Model Output – OW PPV PD and DCPD Frequency Model (with time, and mobility[3]) applied to FA PD+DCPD data set - based on 2010-H1 to 2024-H1 data.

FITTED TREND STRUCTURE REGRESSION STATISTICS - Frequency

Multiple R	R^2	Adjusted R^2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	# parameters p
0.9525	**0.9073**	**0.9002**	0.0567	29	11	3

Runs-Test Result: 1.9566 RESIDUALS RUNS RANDOM ; residuals normal

parameters with p-value >5% **0** (intercept specifically not included)

	Coefficients	S.E.	t-Stat	p-value	C.I. 95% Lower	C.I. 95% Upper	Selected Coeff.	
	1	2						
Intercept	35.188	5.559	6.331	0.0%	23.763	46.614	35.188	3
Season	-	-	-	n/a	-	-	-	0
All Years	(0.016)	0.003	(5.717)	0.0%	(0.021)	(0.010)	(0.016)	2
Scalar 1	0.015	0.001	11.283	0.0%	0.012	0.017	0.015	1
Trend 1	-	-	-	n/a	-	-	-	0
Scalar 2	-	-	-	n/a	-	-	-	0
Trend 2	-	-	-	n/a	-	-	-	0
Scalar 3	-	-	-	n/a	-	-	-	0
Trend 3	-	-	-	n/a	-	-	-	0
Scalar 4	-	-	-	n/a	-	-	-	0
Trend 4	-	-	-	n/a	-	-	-	0

SELECTED TREND STRUCTURE REGRESSION STATISTICS - Frequency

Multiple R	R^2	Adjusted R^2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	# parameters p
0.9525	**0.9073**	**0.9002**	0.0567	29	11	3

Runs-Test Result: 1.9566 RESIDUALS RUNS RANDOM ; residuals normal

	Fitted Annual	Previous Selected	Selected Annual	selected = fitted		
past	(1.6%)		(1.6%)		'22H1	=> last period in "past"
future	(1.6%)		(1.6%)			

Cumulative Trends (summed coefficients)	fitted coeff	S.E.	t-Stat	p-value	C.I. 95% Lower	C.I. 95% Upper	Selected Coeff.
All Yrs or AY	(0.016)	0.003	(5.717)	0.0%	(0.021)	(0.010)	(0.016)
AY+1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AY+1+2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AY+1+2+3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AY+1+2+3+4	n/a	n/a	n/a	n/a	n/a	n/a	n/a

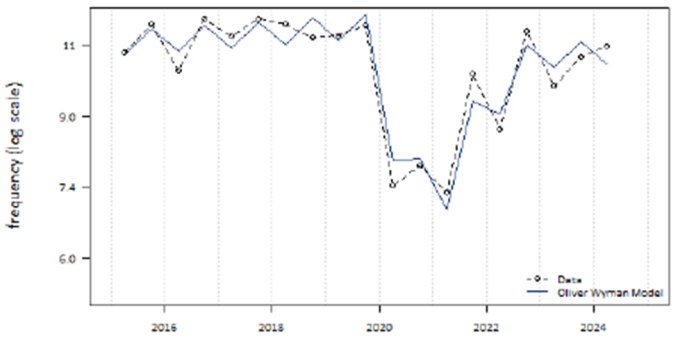
The frequency model outputs based on FA PD+DCPD data set are consistent with the results from OW report figure 15 (see above), where Scalar 1 represents OW Mobility. The OW PD + DCPD frequency model is statistically valid as all the parameters are statistically significant at 5% p-value level.

With OW model coefficients of 0.015 for Mobility and mobility variables, we would appreciate more information on how the Combined New Normal Factors are derived to better assess their reasonability.

[3] Include mobility variables of -22.16, -26.32, -31.49, -16.63, and -14.90 for 2020-H1 to 2022-H1 from OW report.

Accident Benefit Frequency - OW Figure 17 and model outputs based on FA's data set - 2015-H1 to 2024-H1 data

Figure 17: Accident Benefits Total - Fitted Frequency, Severity and Loss Cost



Parameter	Coefficient	p.value	Adj.R2
Trend	0.01	0.295	0.902
Mobility	0.016	0	
Seasonality	0.069	0.01	
New Normal	-0.114	0.075	
Trend Rate	+1.0%		

Model Output – OW PPV AccBen Frequency Model (with time, seasonality, mobility[4], and New Normal Scalar) applied to FA AccBen data set - based on 2015-H1 to 2024-H1 data

FITTED TREND STRUCTURE REGRESSION STATISTICS - Frequency

Multiple R	R^2	Adjusted R^2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	# parameters p
0.9610	0.9235	0.9016	0.0505	19	21	5

Runs-Test Result: 2.6615 RESIDUALS RUNS NOT RANDOM ; residuals normal

parameters with p-value >5%: 2 (intercept specifically not included)

	Coefficients	S.E.	t-Stat	p-value	C.I. 95% Lower	C.I. 95% Upper	Selected Coeff.	
	1	2						
Intercept	(17.136)	17.837	(0.961)	35.3%	(55.393)	21.120	(17.136)	5
Season	0.069	0.023	2.968	1.0%	0.019	0.119	0.069	4
All Years	0.010	0.009	1.095	29.2%	(0.009)	0.029	0.010	3
Scalar 1	0.016	0.002	8.997	0.0%	0.012	0.019	0.016	2
Trend 1	-	-	-	n/a	-	-	-	0
Scalar 2	(0.115)	0.059	(1.927)	7.4%	(0.242)	0.013	(0.115)	1
Trend 2	-	-	-	n/a	-	-	-	0
Scalar 3	-	-	-	n/a	-	-	-	0
Trend 3	-	-	-	n/a	-	-	-	0
Scalar 4	-	-	-	n/a	-	-	-	0
Trend 4	-	-	-	n/a	-	-	-	0

SELECTED TREND STRUCTURE REGRESSION STATISTICS - Frequency

Multiple R	R^2	Adjusted R^2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	# parameters p
0.9610	0.9235	0.9016	0.0505	19	21	5

Runs-Test Result: 2.6615 RESIDUALS RUNS NOT RANDOM ; residuals normal

	Fitted Annual	Previous Selected	Selected Annual	selected = fitted
past	1.0%		1.0%	'22H1 => last period in "past"
future	1.0%		1.0%	

Cumulative Trends (summed coefficients)	fitted coeff	S.E.	t-Stat	p-value	C.I. 95% Lower	C.I. 95% Upper	Selected Coeff.
All Yrs or AY	0.010	0.009	1.095	29.2%	(0.009)	0.029	0.010
AY+1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AY+1+2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AY+1+2+3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AY+1+2+3+4	n/a	n/a	n/a	n/a	n/a	n/a	n/a

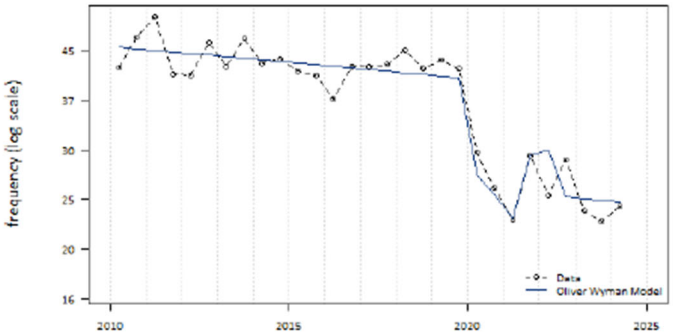
The model outputs based on FA AccBen data set are consistent with the results from OW report figure 17 (see above), where Scalar 1 represents OW Mobility, and Scalar 2 represents OW New Normal. The OW AccBen frequency model is not statistically valid as the Trend and New Normal parameters are not statistically significant at 5% p-value level.

With OW model coefficients of 0.016 for Mobility and mobility variables, and -0.114 for New Normal, we would appreciate more information on how the Combined New Normal Factors are derived to better assess their reasonability.

[4] Include mobility variables of -22.16, -26.32, -31.49, -16.63, and -14.90 for 2020-H1 to 2022-H1 from OW report.

Collision Frequency - OW Figure 19 and model outputs based on FA's data set - 2010-H1 to 2024-H1 data

Figure 19: Collision - Fitted Frequency, Severity and Loss Cost



Parameter	Coefficient	p.value	Adj.R2
Trend	-0.013	0.038	0.901
Mobility	0.017	0	
New Normal	-0.444	0	
Trend Rate	-1.3%		

Model Output – OW PPV CL Frequency Model (with time, mobility[5], and New Normal Scalar) applied to FA CL data set - based on 2010-H1 to 2024-H1 data

FITTED TREND STRUCTURE REGRESSION STATISTICS - Frequency

Multiple R	R^2	Adjusted R^2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	# parameters p
0.9549	0.9118	0.9012	0.0810	29	11	4

Runs-Test Result: 0.7739 RESIDUALS RUNS RANDOM ; residuals normal

parameters with p-value >5% 0 (intercept specifically not included)

	Coefficients	S.E.	t-Stat	p-value	C.I. Lower	95% Upper	Selected Coeff.	
	1	2						
Intercept	29.631	11.854	2.500	1.9%	5.218	54.044	29.631	4
Season	-	-	-	n/a	-	-	-	0
All Years	(0.013)	0.006	(2.183)	3.9%	(0.025)	(0.001)	(0.013)	3
Scalar 1	0.017	0.002	7.676	0.0%	0.013	0.022	0.017	2
Trend 1	-	-	-	n/a	-	-	-	0
Scalar 2	(0.445)	0.066	(6.725)	0.0%	(0.582)	(0.309)	(0.445)	1
Trend 2	-	-	-	n/a	-	-	-	0
Scalar 3	-	-	-	n/a	-	-	-	0
Trend 3	-	-	-	n/a	-	-	-	0
Scalar 4	-	-	-	n/a	-	-	-	0
Trend 4	-	-	-	n/a	-	-	-	0

SELECTED TREND STRUCTURE REGRESSION STATISTICS - Frequency

Multiple R	R^2	Adjusted R^2	S.E. of Estimate	# of Obs. n	# of Obs. Excluded	# parameters p
0.9549	0.9118	0.9012	0.0810	29	11	4

Runs-Test Result: 0.7739 RESIDUALS RUNS RANDOM ; residuals normal

	Fitted Annual	Previous Selected	Selected Annual	selected = fitted
past	(1.3%)		(1.3%)	'22H1 => last period in "past"
future	(1.3%)		(1.3%)	

Cumulative Trends (summed coefficients)	fitted coeff	S.E.	t-Stat	p-value	C.I. Lower	95% Upper	Selected Coeff.
All Yrs or AY	(0.013)	0.006	(2.183)	3.9%	(0.025)	(0.001)	(0.013)
AY+1	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AY+1+2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AY+1+2+3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AY+1+2+3+4	n/a	n/a	n/a	n/a	n/a	n/a	n/a

The model outputs based on FA CL data set are consistent with the results from OW report figure 19 (see above), where Scalar 1 represents OW Mobility, and Scalar 2 represent OW New Normal. The OW CL frequency model is statistically valid as all parameters are statistically significant at 5% p-value level.

With OW model coefficients of 0.017 for Mobility and mobility variables, and -0.444 for New Normal, we would appreciate more information on how the Combined New Normal Factors are derived to better assess their reasonability.

As these Combined New Normal Factors have changed from the 2024 Annual Review to the current 2025 Semi-Annual Review, it would have been helpful to have a bridging analysis from using those Factors in the last Annual Review to using those factors in the current Semi-Annual Review to evaluate the volatility and appropriateness of these Combined New Normal Factors.

While we agree that the adjustment factors are necessary to account for the uncertainties as OW described, it is difficult to evaluate the reasonableness of these Combined New Normal Factors without the analysis behind the derivation of these factors.

[5] Include mobility variables of -22.16, -26.32, -31.49, -16.63, and -14.90 for 2020-H1 to 2022-H1 from 2023 OW report.

On page 27, OW states: "*Therefore, we include a mobility parameter for the observations in our regression models for the coverages that experienced a significant reduction in claims frequency coincident with COVID-19 pandemic*." We continue to question the usage of the mobility parameter like our past written submissions.

We would appreciate it if OW provided more detailed information associated with the calculation of the Combined New Normal Factors and how they interact with mobility parameters

5. Selection of Trends Rates and Uncertainties

OW has increased loss cost trend selections from benchmarks as at 2023-12 to the current 2025 Semi-Annual Review as at 2024-06. The table below shows the OW selected loss cost trends as at 2024-06 and the benchmark loss cost trends as at 2023-12. You will notice the significant increase in future loss cost trends for PD/DCPD and Collision.

	Alberta PPV Loss Cost Trend - OW as at:2024-06		Alberta PPV Loss Cost Trend - OW as at:2023-12		Alberta PPV Loss Cost Trend Difference between OW and OW	
Coverage	past trend	future trend	past trend	future trend	past trend	future trend
BI	**9.1%**	**9.1%**	**8.7%**	**8.7%**	**0.4%**	**0.4%**
PD/DCPD	**1.5%**	**10.3%**	**1.6%**	**1.6%**	**(0.1%)**	**8.7%**
AccBen (indivis)	**12.0%**	**5.5%**	**13.2%**	**4.1%**	**(1.2%)**	**1.4%**
UM	**4.9%**	**4.9%**	**4.4%**	**4.4%**	**0.5%**	**0.5%**
CL	**2.5%**	**16.7%**	**2.4%**	**2.4%**	**0.1%**	**14.3%**
CM	**5.1%**	**5.1%**	**5.1%**	**5.1%**	**-**	**-**
SP	**4.9%**	**4.9%**	**3.7%**	**3.7%**	**1.2%**	**1.2%**
AP	**3.2%**	**3.2%**	**2.7%**	**2.7%**	**0.5%**	**0.5%**

Note: the past and future trends cut-off date may be different.

We agree with OW statement that "*The recent claim experience is exceptional due to the COVID-19 pandemic, the introduction of reforms in the last quarter of 2020, and the recent changes in inflation. Uncertainty surrounding future inflation adds uncertainty around selecting an appropriate future trend rate*."

Since we have completed our own trend analysis using PPV Industry Experience as of June 30, 2024, we would like to provide the Board with a summary of our selections of the past and future trends and how they compared with the preliminary selections from the OW PPV Report.

Please note that our areas of focus detailed above can partially explain the differences between the two sets of selections.

Alberta Industry PPV Trends as at June 30, 2024[6]

Coverage	Alberta PPV Loss Cost Trend - FA as at:2024-06		Alberta PPV Loss Cost Trend - OW as at:2024-06		Alberta PPV Loss Cost Trend Difference between FA and OW	
	past trend	future Trend	past trend	future Trend	past trend	future Trend
BI	**8.7%**	**8.7%**	**9.1%**	**9.1%**	**(0.4%)**	**(0.4%)**
PD	**2.2%**	**2.2%**	**1.5%**	**10.3%**	**0.7%**	**(8.1%)**
DCPD	**2.2%**	**2.2%**	**1.5%**	**10.3%**	**0.7%**	**(8.1%)**
AccBen (indivis)	**5.5%**	**5.5%**	**12.0%**	**5.5%**	**(6.5%)**	**-**
UM	**-**	**-**	**4.9%**	**4.9%**	**(4.9%)**	**(4.9%)**
CL	**3.2%**	**3.2%**	**2.5%**	**16.7%**	**0.7%**	**(13.5%)**
CM	**4.1%**	**4.1%**	**5.1%**	**5.1%**	**(1.0%)**	**(1.0%)**
SP	**5.1%**	**5.1%**	**4.9%**	**4.9%**	**0.2%**	**0.2%**
AP	**1.5%**	**1.5%**	**3.2%**	**3.2%**	**(1.7%)**	**(1.7%)**

Note: the past and future trends cut-off date between FA and OW may be different.

The OW PPV preliminary future loss cost trends are higher than the loss cost trends estimated for indemnity as per FA's own modeling of the Alberta industry experience as at June 30, 2024 for all coverages, except SP (see table above).

The significant increase of OW future trends for PD including DCPD from the 2024 Annual Review to the 2025 Semi-Annual Review is largely driven by removing their Inflation Scalar at 2021H2 and adding a 2021 Trend Change at 2021H2 in the severity model, where the 2021H2 period coincided with the rise in inflation period.

The significant increase of OW future trends for CL from the 2024 Annual Review to the 2025 Semi-Annual Review is largely driven by removing their Inflation Scalar at 2020H2 and adding a 2021 Trend Change at 2021H2 in the severity model, where the 2021H2 period coincided with the rise in inflation period.

In our Alberta PPV 2024H1 trend analysis, we tested scalar and trend at 2021H2/2022H1 that coincides with the rise of inflation for PD/DCPD and CL.

- FA selected PD severity model indicated both scalar and trend at 2021H1/2021H2 were not statistically significant;
- FA selected CL severity model indicated scalar at 2021H2 was statistically significant but the trend at 2021H2 was not statistically significant.

As described on page 26 of the OW's Report, "*The purpose of a scalar or level change parameter is to isolate and remove the impact of a one-time shift in claims cost (e.g. due to a reform or other event) so that the underlying claim cost trend can be identified*."

We believe the significant rise in inflation may not continue and we have seen severity settling within a relatively closer range in recent data points. Therefore, we believe including a scalar to account for the spike in inflation as in the 2024 Annual Review would be a more appropriate approach than embedding the impact as trend as shown in the 2025 Semi-Annual Review.

[6] OW PPV Report indicates trend rate begins July 1, 2021 coincident with the rise in inflation for PD (+10.3%), DCPD (+10.3%), and Collision (+16.7%).

We estimate that the OW preliminary future loss cost trend selections at the coverage level will translate to an overall loss cost future trend rate of 9.6% for private passenger vehicles, while the FA estimated overall loss cost future trend rate is 5.7% for private passenger vehicles.

We agree with OW's loss cost trends selections that have increased for the most coverages. Especially with the potential for new US tariffs that has added another uncertainty to the future loss cost, the future insurance claims cost may increase further. Lately, we have seen many inputs from industry leaders on the potential impact of the US tariffs and particularly[7]:

- Insurance costs have been a key factor in inflation.
- President Donald Trump has proposed tariffs on auto imports, which could raise vehicle prices amid ongoing plans for tariffs on steel, aluminum and trade with Canada and Mexico. Economists and insurance industry representatives warn that these measures could also lead to higher auto insurance costs, according to a report.
- Experts suggest this would impact insurance premiums, as the cost of replacing damaged vehicles and parts, many of which are imported, affects insurance pricing.

Finally, we appreciate the OW Report's mention regarding heightened uncertainty due to COVID 19, Bill 41 Reforms and rising inflation as well as OW's recommendation that on OW PPV Report page 4:

"*…when selecting the future trend rate, we suggest consideration of:*

- *The correlation of the historical CPI index with historical claim cost changes; and any recent changes to the CPI – stabilizing, rising or falling.*
- *The actual change in claim costs data that has emerged during the recent high inflationary period.*
- *The anticipated future CPI during the rating program period given the Federal Government's actions to curb inflation through higher interest rates.*
- *The impact of economic conditions and general high inflation on vehicle usages."*

As such, the projection of future rate needs is subject to considerable uncertainty and the AIRB should consider this when reviewing individual rate filings.

Any questions related to this submission may be directed to Philippe Gosselin by email at pgosselin@facilityassociation.com or by phone at 416-644-4968.

[7] It comes from Insurance Business News "What impact might Trump's proposed auto import tariff have on insurance costs?", https://www.insurancebusinessmag.com/us/news/auto-motor/what-impact-might-trumps-proposed-auto-import-tariff-have-on-insurance-costs-525917.aspx