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February 19, 2021

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

Attention: Ms. Charlene Butler, MBA, BSc, BComm, Chair

RE: FA Written Submission in regards to the AIRB Draft Review of 2020-H1 Industry PPV Experience

Dear Ms. Butler,

Facility Association has reviewed the draft Oliver Wyman ("OW") report entitled "*Semi-Annual Review of Industry Experience – Preliminary Report as of June 30, 2020 Private Passenger Vehicles*" dated January 26, 2021 ("OW Report").

We are pleased to provide our attached written submission for your consideration. Our comments are focused on the availability of automobile insurance in the voluntary market in Alberta, providing consumers choice both in terms of insurance provider and choice of the type and amount of coverage available[1]. We believe this dovetail with the Alberta Automobile Insurance Rate Board (AIRB) vision of fostering an efficient and effective automobile insurance market with fair and predictable rates.

We continue to be concerned with the potential availability issues in Alberta at the current time. Except for 2020 (mainly due to the impact of COVID-19), the OW estimates of PPV loss ratios (indemnity, ALAE, and ULAE) have been improving (marginally) from their accident year 2016 peak. They remain well above the 65% level we estimate would be consistent with the proposed benchmarks as per the OW Report. We estimate that the OW future trend selections at the coverage level will translate to an overall loss cost future trend rate over 4.2% for private passenger vehicles.

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, as stated in several passages of the OW Report.

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[1]Consumers in Alberta 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 only 0.1% of individually-rated private passenger vehicles were insured for the required minimum third party liability limit, according to 2019 data found in GISA industry data. Further, 74% purchased protection for their vehicle against collision/upset, and 86% 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 light of this, we believe it is important for the AIRB to use the benchmarking exercises to inform its considerations 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 products, while maintaining fairness to all parties.

In contrast, benchmark assumptions, which 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.

More broadly (i.e. beyond just a focus on reform factors and trends), there are areas of uncertainty where we believe the AIRB should allow flexibility for companies when selecting assumptions supporting their rate 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;
- large loss and catastrophe loss loadings and methodologies;
- operational expenses; and
- profit provisions (both in terms of the metric to use, and the level to target).

As mentioned in our last written submission (*AIRB Annual Review of Industry Experience as at December 2019*), we would like to reiterate our support for the update to the Board guidelines[2] to direct insurers to support their individually selected expected investment income rate. 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 the AIRB on their own merit and the basis of reasonableness, giving proper consideration to prediction uncertainty.

We would also like to acknowledge the publication of simplified filing guidelines for insurers to adopt UBI program in their rating[3]. We believe that UBI is an additional tool to allow the voluntary market in Alberta to be as competitive as it can be.

In considering these areas of potential flexibility, it is important to acknowledge the extent of the current estimated rate deficiency in the province. Based on our interpretation, the proposed benchmark assumptions would indicate target indemnity and claims expense ratios of approximately 65% for PPV. The charts on the next page summarize estimated rate deficiencies, by accident year, relative to this

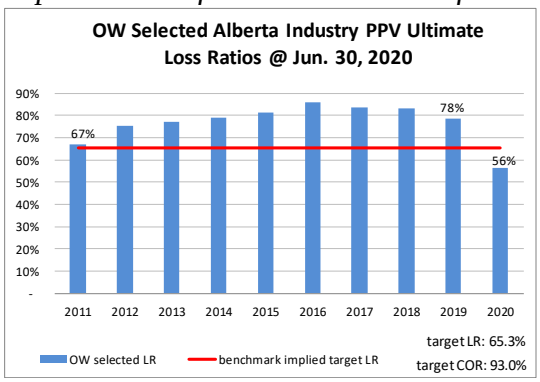
[2] The AIRB filing guideline started in July 2019 to current (July 1, 2020) does not include benchmark for return on investment, only states: "Claim costs must be discounted by the expected rate of return on investment. Insurers have to support the use of investment return if it is lower than the risk free rate published in industry benchmarks."

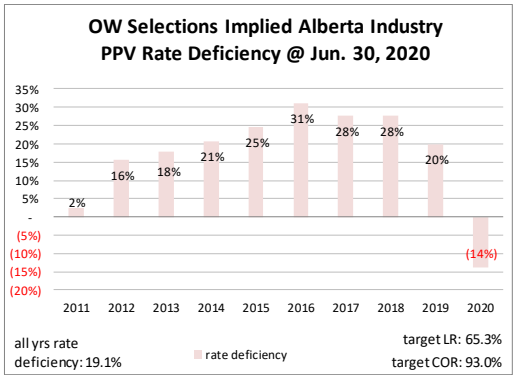
[3] Simplified Filing Guideline for UBI program effective January 1, 2021.

target level. For PPV, this ranges from 2% (2011) to 31% (2016) deficient, with a weighted average rate deficiency of 19% or **greater than $5.6 billion in PPV premium shortfall over that 9.5-year period**[4].

It is important to note that these are not estimates of actual hindsight rate deficiencies, but rather estimated rate deficiency when applying the OW benchmark assumptions per the current preliminary benchmark report. We have not attempted to put claims or premium amounts "on-level" (i.e. adjusted claims for trends/reforms over time; adjusted premium levels for premium trend and rate changes).

*Industry Alberta **PPV** @ June 30, 2020 - OW selected indemnity, ALAE, ULAE LRs and implied rate deficiencies on basis of OW selected current benchmarks*





We would recommend, to help users of the OW Report, that a formal Actual vs. Expected (AvE) emergence column be added to the exhibits in Appendices C and D. This would help users of the OW Report in assessing changes in ultimate from prior analysis against actual emergence.

We would also recommend that a formal discussion of the 2020 reforms and their impacts, especially Bill 41, on the loss and loss cost to be included to aid users in assessing changes of loss cost, and more importantly, changes of the future loss cost.

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

- selection of ultimates and valuation methodologies;
- use of indemnity + ALAE + ULAE vs use of indemnity alone; and
- selection of loss trend rates.

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.

[4] The estimated 2020-1 loss ratio is significant low due to COVID-19 impact, 2020 loss ratio and rate deficiency are based on 2020 first half year experience.

Best regards,

Philippe Gosselin, FCAS, FCIA
VP Actuarial & Acting CRO

General Comments

This document represents the Facility Association ("FA") written submission to the Alberta Automobile Insurance Rate Board ("AIRB") with respect to the Oliver Wyman ("OW") report entitled "*Semi-Annual Review of Industry Experience – Preliminary Report as of June 30, 2020 Private Passenger Vehicles*" dated January 26, 2021 ("OW Report").

Summary of Selection

There are many possible models for frequency, severity, and loss costs for each coverage that are valid and reasonable, and 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. We put forward that differences like this in general should be viewed as both "okay" and healthy in a competitive environment. We can even say that they should be welcomed.

Specifically, we feel it is important for the Board to consider that valid differences in actuarial judgment and opinion can lead to differing selections of ultimates, and differing trend results. Indeed, differing 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 filing insurer to bet 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 market place 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.

We appreciate the opportunity to provide feedback, 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 (counts / amounts) is based on the selection of loss development factors (chain ladder method) using industry data through June 30, 2020.

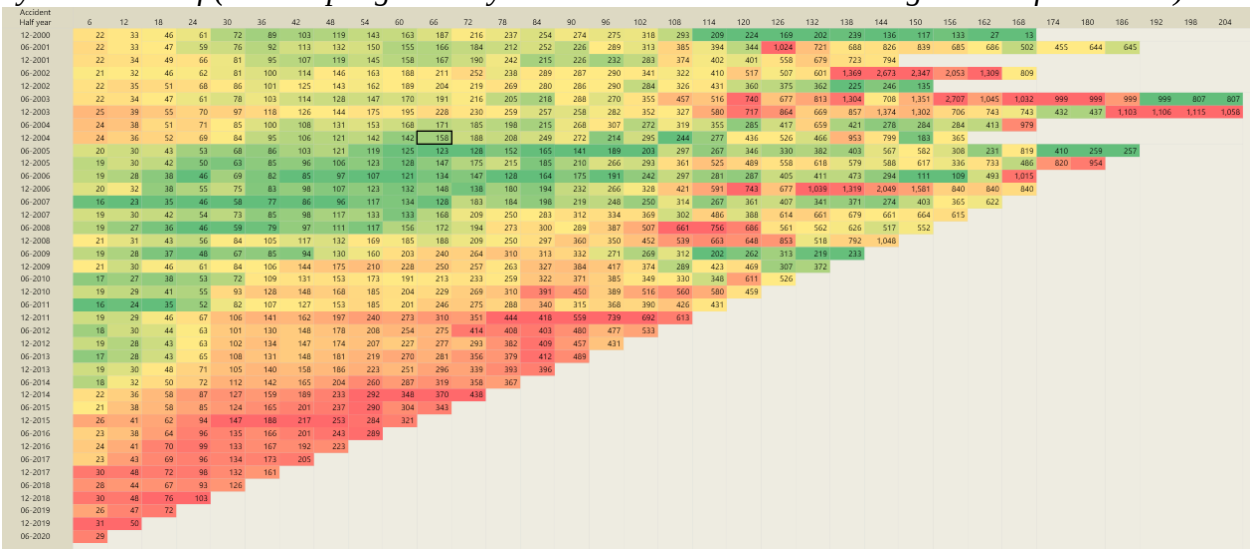
We believe it is uncommon practice in Canada for a valuation actuary to rely on a **single valuation methodology in completing a valuation** as this introduces significant model risk (the risk that the model employed is not appropriate or has significant shortcomings for the experience being projected). 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:

- dependency on the experience, requiring the past to be perfectly predictive of the future – for Alberta experience in particular, there is evidence that claims reporting and development (link ratios) may be changing for some coverages, particularly in the face of increased catastrophic event activity, changes in economic activity, regulatory and potential product reforms, system changes, recent changes in company reserving patterns (changes in case reserve adequacy) and acknowledged data reporting quality concerns;
- highly-leveraged nature – for coverages with long settlement periods (for example, bodily injury), link ratios tend to have significant levels of volatility, particularly at earlier development ages; and
- calendar period (or "settlement period") trends – we believe there is evidence[5] of inflation on a settlement year basis, where all claims settled one year are inflated relative to similar claims settled in the previous year, and the standard link ratio methodology does **not** properly account for such trends

As an illustration, we have included below a "heat map" for the PPV Bodily Injury (BI) indemnity average case reserves. One would notice that the most recent 8-10 diagonals for accident halfs are **showing an increase in the average case reserves**, which would have an impact on valuation estimates based solely on the chain ladder method, and should be taken into consideration.

*Industry Alberta **PPV** **Bodily Injury** at June 30, 2020*
***Average Case Reserve Indemnity Only** per open claim (Amounts in $'000s)*
by accident half (heat map – green to yellow to red indicates increasing amount for column)



Accident Half year	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204
12-2000	22	33	46	61	72	89	103	119	143	163	187	216	237	254	274	275	318	293	209	224	169	202	239	136	117	133	27	13						
06-2001	22	33	47	59	76	92	113	132	150	155	166	184	212	252	226	289	313	385	394	344	1,024	721	688	826	839	685	686	502	455	644	645			
12-2001	22	34	49	66	81	95	107	119	143	158	167	190	242	215	226	232	283	374	402	401	558	679	723	794										
06-2002	21	32	46	62	81	100	114	146	163	188	211	252	238	289	287	290	341	322	410	517	507	601	1,369	2,673	2,347	2,053	1,309	809						
12-2002	22	35	51	68	86	101	125	143	162	189	204	219	269	280	286	290	284	326	431	360	375	362	225	246	135									
06-2003	22	34	47	61	78	103	114	128	147	170	191	216	205	218	288	270	355	457	516	740	677	813	1,304	708	1,351	2,707	1,045	1,032	999	999	999	999	807	807
12-2003	25	39	55	70	97	118	126	144	175	195	228	230	259	257	258	282	352	327	580	717	864	669	857	1,374	1,302	706	743	743	432	437	1,103	1,106	1,115	1,058
06-2004	24	38	51	71	85	100	108	131	153	168	171	185	198	215	268	307	272	319	355	285	417	659	421	278	284	284	413	979						
12-2004	24	36	52	69	84	95	106	121	142	142	158	188	208	249	272	214	295	244	277	436	526	466	953	799	183	365								
06-2005	20	30	43	53	68	86	103	121	119	125	123	128	152	165	141	189	203	297	267	346	330	382	403	567	582	308	231	819	410	259	257			
12-2005	19	30	42	50	63	85	96	106	123	128	147	175	215	185	210	266	293	361	525	489	558	618	579	588	617	336	733	486	820	954				
06-2006	19	28	38	46	69	82	85	97	107	121	134	147	128	164	175	191	242	297	281	287	405	411	473	294	111	109	493	1,015						
12-2006	20	32	38	55	75	83	98	107	123	132	148	138	180	194	232	266	328	421	591	743	677	1,039	1,319	2,049	1,561	840	840	840						
06-2007	16	23	35	46	58	77	86	96	117	134	128	183	184	196	219	248	250	314	267	361	407	341	371	274	403	365	622							
12-2007	19	30	42	54	73	85	98	117	133	133	168	209	250	283	312	334	369	302	486	388	614	661	679	661	664	615								
06-2008	19	27	36	46	58	76	97	111	117	156	172	194	273	300	289	387	507	661	756	686	561	562	626	517	552									
12-2008	21	31	43	56	84	105	117	132	169	185	188	209	250	297	360	350	452	539	663	648	853	518	792	1,048										
06-2009	19	28	37	48	67	85	94	130	160	203	240	264	310	313	332	271	269	312	202	262	313	219	233											
12-2009	21	30	46	61	84	106	144	175	210	228	250	257	263	327	384	417	374	289	423	469	307	372												
06-2010	17	27	38	53	72	109	131	153	173	191	213	233	259	322	371	385	349	330	348	611	526													
12-2010	19	29	41	55	93	128	148	168	185	204	229	269	310	391	450	389	516	560	580	459														
06-2011	16	24	35	52	82	107	127	153	185	201	246	275	288	340	315	368	390	426	431															
12-2011	19	29	46	67	106	141	162	197	240	273	310	351	444	418	559	739	692	613																
06-2012	18	30	44	63	101	130	148	178	208	254	275	414	408	403	480	477	533																	
12-2012	19	28	43	63	102	134	147	174	207	227	277	293	382	409	457	431																		
06-2013	17	28	43	65	108	131	148	181	219	270	281	356	379	412	489																			
12-2013	19	30	48	71	105	140	158	186	223	251	296	339	393	396																				
06-2014	18	32	50	72	112	142	165	204	260	287	319	358	367																					
12-2014	22	36	58	87	127	159	189	233	292	348	370	436																						
06-2015	21	38	58	85	124	165	201	237	290	304	343																							
12-2015	26	41	62	94	147	188	217	253	284	321																								
06-2016	23	38	64	96	135	166	201	243	289																									
12-2016	24	41	70	99	133	167	192	223																										
06-2017	23	43	69	96	134	173	205																											
12-2017	30	48	72	98	132	161																												
06-2018	28	44	67	93	126																													
12-2018	30	48	76	103																														
06-2019	26	47	72																															
12-2019	31	50																																
06-2020	29																																	

[5] FA had been investigating the use of a valuation methodology that incorporates calendar period trends (akin to a GLM methodology). Our review of Alberta PPV data at Dec. 31, 2019 suggested a relatively large statistically significant calendar period trend, for at least some coverages (e.g. our bodily injury models indicate a calendar trend in excess of 6% annualized).

The selection of ultimates is a critical and foundational input of the loss trend analysis. 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**.

We appreciate that the current OW Report includes prior estimates of ultimates as it is beneficial to understand how the historical estimates of ultimates are changing over time (that is, over a longer period of selections, beyond a comparison with the prior semi-annual report). 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. It is relatively easy to provide historical actual vs. predicted levels and we suggest that this be done by focusing on loss costs, showing variances in both dollar terms and percentage terms and suggest that a "triangle" format might be a strong visualization tool to aid in the assessment. It might also be possible to estimate the variances that can be attributed to process variance (that is, randomness inherent in the underlying process), and parameter variance (that is, due to either having a sub-optimal model, or having the optimal model, but having selected a sub-optimal parameterization of the model).

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 basis[6] for loss amounts in their trend analysis.

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

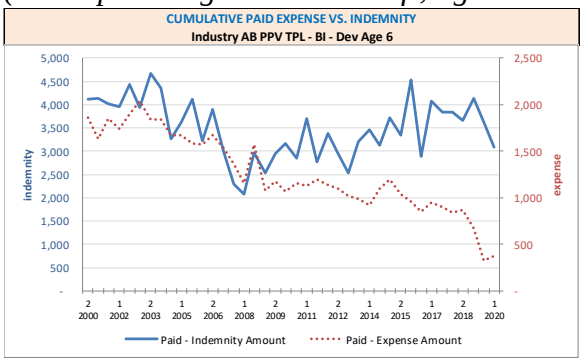
- **ALAE develops differently than indemnity:** If the proportion of ALAE to indemnity is reasonably constant, using aggregate indemnity & ALAE triangles to determine ultimate levels is not problematic. However, if the relation changes (particularly in Alberta PPV, where we've seen impacts related to 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 OW report, the calendar year ULAE ratios are not stable and in recent years, we have seen a range from 8.5% for calendar year 2016 to 10.8% for calendar year 2019. Furthermore, applying these calendar year factors to accident half data at a coverage level

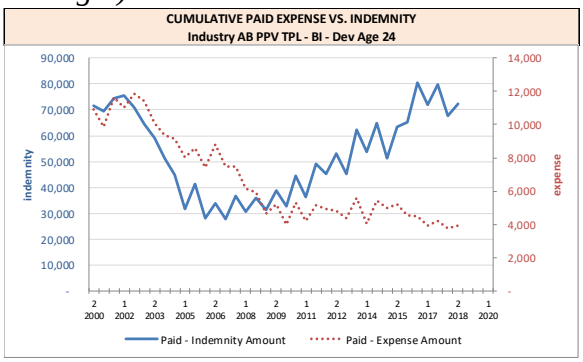
[6] "*Our severity and loss cost estimates include allocated loss adjustment expenses and a provision for the unallocated loss adjustment expenses (ULAE) based on ULAE factors provided by GISA.*" [page 15, OW Report]

will inappropriately apply the factor equally to first and second accident halfs for a given accident year, as well as equally across all coverages.

We also note a continuation of the previous pattern we identified and discussed in prior submissions related to the change in relationship between paid indemnity and paid ALAE for bodily injury. Specifically, we have noted that by 24 months, the total dollar amount of paid ALAE has remained relatively flat at around $5 million per accident half, while paid indemnity has increased annually over the same period (close to 5% annually) (see the charts below).

*Industry Alberta **PPV** **BI** **Paid Indemnity** and **Paid ALAE** at June 30, 2020 by accident half (development age 6 chart on left; age 24 chart on right)*





As per the charts above, for PPV BI at 6 months, indemnity paid started increasing at around 2009 whereas ALAE paid has continued to decrease (paid may be leveling out recently). At 24 months, while ALAE paid may be leveling out at around 2009, indemnity paid continues to increase.

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.

3. selection of loss trend rates

OW Report described reforms, especially 2020 reforms. However, the OW Report does not include assessments of reforms impacts, especially the 2020 reforms impacts in bodily injury and accident benefit claims costs[7]. Considering that the impacts of 2020 reforms are important in the context of predicting future claims costs, we believe users of the OW Report would benefit from having OW comment on how they consider these reforms, if at all (and if not, why not).

[7] FA has applied AIRB bulletin 08-2020 reform impact factors in our bodily injury and accident benefit trend models as a scalar adjustment to estimate the future loss cost under the new automobile insurance system.

The OW Report loss trend analysis excluded the 2020-1 data point for the coverages that have seen a significant change in claim costs as a result of COVID-19, this is consistent with FA's trend analysis.

The OW Report selected loss trends rates are generally NOT within one standard error of the trend estimates for indemnity as per FA's own modeling of the Alberta industry PPV experience as at June 30, 2020. However, they are not consistently higher or lower by coverage (i.e. OW is higher for some coverages, lower for others, where PD is the only coverage were the OW trend is within a standard error of FA's estimate).

Consideration of coverage correlations

In addition to review of linear regression models, FA also considers correlation between coverages and across private passenger and commercial vehicles for like coverages when selecting trend review periods. That is, collision, accident benefits, property damage and bodily injury coverages are all generally triggered by automobile collisions (and private passenger and commercial vehicles share the same roads, weather and economic conditions etc.). As such, we expect to see correlation between and among these coverages for claims frequency, and we consider this in our modeling and in our final model selections. This ensures consistency between the coverages and the related modeled frequencies and helps raises questions (particularly where relationships appear to be changing).

If OW were to formally consider coverage correlations when selecting trend period structures, we believe that it will likely result in more consistent models.

PPV Bodily Injury

OW described their rationale for selecting a future loss cost trend rate (+5.0%) lower than their selected past trend rate (+7.0%) as being in part due to finding "*…some evidence of moderation to the steep increases in the loss costs (e.g., +6.7% loss cost trend rate for the time frame 2015-2 to 2019-2, and even lower for short time frames ending 2019-2)"* as well as mentioning that: "*In addition, Bill 41, introducing changes to the minor injury definition (increasing the percentage of claimants subject to the cap) will likely temper the future loss cost trend*".

In addition, going back through prior OW PPV Reports, we would note that OW has continued to move-the-goal-posts, by effectively changing the period at which they view the future loss cost trend have changed. Indeed, it went from '18H2 with the 2018-12 AIX data set to '19H1 with the 2019-06 AIX data set, to '19H2 with the 2019-12 AIX data set and now to '20H1 with the current 2020-06 AIX data set.

Considering that:

- in Figure 4 of the OW Report, the loss cost trend rate for the shortest time frame (2016-1 to 2019-2) at +6.7% is still significantly higher than OW selected future BI loss cost trend rate of +5.0%.

- the impact of Bill 41 on future loss cost trend seems judgmental as there is no evidence put forward in the report except the mention stated above. This being said, we do recognize that, based on the AIRB Bulletin 08-2020, the impact of Bill 41 on BI loss cost ranges from -18% to -20%, but we believe that this can only be seen as a one-time impact.
- by continually changing the period at which OW view the future loss cost trend have changed basically result in **continually changing the model structure and potentially leads to instability in the trend estimates between analyses**. In general, we believe a better approach would be to explicitly pick a point at which the trend is viewed as having changed, then take that forward. The benefit is that future analysis may provide support for or against the original hypothesis, leading to improved decision making.

we would question whether the selected lower future bodily injury loss cost trend rate (+5.0%) versus the selected past trend rate (+7.0%) for PPV **is supported by proper evidence**.