



ACTLA

Alberta Civil Trial Lawyers Association

Submission to the Alberta Automobile Insurance Rate Board (AIRB)

2020 Annual Review

July 28, 2021



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Executive summary

The Alberta Civil Trial Lawyers Association (ACTLA) appreciates the opportunity to provide a submission to the Alberta Automobile Insurance Rate Board's (AIRB) 2021 annual review process. ACTLA is made up of 600+ members representing thousands of Albertans and legal professionals. We advocate for a strong civil justice system that protects Albertans' rights, provide continuing legal education and professional development, and promote and uphold the rule of law, administration of justice, and the public good.

ACTLA has retained Mr. Craig A. Allen, an independent consulting actuary familiar with the Canadian insurance industry, to conduct a review of the draft Oliver Wyman report and associated historical data. Our submission is comprised of Mr. Allen's technical analysis and this summarizing foreword which provides additional detail and commentary on Mr. Allen's findings from an ACTLA perspective.

With supporting actuarial data included in Mr. Allen's appended findings, ACTLA wishes to highlight the following for the AIRB's consideration in support of our recommendation that there be no rate increases to premiums for basic and additional coverage for private passenger vehicles:

1. Inflation-adjusted bodily injury claims costs and claims costs for all coverages combined have been stable since 2016

Previous analysis from both Oliver Wyman and General Insurance Statistical Agency (GISA) actuaries, Ernst & Young, have indicated a leveling off in per vehicle loss costs for bodily injury coverage beginning in 2016. Contrary to the AIRB bodily injury trend rate for 2021, which continues to project future growth well in excess of the general inflation rate, our analysis shows that inflation adjusted bodily injury claims costs and all coverages claim costs have remained stable since 2016.

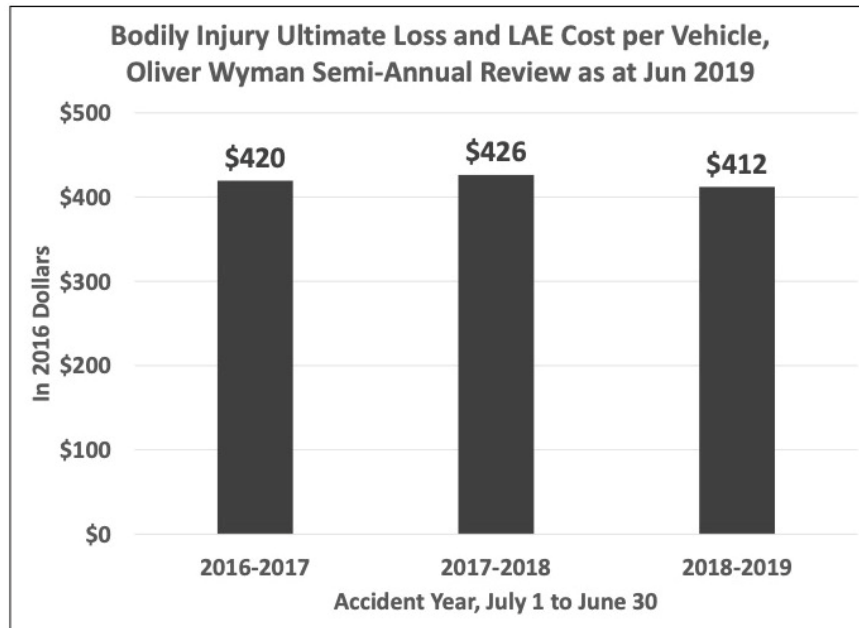
A critical reason for this divergence is the fact Oliver Wyman has not recognized the 2017 changes in claims handling practices outlined in the GISA notes to user and incorporated it into their annual review analysis. Ernst and Young did account for the changes in claim handling practices for their 2019 assessment, but have since opted to discontinue such adjustments. The notes from GISA advise users to exercise caution in using the GISA exhibits:

"Note 12 advises that a large insurer has changed its claims handling practices for BI claims, increasing the rate at which it closes claims, beginning in the first half of 2017 and continuing in later calendar periods."

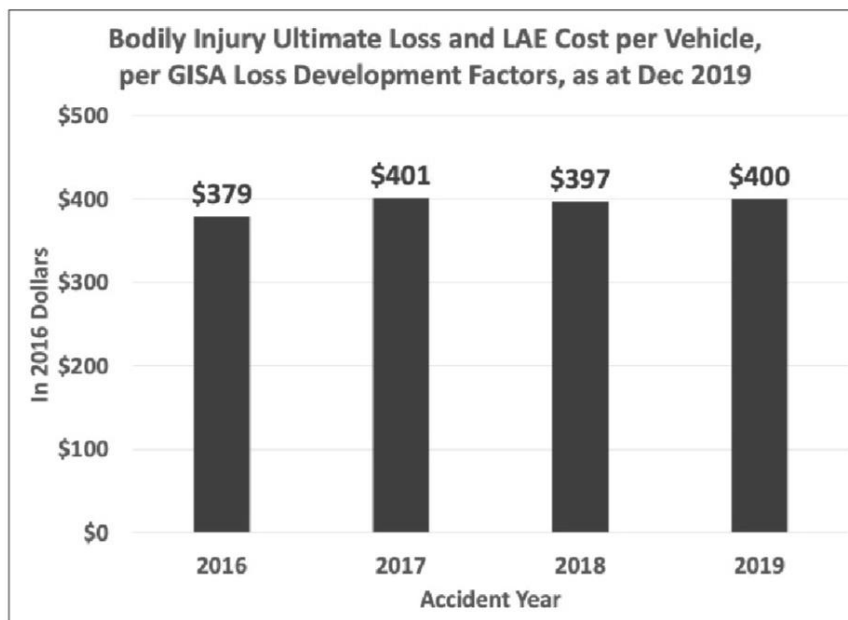


“Note 13 advises that a large insurer has strengthened its case reserving practice for BI claims, beginning with accident semester 2017-2, yielding increased case reserve amounts in calendar periods 2017-2 and later.”

Figure 5 in the Allen report and provided below, show as recently as the 2020 Semi-Annual Review (as of June 30, 2019), the Oliver Wyman analysis showed stability in the inflation-adjusted loss cost projections for accident years beginning at June 30, 2016.

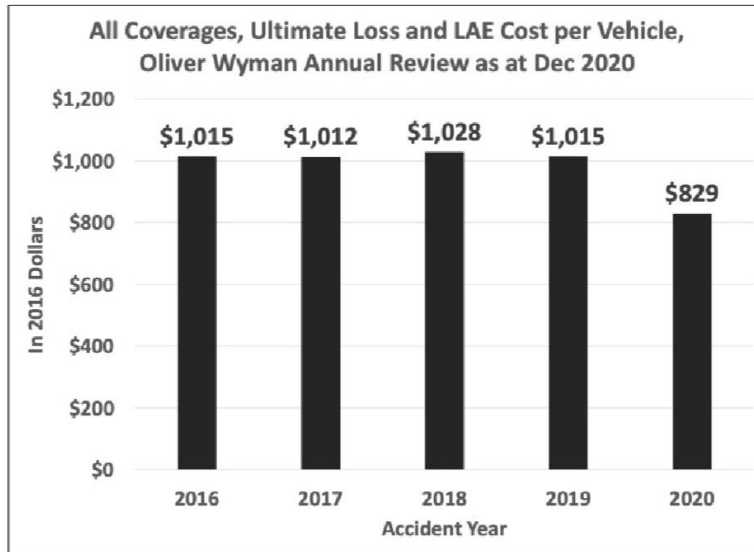


The loss cost projections prepared by GISA in June 2020 for its Actual Loss Ratio Exhibit as of December 2019, also showed stability in its inflation-adjusted loss costs following 2016. These loss cost projections are shown as Figure 6 in the Allen report and provided below.

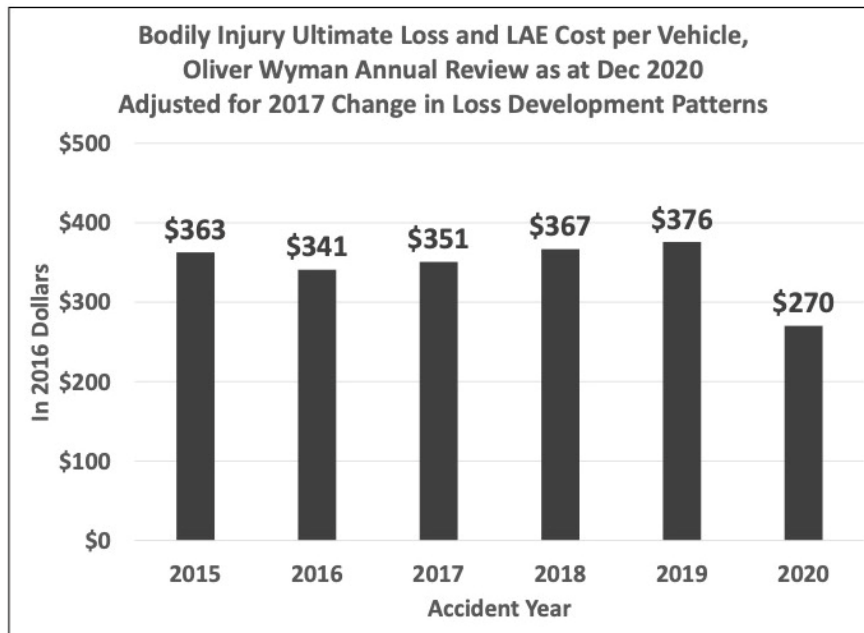




Even in the absence of adjustments for reserve practices, the Oliver Wyman report shows the inflation adjusted ultimate loss cost per vehicle for all coverages remained stable from 2016 to 2019 and dropped in 2020 due to COVID-19 (Figure 2 of the Allen report).

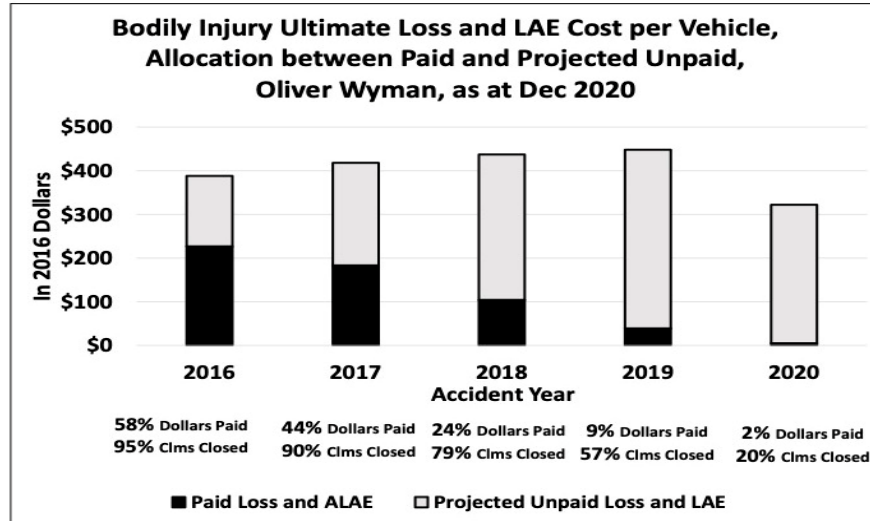


Further, when reasonable and appropriate adjustments are made for the change in loss development patterns, the inflation adjusted bodily injury loss cost has remained essentially stable since 2015, and dropped significantly in 2020 (Figure 3 of the Allen report).

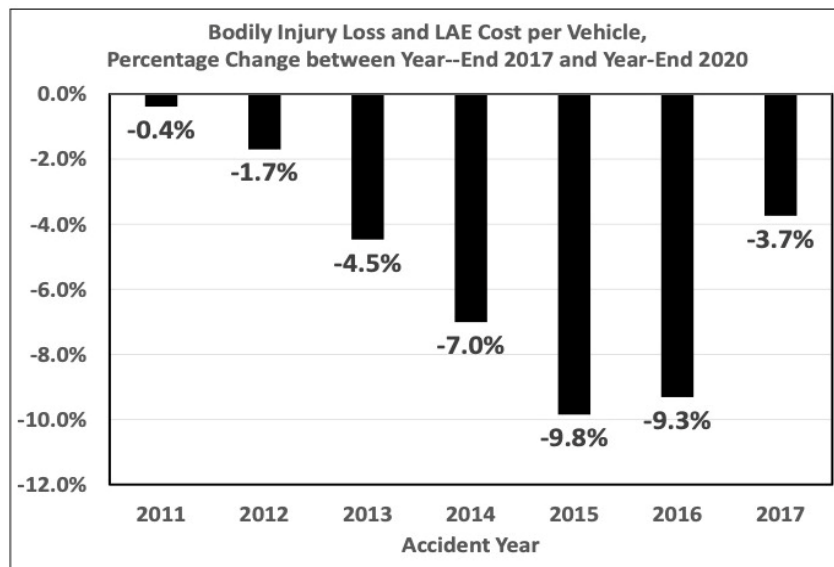




The information within the Allen report provides analysis on the impacts of the change in reserve practices. There remains significant uncertainty in relation to reserve practices with the vast majority of claims accounting for a very small percentage of the payouts as detailed in Figure 8 of the Allen report.



Additionally, Allen's analysis shows that the reserves and projections of the insurance industry, as considered and applied by Oliver Wyman, often experiences downward variation resulting in lower payouts than anticipated (Figure 7 of the Allen report).



Contrary to key assertions made by the insurance industry, bodily injury claim costs are not the driving factor to premium increases. The period of growth of bodily injury claim costs ended in 2016 and has since stabilized. The evidence does not support skyrocketing claims costs and instead indicates virtually no inflation adjusted increases to claims costs since 2016.

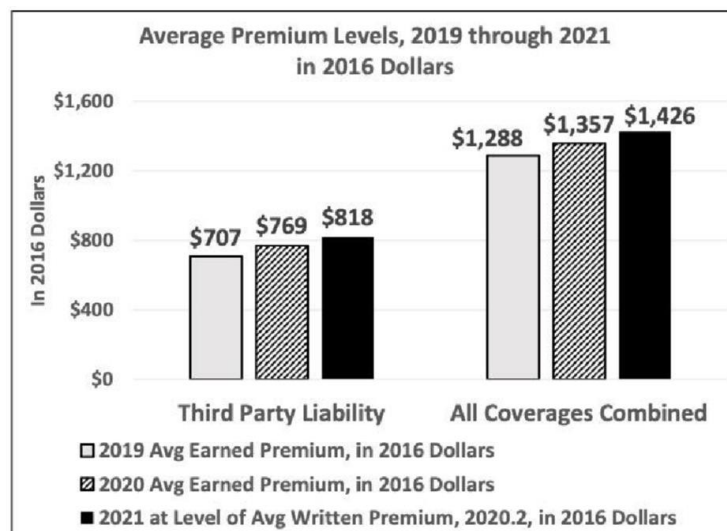


2. Consumer premiums have increased significantly since 2016, while claims payouts have stabilized

While claims costs have levelled off since 2016, the trend rates for bodily injury coverage as forecast by Oliver Wyman have projected increases on an annual basis since 2016 of between 6 to 8.5% compounded annually, well in excess of inflation (Table 1 of the Allen report).

Effective Date	Past Trend Rate	Future Trend Rate	12-Month Increase in CPI ¹
April 1, 2015	+2.0%	+2.0%	1.7%
Oct. 1, 2015	+4.5%	+4.5%	1.5%
April 1, 2016	+6.0%	+6.0%	1.3%
Oct. 1, 2016	+6.0%	+6.0%	1.0%
April 1, 2017	-1.0%	+7.5%	0.4%
Oct. 1, 2017	+7.5%	+7.5%	2.0%
April 1, 2018	+7.5%	+7.5%	2.8%
Oct. 1, 2018	+8.5%	+7.5%	2.1%
April 1, 2019	+8.5%	+7.5%	1.4%
Oct. 1, 2019	+8.5%	+7.5%	2.3%
April 1, 2020	+8.0%	+7.0%	1.6%
Oct. 1, 2020	+7.0%	+6.0%	0.8%
April 1, 2021	+7.0%	+5.0%	2.7%

These projected trend rates for bodily injury claims cost have been used to rationalize significant automobile insurance premium increases for Albertans, with the most notable increases occurring after the removal of the 5% cap in 2019 (Figure 11 of the Allen report).





The effect of increased premiums in the face of leveling claims costs, and significantly reduced claim costs in 2020 due to COVID-19 will either lead to decreased premiums for consumers or skyrocketing profits for insurance companies. To date, it has been the latter with the insurance industry reaping significant profits in the Alberta auto insurance market.

3. The effects of COVID-19 have resulted in significant one-time savings for the insurance industry, but these are underappreciated in Oliver Wyman's trend factors

The COVID-19 pandemic dramatically reduced the amount of driving by auto insurance policyholders. Fewer kilometres driven has meant less time on the road and fewer driver errors. Equally important, fewer vehicles on the road reduced the risk that driver error - when it occurred - would lead to collisions, vehicular damage, and bodily injury.

Many American insurance companies and Canadian crown corporations recognized lower claim costs by issuing across-the-board premium reductions through the pandemic. Insurers operating in Alberta fell short of this measure. Unlike these other jurisdictions, very few insurance companies in Alberta provided direct premium relief to consumers in lieu of decreased COVID-19 auto claims payouts. Most insurers only encouraged consumers to contact their brokers or company to discuss a decrease in premium due to a change in use.

While Oliver Wyman has projected the 2020 claims costs with reference to COVID-19, they have not provided any guidance to the AIRB on what COVID-19 related adjustments should be moving forward. Instead, it has been left to individual insurers applying for a rate change to determine whether or not, or to what degree, COVID-19 is expected to impact claims costs during the proposed rating program. This stands in contrast to the analysis performed by JS Cheng and Partners Inc. in its May 27, 2020 report which proposed claims cost reduction of 5% for 2021 and the smaller reduction of 2.5% for 2022.

Given the increase in the number of Albertans who will continue to work from home and the associated decrease in traffic on the roads, a reduction for at least 2021 would seem appropriate. Moreover, to underappreciate the ongoing effect of COVID-19 in relation to the 2020 claims costs and apply a compounded increase on the previously assessed increase for 2020, which did not materialize, appears unreasonable and unfair to Alberta consumers.

4. Bill 41 has resulted in further savings both retroactively and prospectively, the effects of which have not been considered in Oliver Wyman's trend factors

While it may be difficult to accurately quantify future savings due to the ongoing effects of COVID-19 and long-term changes in commuting and driving patterns, savings in relation to Bill 41 are measurable and significant.

One of the significant changes which will result in retroactive reductions to past years claims costs is the change to pre-judgment interest, which the Superintendent of Insurance has



indicated is retroactive - a position which has been forcefully adopted by the insurance industry. This retroactivity will amount to million of dollars in savings on past claims which have not yet been settled. Moving forward, the change to pre-judgment interest alone is expected to save the insurance industry over \$40 million a year, based on Insurance Bureau of Canada (IBC) estimates.

Furthermore, the definition change to minor injury which will take effect for claims after January 1, 2021, will lead to a further estimated savings of approximately \$215 million a year, again based on IBC projections. Further savings which are as yet unknown, but expected to be substantial, is the imposition of legislated limits on expert reports for personal injury actions.

It is noted by Oliver Wyman that in addition to underappreciating COVID-19 effects, no adjustment has been made for Bill 41. Given that many of the cost savings in relation to Bill 41 are ascertainable, provision should be made for its impacts when assessing trend factors in relation to bodily injury claims costs.

5. The impact of the above results in projected Alberta automobile insurance pre-tax profits of over \$1.7 billion dollars for 2020 and 2021 combined

Regardless of what measures are used, there is little doubt that automobile insurers in Alberta have reaped a significant windfall due in large part to the effects of COVID-19, but also due to increasing premiums and stabilizing claims costs. The further cost-saving measures brought about by Bill 41 will only serve to solidify these cost savings for insurers.

Table 10 below from the Allen report uses the analysis of Oliver Wyman to derive a projected pre-tax profit of 1.168 billion for Alberta auto insurers over 2020 and 2021 factoring in savings associated with Bill 41 reforms.

	Actual 2020	Projected 2021*	Total
Premium	\$4,071,500	\$4,386,100	
Less: Claims Costs	\$2,488,100	\$3,410,800	
Less: Expenses	\$1,058,600	\$1,140,400	
Less: Health Cost Recovery	\$115,800	\$74,200	
Plus: Investment Income	\$368,300	\$344,000	
Total Profit, Pre-Tax, Excl. Bill 41	\$777,300	\$104,700	\$882,000
Plus: Bill 41 Change in MIR Definition		\$212,600	\$212,600
Plus: Bill 41 Reduction in PJI	\$31,400	\$42,000	\$73,400
Total Profit, Pre-Tax, Incl. Bill 41	\$808,700	\$359,300	\$1,168,000



Alternatively, Table 11 below from the Allen report, uses Cheng's method, with adjustments for the 2017 loss development pattern change made to claims costs and trends from the Oliver Wyman Dec. 2020 analysis. The projection for 2021, is largely based on a continuation forward of premium components from the 2020 year, and claims amounts from the pre-COVID 2019 accident year. This calculation results in a \$1.733 billion projected profit over 2021 and 2022.

	Actual 2020	Projected 2021*	Total
Premium	\$4,071,500	\$4,386,100	
Less: Claims Costs	\$2,332,500	\$2,996,200	
Less: Expenses	\$1,058,600	\$1,140,400	
Less: Health Cost Recovery	\$115,800	\$74,200	
Plus: Investment Income	\$368,300	\$344,000	
Total Profit, Pre-Tax, Excl. Bill 41	\$932,900	\$519,300	\$1,452,200
Plus: Bill 41 Change in MIR Definition		\$212,600	\$212,600
Plus: Bill 41 Reduction in PJI	\$26,200	\$42,000	\$68,200
Total Profit, Pre-Tax, Incl. Bill 41	\$959,100	\$773,900	\$1,733,000

Conclusion

Stable claim costs across all coverages, recent increases in premiums paid by consumers, the ongoing impact of COVID-19 on driving patterns, industry savings associated with Bill 41, and projected windfall industry profits for 2020 and 2021 are all material factors that are either underappreciated or absent from the Oliver Wyman analysis. While these factors may not be appropriately accounted for in the Oliver Wyman analysis, they remain relevant for the AIRB in its responsibility to regulate auto insurance rating programs for Albertans.

ACTLA believes the above evidence is sufficient to support our recommendation that no rate increases to premiums for basic and additional coverage for private passenger vehicles be granted in 2021. The combined impacts of recent premium increases, COVID-19, Bill 41 cost savings, and industry profits support this recommendation. At minimum, a period of evaluation should occur to allow the effects of Bill 41 and the long-term impacts of COVID-19 to be observed in the industry before any further premium increases are permitted.

Review of Experience, Alberta Private Passenger Automobile Insurance, as at December 31, 2020

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July 28, 2021

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As Part of their Written Submission to the Alberta Automobile Insurance Rate Board 2021 Annual Review

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I. Executive Summary

The following are the findings of my analysis.

Finding 1:

My finding is that inflation-adjusted loss and LAE costs per vehicle have remained approximately stable for accident years between 2016 and 2019 (with a marked decline in the pandemic year 2020). This is my finding for both bodily injury coverage and for all coverages combined. pre-2020 accident years. An apparent change in loss development patterns beginning in 2017 has complicated the task of assessing the trend in bodily injury loss costs. However, evidence to date suggests that the change in pattern is driven by case reserving practices, rather than a change in the underlying claims exposure. A continuation into the future of the stability seen for the last 4.5 years would be in contrast to the current bodily injury benchmark trend rate, which continues to project future growth well in excess of the general inflation rate.

Finding 2:

Inflation-adjusted premium levels per vehicle, both for bodily injury coverage and for all coverages combined, have increased at above the rate of general inflation since 2019, while inflation-adjusted claims costs have been approximately stable. Such premium increases were needed to remedy the unprofitable position of the industry between 2015 and 2018. However, stabilization of claims costs and the introduction of reforms under Bill 41 have put the industry in a profitable position in recent years.

Finding 3:

Oliver Wyman advises that its trend factors do not take account of the effect of COVID-19. However, they also acknowledge that the pandemic may continue to affect prospective loss experience, and advise that adjustments to historic loss experience be made for programs with such an ongoing impact.

Finding 4:

Industry pre-tax profits in 2019 and 2020 are projected at \$209.0 million and \$932.9.1 million respectively. Further, the impact of Bill 41 on prejudgment interest for claims from prior accident years that remain open is projected to add a one-time gain of over \$120 million to industry pre-tax profits. Projected pre-tax profits for 2021, when savings from Bill 41 and a 5% claims cost reduction on moving coverages for COVID-19 are \$773.9 million.

II. Introduction

I have prepared this report as actuarial consultant to the Alberta Civil Trial Lawyers Association (“ACTLA”).

The report is part of ACTLA’s written submission to Alberta’s Automobile Insurance Rate Board (AIRB) for the 2021 Annual Review.

This report presents the results of my analysis of private passenger automobile insurance (“PPA”) experience for Alberta.

III. Data Sources

I have based my analysis on data published by the General Insurance Statistical Agency (GISA) as at December 31, 2020. I have also reviewed in depth the analysis and conclusions of Oliver Wyman Limited (“Oliver Wyman”), consulting actuary to AIRB, in its 2021 Semi-Annual Review and its 2021 Preliminary Annual Review.

IV. Identification

I am an independent consulting actuary based in New York, NY. I am a fellow of the Canadian Institute of Actuaries and of the Casualty Actuarial Society, and have provided actuarial services in Canada and the U.S. for 34 years.

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July 28, 2021

V. Analysis

Below are the analyses that form the basis of this report.

A. The Trend in Bodily Injury Loss and LAE Cost per Vehicle Since 2016

Since 2015, the AIRB Benchmark trend rate for bodily injury (BI) coverage has projected annual increases in *ultimate loss and LAE costs per vehicle* (“loss cost”) that are significantly higher than corresponding annual increases in the Alberta Consumer Price Index (CPI). My analysis of the claims projections and exposure data prepared by Oliver Wyman and GISA finds support for a lower current bodily injury loss cost trend, beginning in 2016.

1. Oliver Wyman Annual Review, through December 31, 2020

The 2021 Annual Review by Oliver Wyman, through Dec. 31, 2020, makes projections of loss cost by accident year, for the bodily injury coverage. Figure 1 below shows the results in 2016 dollars, revealing a steady increase in real loss costs through accident year 2019. This progression is interrupted by a sharp reduction in bodily injury loss cost for the 2020 accident year, owing to the reduction in traffic due to the COVID-19 crisis.

The pattern of increasing loss cost for accident years prior to 2020 is a departure from previous analyses by Oliver Wyman of the ultimate loss cost by accident year. Analyses as recent as June 2019 showed a leveling in real loss cost (in 2016 dollars) beginning with the accident period starting June 30, 2016.

Figure 1: Bodily Injury Loss Cost, Oliver Wyman as at December 31, 2020

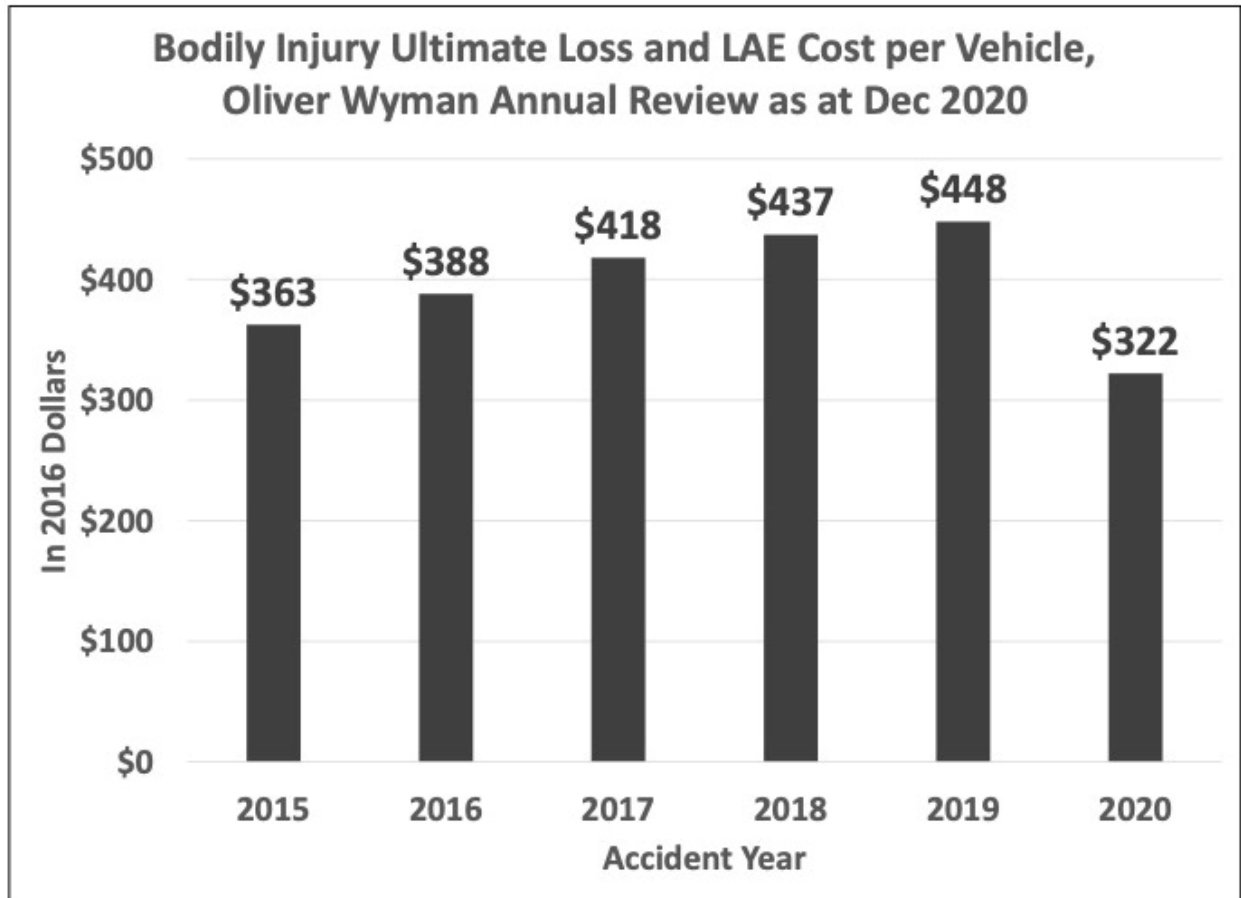
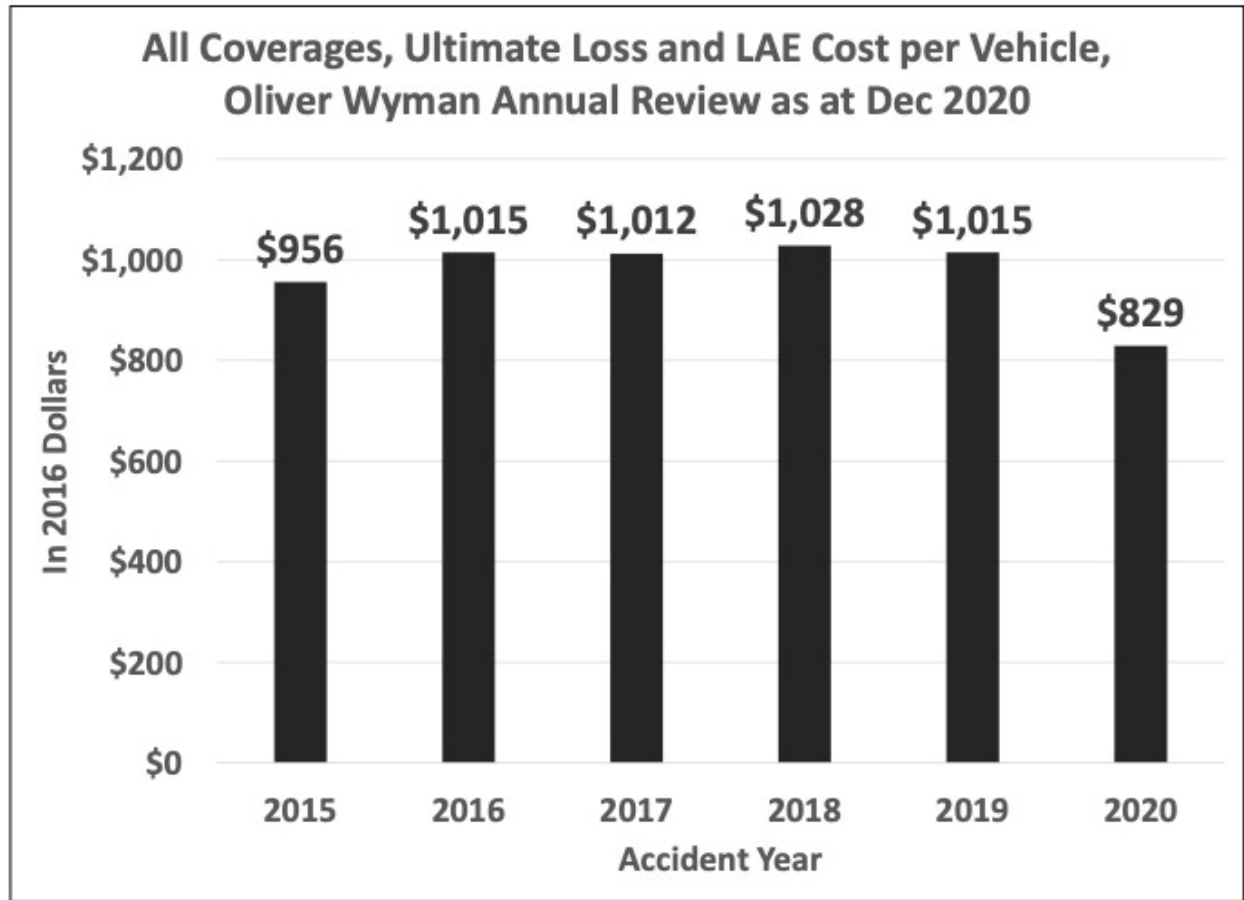


Figure 2 below shows that for all coverages combined, the Oliver Wyman analysis finds stability in the inflation-adjusted loss cost over the accident years 2016 through 2019.

Figure 2: All Coverages Loss Cost, Oliver Wyman as at December 31, 2020



Later in this report, I will present again my finding in my report of July 29, 2020, that a discontinuous change in the loss development pattern for bodily injury coverage begins in calendar year 2017. Further, by making an adjustment to my analysis, taking account of the change in the loss development pattern, I find near-stability in the inflation-adjusted loss cost.

Figures 3 and 4 below present the results with the adjustments for the changed loss development pattern. The pre-COVID upward trend in bodily injury loss costs is much reduced with these adjustments.

Figure 3: Bodily Injury Loss Cost, Oliver Wyman as at December 31, 2020, Adjusted for 2017 Change in Loss Development Patterns

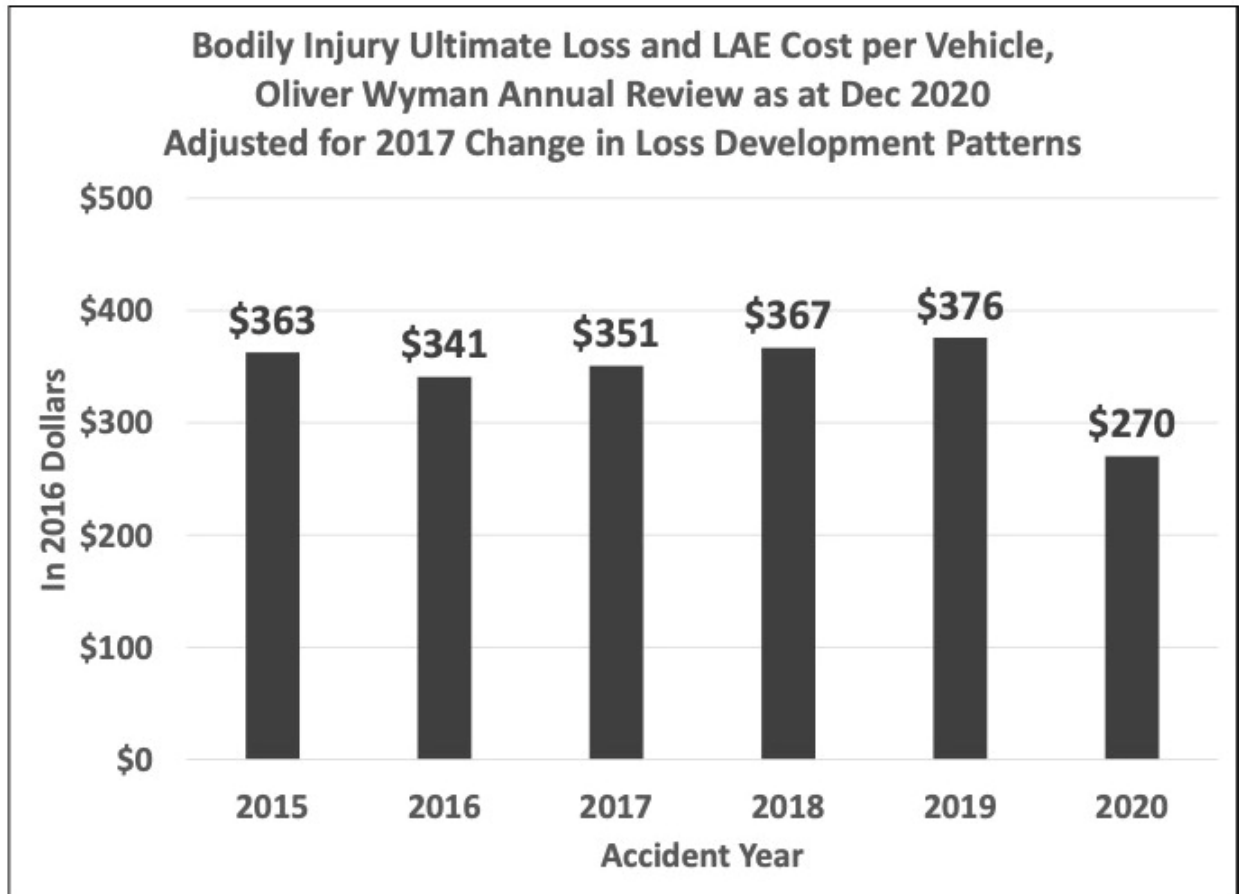
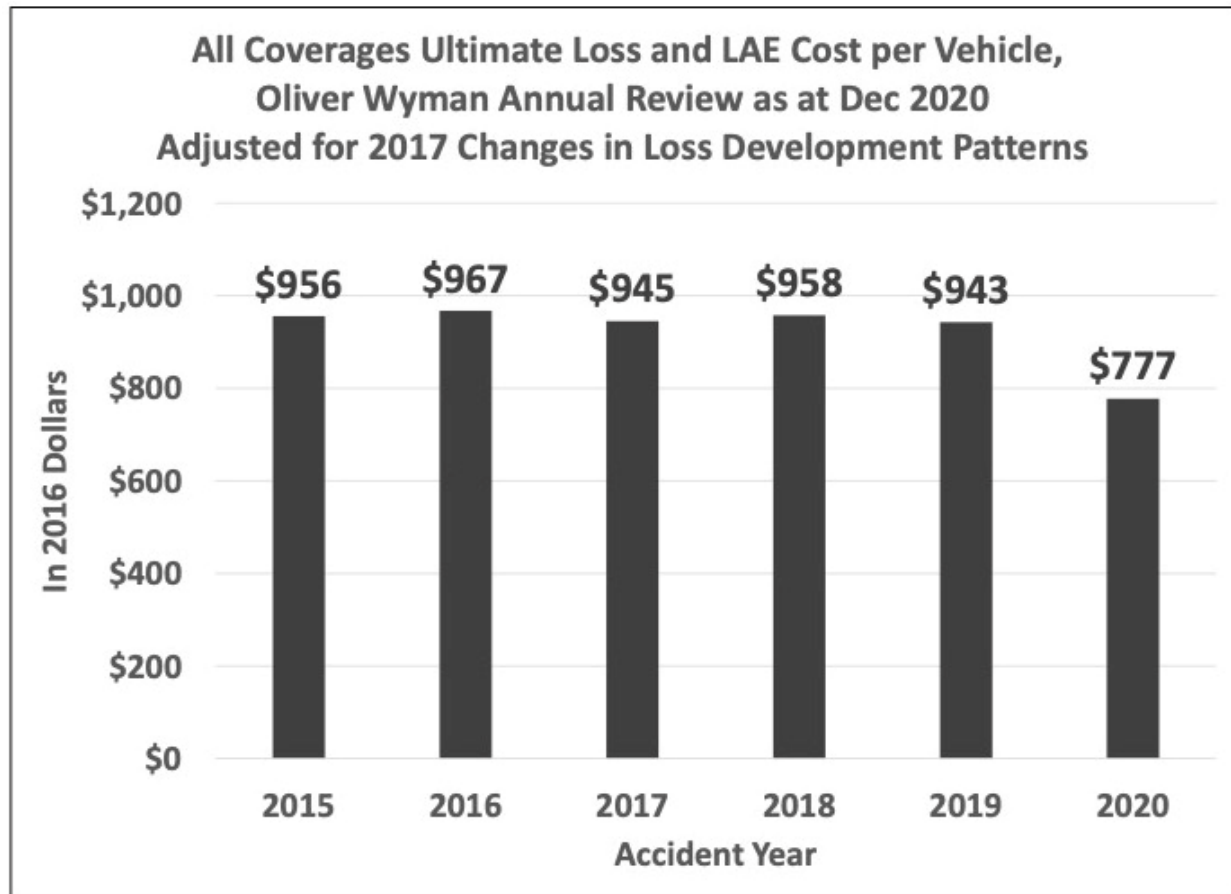


Figure 4: All Coverages Loss Cost, Oliver Wyman as at December 31, 2020, Adjusted for 2017 Change in Loss Development Patterns



2. Benchmark Trend Rate for Bodily Injury

Beginning in 2015, the AIRB Benchmark trend rate for bodily injury coverage has projected increases in the BI loss cost well in excess of the annual rate of increase in the Alberta CPI.

Table 1: Benchmark Trend Rates for Bodily Injury, Compared to Increase in Consumer Price Index for Alberta

Effective Date	Past Trend Rate	Future Trend Rate	12-Month Increase in CPI ¹
April 1, 2015	+2.0%	+2.0%	1.7%
Oct. 1, 2015	+4.5%	+4.5%	1.5%
April 1, 2016	+6.0%	+6.0%	1.3%
Oct. 1, 2016	+6.0%	+6.0%	1.0%
April 1, 2017	-1.0%	+7.5%	0.4%
Oct. 1, 2017	+7.5%	+7.5%	2.0%
April 1, 2018	+7.5%	+7.5%	2.8%
Oct. 1, 2018	+8.5%	+7.5%	2.1%
April 1, 2019	+8.5%	+7.5%	1.4%
Oct. 1, 2019	+8.5%	+7.5%	2.3%
April 1, 2020	+8.0%	+7.0%	1.6%
Oct. 1, 2020	+7.0%	+6.0%	0.8%
April 1, 2021	+7.0%	+5.0%	2.7%

Table 2: Cumulative Increase Over the Period May 2016 through May 2021

	Past Trend Rate, April 1, 2021	Increase in CPI, June 2016 to June 2021
Accumulated Over 5 Years 2016 to 2021	+40.3%	+9.2%

¹ For the twelve months ending 3 months after effective date (e.g. for Effective Date Oct. 1, 2020, the CPI increase over the period Jan. 1, 2020 to Dec. 31, 2020)

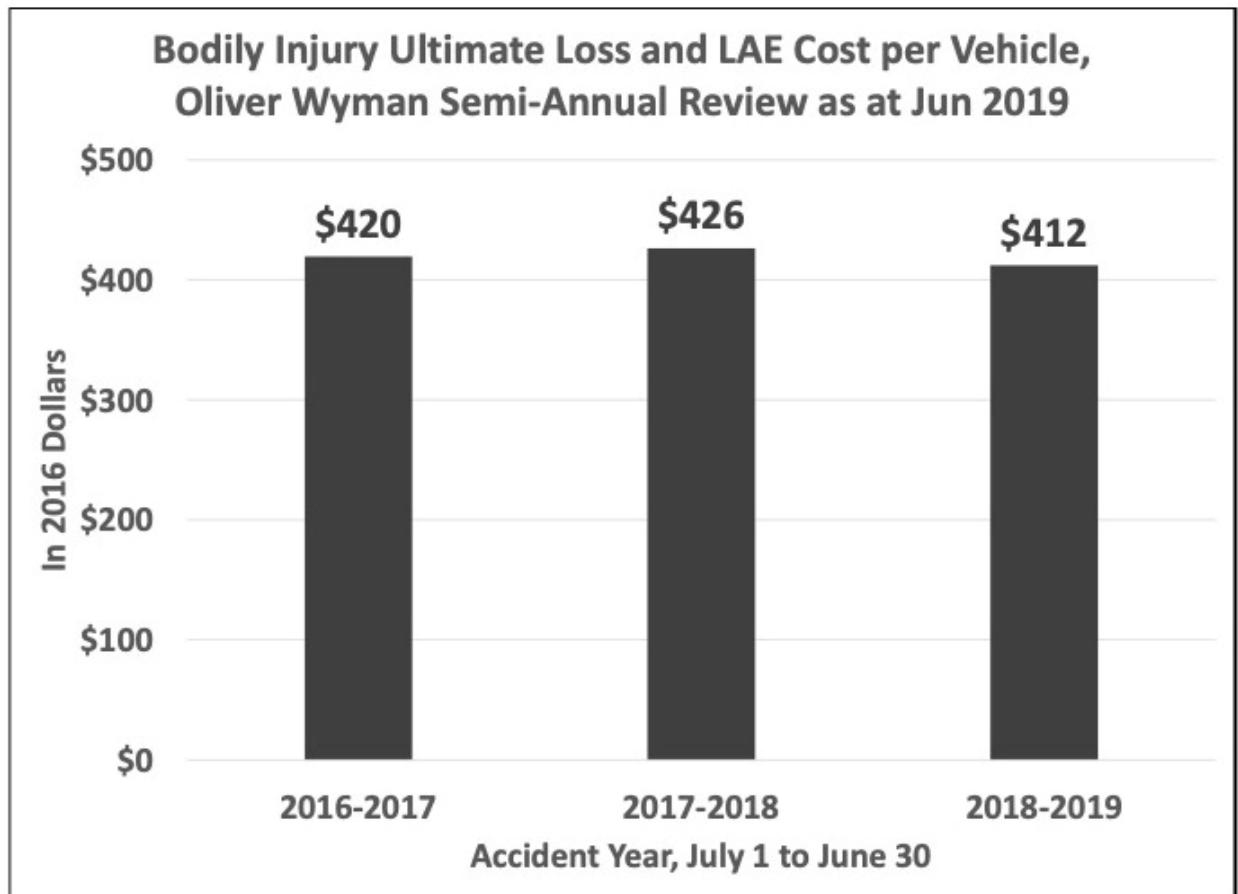
B. In-Depth Analysis of the Bodily Injury Loss Cost Projections

1. The Uncertainties Around the Bodily Injury Loss Cost Projections

The following charts, Figure 5 through Figure 8, illustrate the uncertainties that remain for bodily injury loss cost projections of age 5 years or less.

Figure 5 illustrates that as recently as the 2020 Semi-Annual Review (as at June 30, 2019) the Oliver Wyman analysis showed stability in the inflation-adjusted loss cost projections for accident years beginning at June 30, 2016.

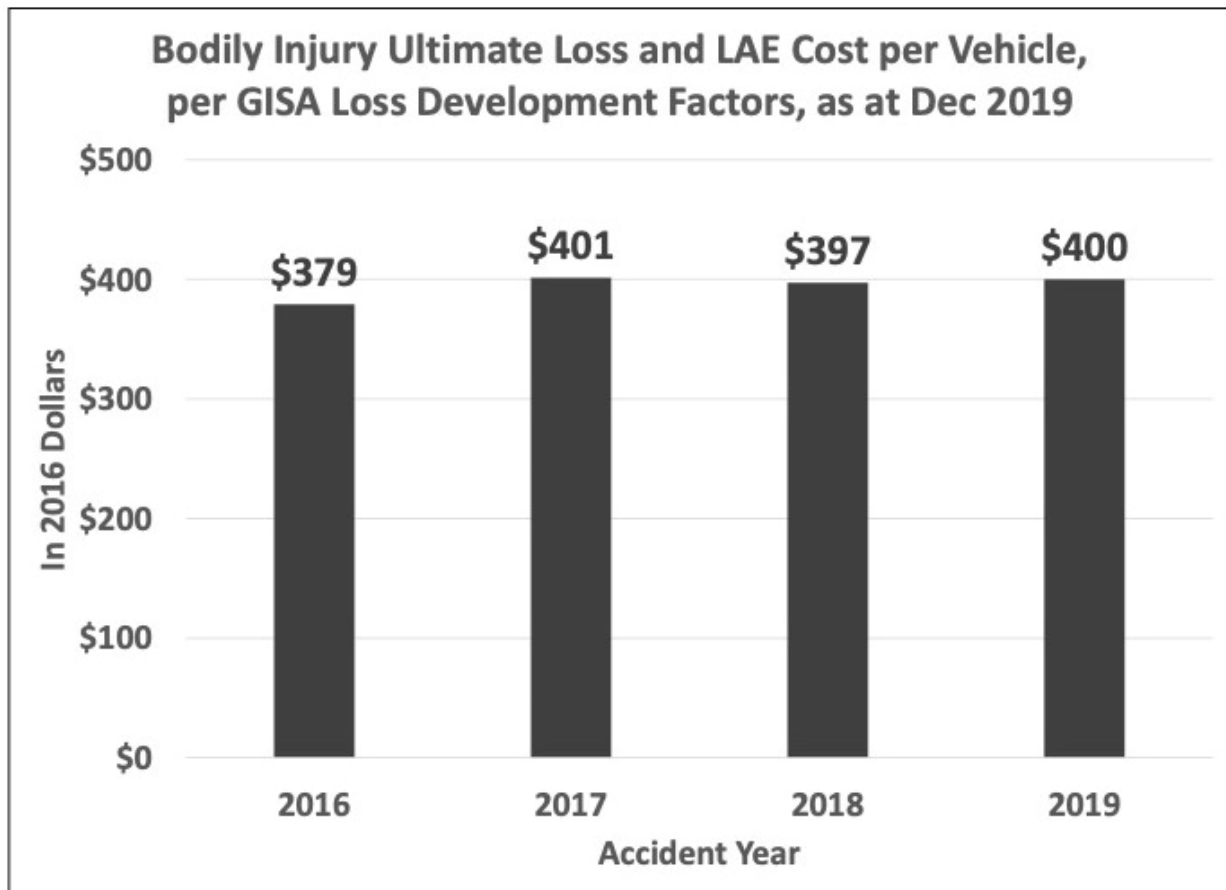
Figure 5: Bodily Injury Loss Cost, Oliver Wyman as at June 30, 2019



Further, slightly more recently, the loss cost projections prepared by GISA in June 2020 for its Actual Loss Ratio Exhibit as at December 2019, also showed stability in its inflation-adjusted loss costs following 2016. These loss cost projections are shown in Figure 6 below.

These variations illustrate the uncertainties and difficulties in making stable predictions of the cost of compensation for significant bodily injuries.

Figure 6: Bodily Injury Loss Cost, GISA as at June 30, 2019



A comparison of the Oliver Wyman projections as at June 2019 (Figure 5) and December 2020 (Figure 1) shows that there has been unfavorable development in the loss cost projections for accident years 2018 and 2019 over that period.

However, Figure 7 below illustrates that favorable development is also common over the life cycle of the accident years involved.

Figure 7: Bodily Injury Loss Cost, Percentage Change between Year-End 2017 and Year-End 2019 Estimates

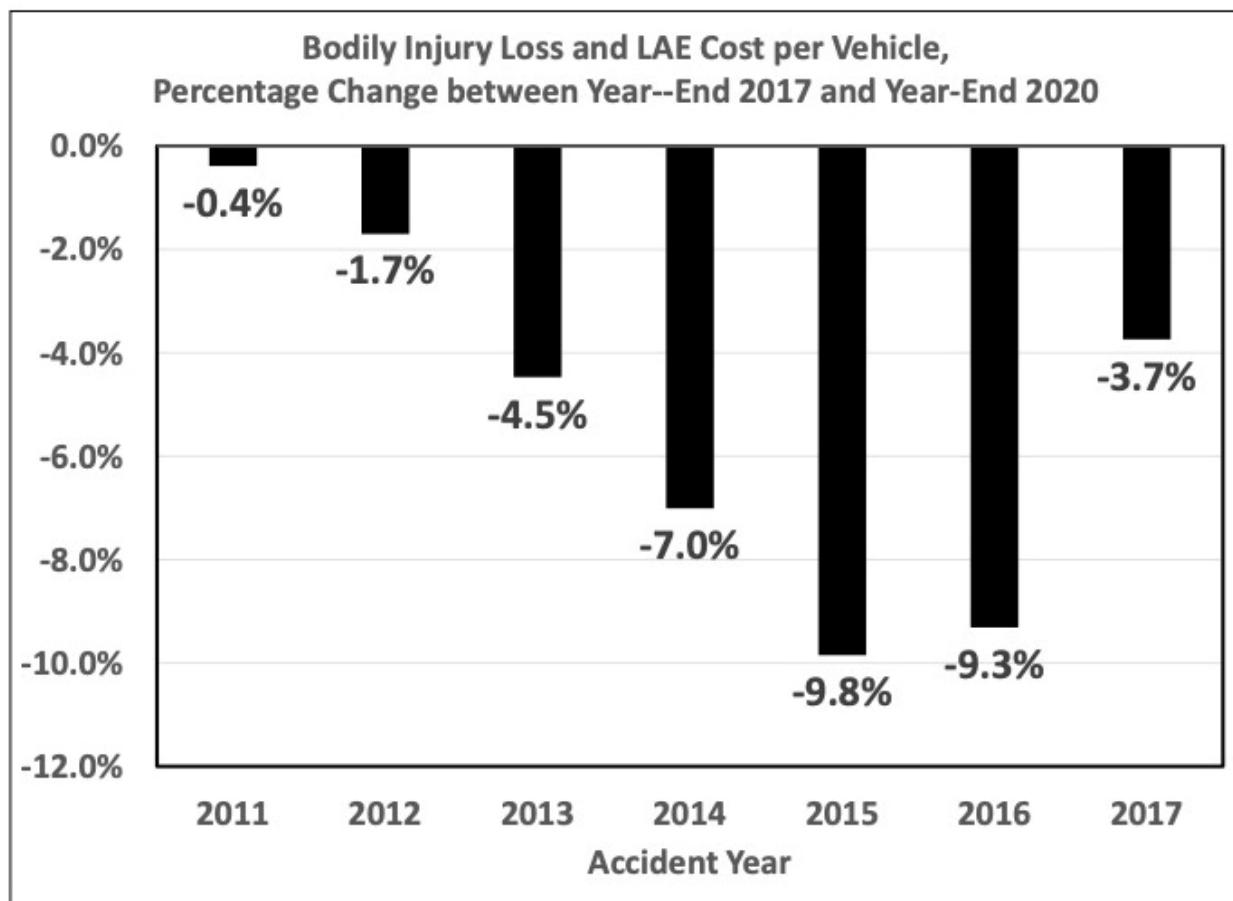
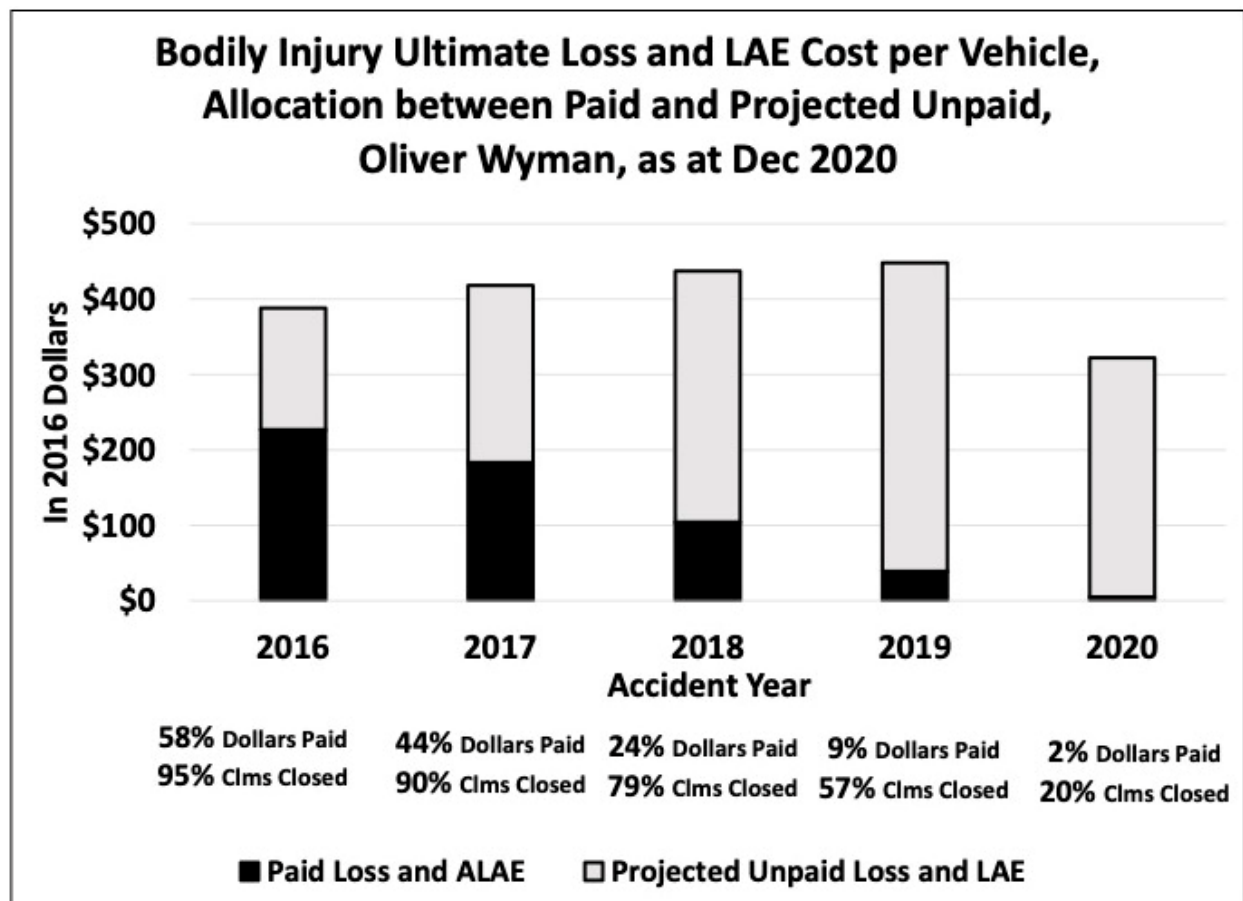


Figure 7 illustrates the cumulative results of successive Annual and Semi-Annual reviews since year-end 2017, and that there have been decreases as well as increases in the projected BI loss cost.

These decreases reversed previous increases made between year-end 2016 and year-end 2017. These increases were brought about by the change in age-to-age ratios during calendar year 2017.

Finally, Figure 8 below illustrates that unpaid amounts continue to dominate the projected loss costs for the accident years following 2016. Thus, the proportion of dollars that remains open to change in either direction is relatively high.

Figure 8: Bodily Injury Loss Cost, Balance between Paid and Projected Unpaid Amounts, as at December 2020



Note that the percentage of claims closed for each accident year is much higher than the percentage of dollars finalized. This pattern is common among insurance claims, as smaller claims are generally settled more quickly than larger claims. It also is consistent with Alberta's Minor Injury Regulation working as intended – in streamlining the resolution of minor injury claims.

2. 2017 Changes in Claims Handling Practices, per GISA Notes to Users

In publishing the private passenger automobile experience data for Alberta, GISA issued a bulletin of Notes to Users. These notes advise users of where to exercise caution in using the GISA exhibits.

- Note 12 advises that a large insurer has changed its claims handling practices for BI claims, increasing the rate at which it closes claims, beginning in the first half of 2017 and continuing in later calendar periods.
- Note 13 advises that a large insurer has strengthened its case reserving practice for BI claims, beginning with accident semester 2017-2, yielding increased case reserve amounts in calendar periods 2017-2 and later.

Evidence of changes in claims handling practices that coincide with these advisories can be seen in the ratios of case incurred loss and LAE at successive age intervals (i.e. age-to-age ratios in the loss development “triangle.”)

Figure 9 below presents the age-to-age ratios in the eight half-year intervals beginning in calendar year 2017, and compares them to those for the eight half-year intervals ending at calendar year 2016. It can be seen that there is a marked and persistent shift from an average ratio of 1.239 in the pre-2017 period up to an average of 1.369 in calendar year 2017 and later.

Figure 9: Age-to-Age Ratios, 6 Months to 12 Months

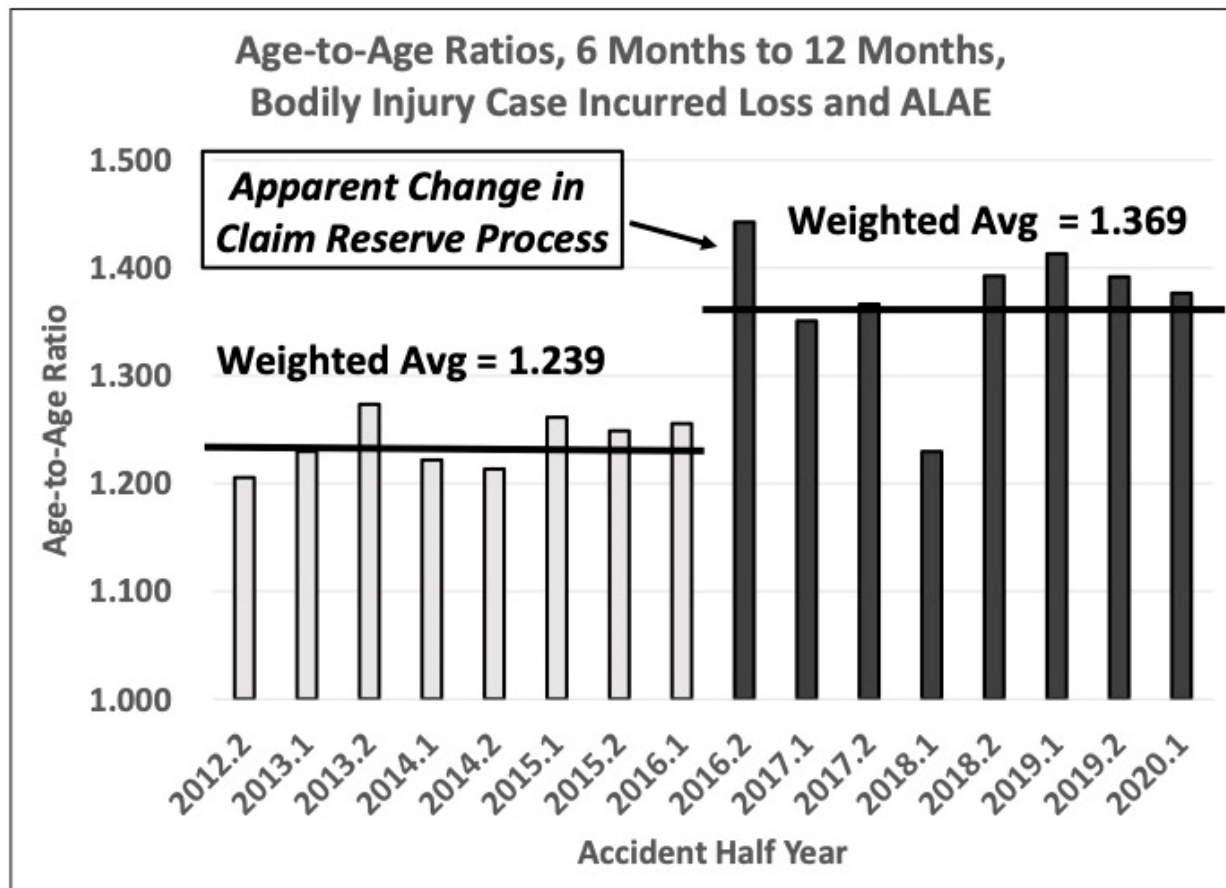
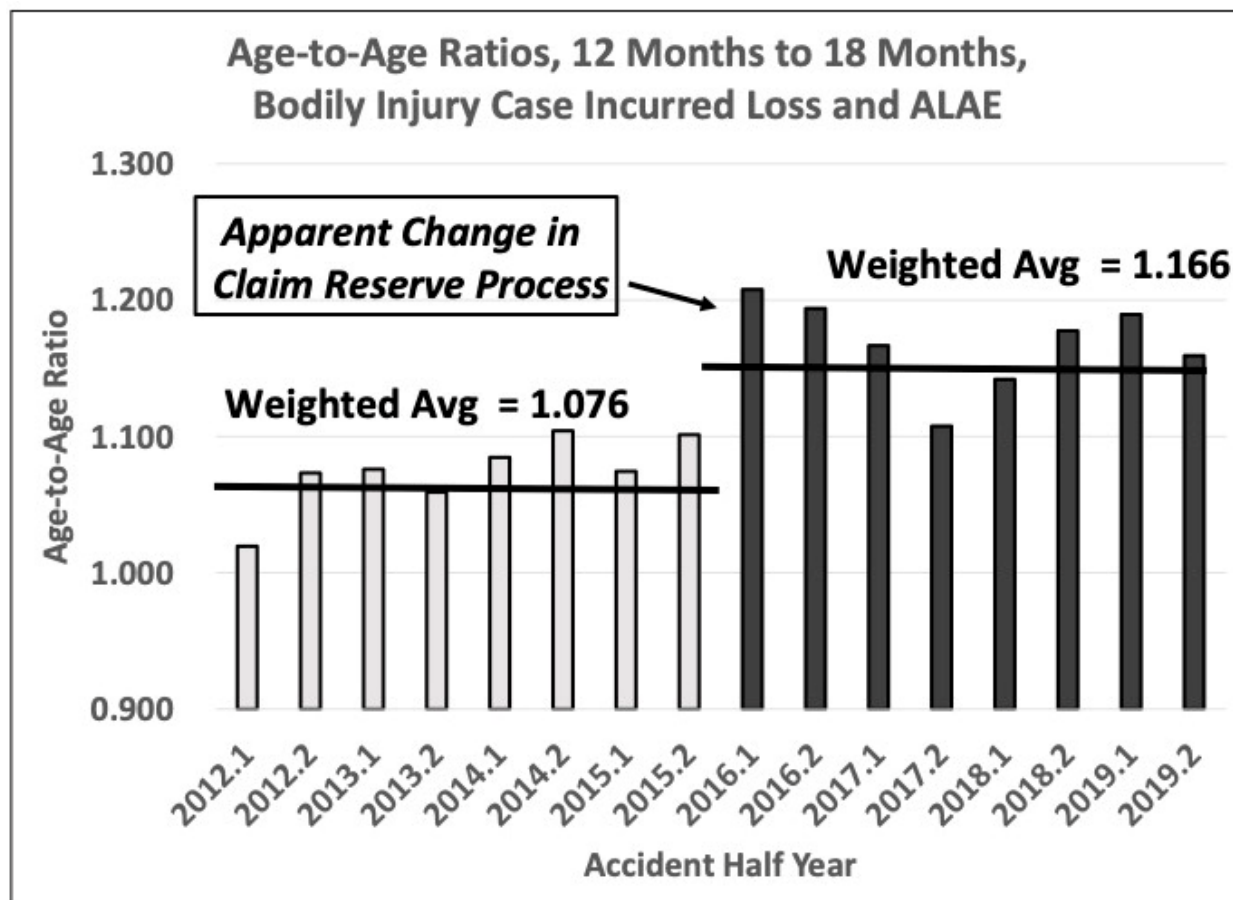


Figure 10 shows a similar discontinuous and ongoing shift for the ratios from 12 months to 18 months, from an average ratio of 1.076 in the pre-2017 period to an average of 1.166 in the latter period.

Figure 10: Age-to-Age Ratios, 12 Months to 18 Months



I propose that these shifts could indicate a change in claims handling practices, in particular rules and policies that lead claims staff to set case reserves at a higher level with a given set of facts having emerged. Such a shift would not imply a change in the nature of the underlying claims costs – rather it would indicate a change in the *estimates* and *predictions* of those claims costs, as made by claims staff and management.

The following are the reasons that suggest to me that the shift in pattern is a matter of reserving practice, rather than an increase the underlying loss cost.

- First is that the shift has occurred at precisely the time that the GISA advisories in Notes 12 and 13 note a shift in claims handling practice. The term “strengthening” is used in

Note 13, which often suggests a one-time disruption in the level of reserves, and a later return to “normal.” However, in this case, the rise in the age-to-age factors takes hold in new cohorts of claims. It is possible for a change in claims handling policy to roll out over the life cycle of the claims – since certain facts that interact with the new procedures may take time to emerge. The pattern observed in Figures 9 and 10 would be consistent with this change.

- Second, the shift in the pattern happened some two years after the major court decision *McLean v. Parmar* in 2015, suggesting that the change did not arise from that decision.
- As will be seen in the next section, the rise in the reserve level hasn’t been accompanied by a rise in claim dollars paid.

Once a new process for setting case reserves has been established, has been applied to all open claims, and has been in operation *throughout the life cycle* of several accident-year cohorts of claims, the unadjusted actuarial process for determining ultimate loss costs will operate satisfactorily. Where the new pattern increases the age-to-age ratio at an earlier age, the age-to-age ratios at later ages will be expected to *decrease* from the previous pattern. In effect, the growth cycle is shifted to an earlier age.

In the case of the Alberta 2017 shift, the second phase, the decrease in age-to-age ratios at a later age, has not yet been observable. For the accident years 2016 and later, “the other shoe hasn’t dropped.” There has not been a shift in the pattern at later ages i.e. a decrease to offset the higher ratios seen at the 6-12 month and 12-18 month intervals. Thus, the unadjusted chain-ladder method applies age-to-age factors drawn from accident years that follow the old pattern (2015 and prior) to claims cohorts (accident years 2016 and later) that fall under the new pattern.

In the sections that follow, I make adjustments to case incurred losses and loss development ratios that are designed to re-establish consistency between accelerated case incurred amounts for accident years 2016 and later, and loss development factors drawn from accident years 2015 and earlier.

3. The Test of Increasing Case Reserves against Payments to Date

As stated in the previous section, the change in loss development patterns at the 6-12 month and 12-18 month intervals, toward higher levels of case reserves at an earlier age, may indicate a change in case reserving practices separate from the underlying loss cost. The alternative would be for the transitions to higher case incurred amounts to imply an increase in the underlying loss cost.

To test whether the latter is the case, the tables below compare case incurred loss costs with corresponding paid loss costs for accident years at ages 24 and 36 months.

One caveat about this test is that the amounts paid through those intervals represent only a small portion of the ultimate dollars paid for an accident year, and also represent the smaller and less involved claims. However, on the other hand, the absence of significant changes in amounts paid to date may provide a valid indicator that increases in case reserves reflect reserving practices rather than a change in underlying loss costs.

Table 3 below shows a steady increase in the average case incurred loss and LAE per vehicle between accident years 2016 and 2019. This increase is in contrast with the absence of an increase in the average paid loss and LAE per vehicle for the same accident years. In fact, there is an actual decrease in the amounts paid by accident year, although some of that decrease may be explained by a reduced percentage of reported claims settled at the 24 month mark.

That the increase in average case incurred amounts is not mirrored by an increase in the amounts paid is consistent with the hypothesis of an increase in the reserves, not the underlying loss amount.

Table 3: Case Incurred and Cumulative Paid Loss and LAE, Age 24 Months, Accident Years 2016 through 2019

Accident Year	Case Incurred Loss and LAE (000s), Age 24 Months	Cumulative Paid Loss and LAE (000s), Age 24 Months	Case Incurred Loss and LAE per Vehicle, Age 24 Months, 2016 Dollars	Cumulative Paid Loss and LAE per Vehicle, Age 24 Months, 2016 Dollars	Percentage of Reported Claims Closed, Age 24 Months
2016	\$575,352	\$120,299	\$213	\$44.55	66.6%
2017	\$609,604	\$127,852	\$224	\$46.89	66.2%
2018	\$650,772	\$117,178	\$228	\$40.98	62.6%
2019	\$691,002	\$114,545	\$235	\$38.99	59.2%

Table 3 below shows the same phenomenon through 36 months, i.e. an increase in average case incurred amounts per vehicle and an absence of an increase in average paid amounts per vehicle.

(One caution is that the absence of an increase in the paid amount per vehicle may be due to the reduced percentage of reported claims settled at 36 months, for each of the accident years 2017 and 2018. Still, it should be noted that the progression in average payments, as claims close may not be smooth. Claims don't necessarily close in a predictable order.)

Table 4: Case Incurred and Cumulative Paid Loss and LAE, Age 36 Months, Accident Years 2016 through 2018

Accident Year	Case Incurred Loss and LAE (000s), Age 36 Months	Cumulative Paid Loss and LAE (000s), Age 36 Months	Case Incurred Loss and LAE per Vehicle, Age 36 Months, 2016 Dollars	Cumulative Paid Loss and LAE per Vehicle, Age 36 Months, 2016 Dollars	Percentage of Reported Claims Closed, Age 36 Months
2016	\$721,333	\$285,467	\$267	\$106	83.0%
2017	\$793,186	\$300,712	\$291	\$110	81.9%
2018	\$860,892	\$298,138	\$301	\$104	78.1%

C. Specific Adjustments Made for the Change in Loss Development Patterns

An acceleration in loss development patterns has a double, reinforcing effect, amplifying both the current case incurred amounts, and the loss development factors that are calibrated from the new development patterns.

Thus, the process of adjusting the loss development process to a consistent basis throughout the life cycle of the accident year requires two adjustments. The first is an adjustment to the case incurred amounts for the affected accident years to a level of adequacy consistent with the later age-to-age intervals. The second adjustment is to the loss development factors for earlier ages – to undo the “front-loading” of loss development.

1. Adjustments to Case Incurred Amounts

As seen in Figure 9, the average age-to-age ratio for the interval 6-12 months has increased from 1.239 to 1.369 for accident semesters from 2016.2 through 2020.1. Thus, an adjustment to the case incurred amounts for these accident semesters, by the multiplier $1.239/1.369 = 0.905$ is needed. This multiplier will partially restore the level of adequacy of the case incurred loss and LAE amounts to the levels seen prior to the shift that took place in calendar year 2017.

Similarly, a multiplier of $1.076/1.166 = 0.926$, taken from Figure 10, is needed for accident semesters 2016.1 through 2019.2 to provide the remaining restoration to the level of adequacy that existed prior to calendar year 2017.

Table 5 below performs the adjustment to the case incurred loss and LAE amounts.

Table 5: Adjustment of Case Incurred Loss and LAE to Level of Adequacy Prior to Calendar Year 2017

Accident Semester	Case Incurred Loss and ALAE at Dec. 2020 (in Thousands)	Adjustment Multiplier for Interval 6-12 Months	Adjustment Multiplier for Interval 12-18 Months	Adjusted Case Incurred Loss and ALAE at Dec. 2020 (in Thousands)
2016.1	\$411,400	1.000	0.926	\$380,956
2016.2	\$491,645	0.905	0.926	\$412,013
2017.1	\$434,059	0.905	0.926	\$363,754
2017.2	\$483,880	0.905	0.926	\$405,506
2018.1	\$422,497	0.905	0.926	\$354,065
2018.2	\$438,395	0.905	0.926	\$367,388
2019.1	\$352,078	0.905	0.926	\$295,052
2019.2	\$338,924	0.905	0.926	\$284,029
2020.1	\$187,970	0.905	1.000	\$170,113

2. Adjustments to Loss Development Factors

The only two development factors to ultimate that are affected by the shift in the intervals from 6-12 months and from 12-18 months are the factors from 6 months to ultimate and from 12 months to ultimate. Table 6 below performs the adjustment to these two development factors.

Table 6: Adjustment of Loss Development Factors to Level of Adequacy Prior to Calendar Year 2017

Accident Semester	Oliver Wyman Loss Development Factor	Adjustment Multiplier for Interval 6-12 Months	Adjustment Multiplier for Interval 12-18 Months	Adjusted Loss Development Factor
12-ultimate	2.133	1.000	0.926	1.975
6-ultimate	2.952	0.905	0.926	2.474

3. Calculation of Ultimate Loss and LAE Cost per Vehicle, Using Adjustments

Table 7 below illustrates the complete process for the affected accident semesters, of adjusting both the case incurred loss and LAE amounts, and the loss development factors to which they are applied. The result, at the right hand column, is the series of inflation-adjusted loss costs seen in Figure 3.

Table 7: Calculation of Ultimate Loss and LAE Cost per Vehicle, with Adjustments for Change in Loss Development Pattern

Accident Semester	Earned Vehicles	Case Incurred Loss and ALAE at Dec. 2020 (in Thousands)	Adjusted Case Incurred Loss and ALAE at Dec. 2020 (in Thousands)	Adjusted Loss Development Factors	ULAE Factor	Adjusted Ultimate Loss and LAE at (in Thousands)	Loss and LAE Cost per Vehicle	Loss and LAE Cost per Vehicle in 2016 Dollars
2015.1	1,302,868	\$373,624	\$373,624	1.032	1.103	\$425,295		
2015.2	1,349,405	\$462,509	\$462,509	1.042	1.103	\$531,573	\$361	\$363
2016.1	1,324,208	\$411,400	\$380,956	1.057	1.085	\$436,898		
2016.2	1,354,537	\$491,645	\$412,013	1.081	1.085	\$483,244	\$344	\$341
2017.1	1,323,345	\$434,059	\$363,754	1.111	1.092	\$441,311		
2017.2	1,369,502	\$483,880	\$405,506	1.162	1.092	\$514,548	\$355	\$351
2018.1	1,348,691	\$422,497	\$354,065	1.252	1.101	\$488,061		
2018.2	1,399,253	\$438,395	\$367,388	1.385	1.101	\$560,225	\$382	\$367
2019.1	1,372,279	\$352,078	\$295,052	1.599	1.108	\$522,742		
2019.2	1,411,068	\$338,924	\$284,029	1.844	1.108	\$580,314	\$396	\$375
2020.1	1,374,975	\$187,970	\$170,113	1.975	1.103	\$370,607		
2020.2	1,422,587	\$161,105	\$161,105	2.474	1.103	\$439,603	\$290	\$270

D. Average Premium Levels, 2019 through 2021

Figures 11 and 12 illustrate the growth in average premium levels (in 2016 dollars and in nominal dollars respectively) over the three years 2019 through 2021.

These increases are in contrast to the relative stability of inflation-adjusted loss and LAE costs per vehicle, both for bodily injury (after adjustments for the change in loss development patterns) and for all coverages combined.

To be sure, there has been justification for recent rate increases beyond increases in claims costs – in light of the cycle of losses that the industry sustained between 2015 and 2018. However, to the extent that this gap in profitability has been closed, further increases in premium would be expected to be in line with the reduced growth in claims costs.

The next section will present further analysis of the current state of profitability of the industry, in light of rate increases, claims costs, and the reforms provided in Bill 41.

Figure 11: Average Premium Levels in 2016 Dollars, 2019 through 2021, Third Party Liability and All Coverages Combined

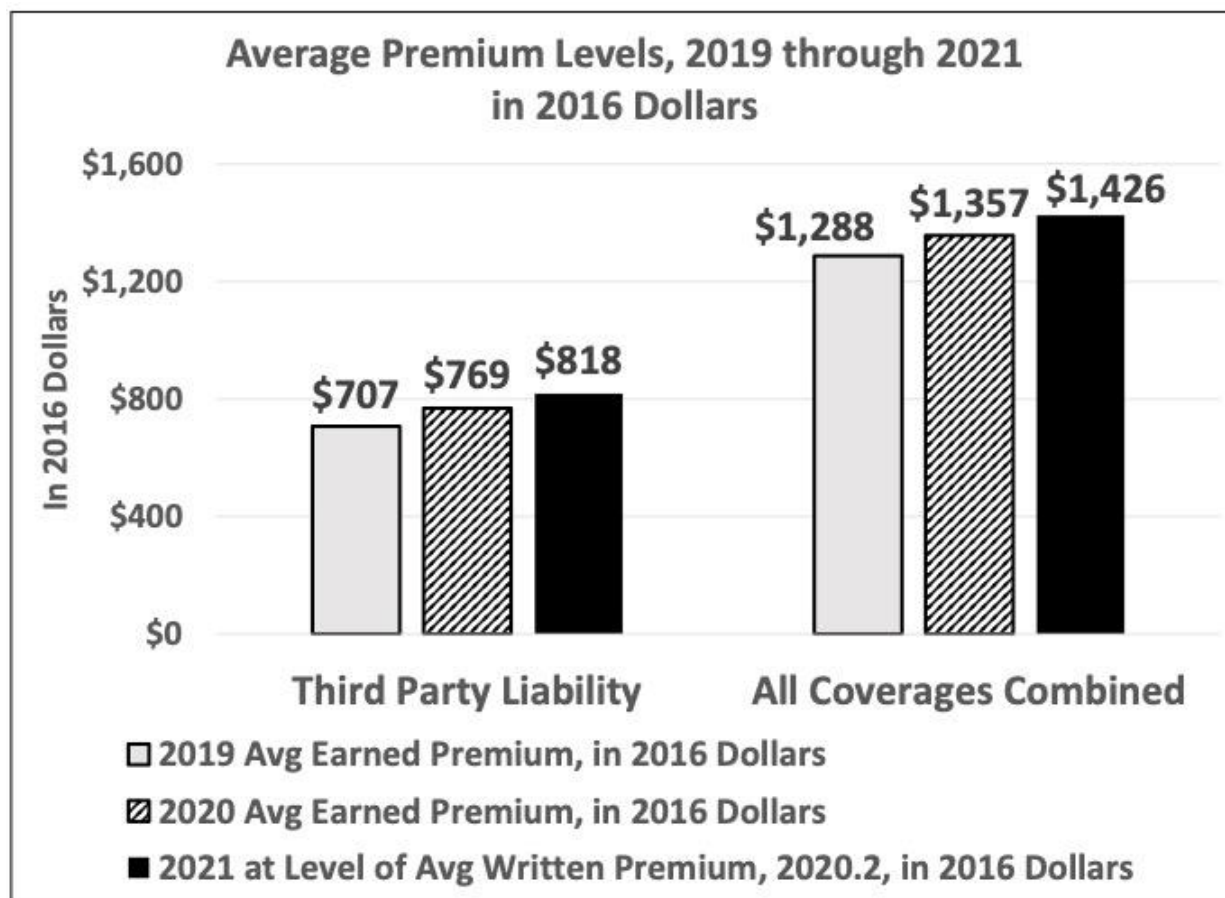
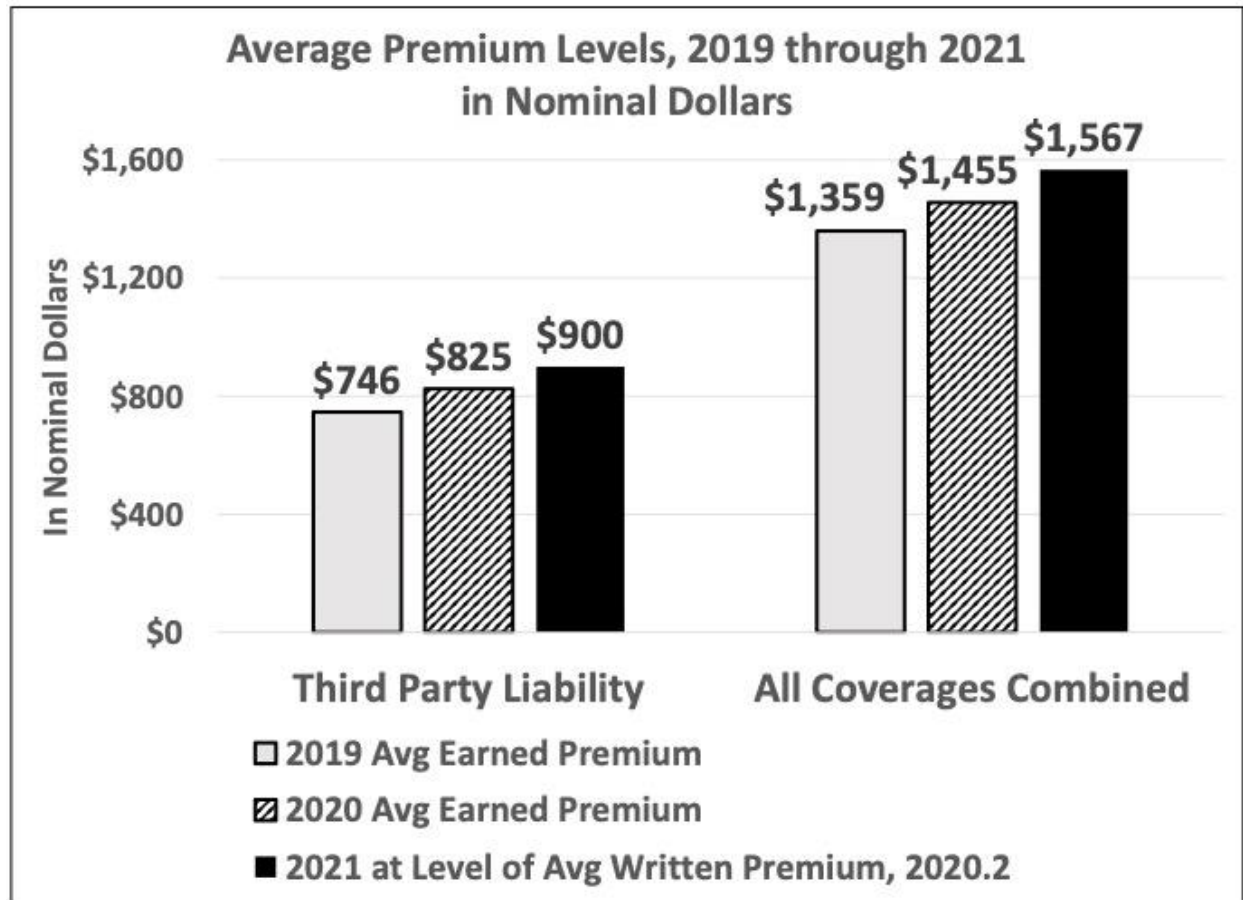


Figure 12: Average Premium Levels in Nominal Dollars, 2019 through 2021, Third Party Liability and All Coverages Combined



E. The Impact of COVID-19

For users of the trend factors provided in Oliver Wyman's December 2020 report, it should be noted that Oliver Wyman has urged the user to take additional measures to consider the effects of COVID-19 on future claims costs.

Oliver Wyman advises on p. 18 of its report as at December 2020 that the trend rates it provides are "intended to measure the rate of change in loss cost experience without influence of COVID-19."

As Oliver Wyman advises:

"For those rating programs intended to be in effect while COVID-19 continues to impact claims costs, the historical loss cost data (to which these trend rates will apply to) should be (i) adjusted to fully remove any impact of COVID-19 and (ii) then adjusted to the degree that COVID-19 is expected to impact claims costs during the proposed rating program."

An example of the impact that COVID-19 is projected to have during proposed rating programs is provided by J.S. Cheng and Partners, Inc. in its May 27, 2020 report "Actuarial Modelling for the Automobile Insurance Advisory Committee," (Appendix 5.8, p. 156). This report proposes a claims cost reduction of 5% for the moving coverages for 2021, and a smaller reduction of 2.5% for the moving coverages for 2022. I used the reduction in the Cheng report in projecting the industry's profit level in 2021.

Oliver Wyman advises further in a footnote that:

"The future effect of the pandemic on traffic is highly uncertain. There may be reduced traffic due to continued work from home flexibility or increased traffic due to reduced reliance on public transit in favour of personal vehicles."

I note that the impact of reduced use of public transit will have a lesser effect in rural areas of Alberta than in urban areas, reflecting lower pre-pandemic transit ridership in those areas with less comprehensive networks of public transit.

F. Profitability of the Alberta Private Passenger Automobile Insurance Industry

Throughout the analyses below, profit for the industry is measured using the method employed by J.S. Cheng and Partners Inc. (“Cheng”) in its 2007 analysis of Alberta auto insurance reform.²

Bill 41 and Prejudgment Interest on Nonpecuniary Damages

I have been provided with Interpretation Bulletin 04-2020 issued by the Alberta Superintendent of Insurance on December 16, 2020. The bulletin advises that the provision in Bill 41 that reduces the rate of prejudgment interest on nonpecuniary damages applies “regardless of whether a cause of action arose before, on or after the coming into force date of the amendment to the rate of prejudgment interest, for judgments given on or after the coming into force date.”

My interpretation of this statement is that the reduction in the prejudgment interest rate does apply to automobile accidents that occurred before Bill 41 took effect (approximately the end of 2020), that were not yet finalized at that date. This can be expected to reduce the loss cost for accident years prior to 2021.

I have estimated the reduction in loss cost due to the reduction in the PJI rate, and I have assigned the reduction in cost to dates prior to 2021 i.e. to the accident year in which the accident took place. I have done so, even though that is contrary to insurance company financial reporting practice. This is so as not to overstate the going-forward profitability of the industry, by including a one-time gain in the current year’s income.

Table 8 below presents the savings that I have estimated for each accident year, arising from the reduction in the prejudgment interest rate, under Bill 41. Note that the savings are greater under the unadjusted claims projections made by Oliver Wyman, as these liabilities are higher than those that are adjusted for the 2017 change in development patterns.

² “REPORT ON THE REVIEW of Insurance Reform – Premium and Claim Analysis by Gordon G. Smith and Theresa K. Reichert of Deloitte and Touche LLP,” J.S. Cheng and Partners, Inc., March 29, 2007

Table 8: Reduction in Losses Due to Reduced PJI Rate for Non-pecuniary Damages

(in Thousands)

Accident Year	[1] Reduction in PJI Under Oliver Wyman Loss Projections	[2] Outstanding Losses Under Oliver Wyman with Adjustments for Loss Development Changes
2011 and prior	\$1,557	\$1,557
2012	\$1,162	\$1,162
2013	\$2,181	\$2,181
2014	\$3,605	\$3,605
2015	\$7,519	\$7,519
2016	\$12,756	\$8,555
2017	\$19,734	\$13,656
2018	\$30,552	\$23,878
2019	\$39,345	\$32,324
2020	\$31,357	\$26,209
Total	\$149,769	\$120,646

1. Results by Year, 2011 to 2019

A. Based on Oliver Wyman Claims Costs, Dec. 2020 Analysis

Industry pre-tax profit based on claims costs in the Oliver Wyman analysis of December 2020, is as shown below in Table 9.

Table 9: Annual Profit and Loss, Alberta Private Passenger Auto Insurance, Using Claims Amounts per Oliver Wyman as at Dec. 2020
(Thousands of Dollars)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Premium	\$2,476,400	\$2,579,400	\$2,729,300	\$2,923,200	\$3,089,300	\$3,186,100	\$3,308,700	\$3,524,900	\$3,783,600	
Less: Claims Costs	\$1,654,400	\$1,943,400	\$2,102,700	\$2,303,800	\$2,521,700	\$2,739,800	\$2,760,200	\$2,940,400	\$2,981,500	
Less: Expenses	\$599,300	\$624,200	\$660,500	\$707,400	\$784,700	\$850,700	\$919,800	\$937,600	\$1,010,200	
Less: Health Cost Recovery	\$82,100	\$75,700	\$63,800	\$72,700	\$101,400	\$100,100	\$102,900	\$139,200	\$146,500	
Plus: Investment Income	\$297,500	\$288,200	\$242,900	\$321,800	\$303,700	\$244,900	\$307,200	\$203,800	\$351,000	
Total Profit, Pre-Tax, Excl. Bill 41	\$438,100	\$224,300	\$145,200	\$161,100	-\$14,800	-\$259,600	-\$167,000	-\$288,500	-\$3,600	\$235,200
Plus: Bill 41 Reduction in PJI by Acc Yr	\$1,600	\$1,200	\$2,200	\$3,600	\$7,500	\$12,800	\$19,700	\$30,600	\$39,300	\$118,500
Total Profit, Pre-Tax, Incl. Bill 41	\$439,700	\$225,500	\$147,400	\$164,700	-\$7,300	-\$246,800	-\$147,300	-\$257,900	\$35,700	\$353,700

By these methods, and without including the impact of the Bill 41 prejudgment interest provision on the 2011 through 2019 accident years, the industry earned a total profit of \$235.2 million over the 2011 to 2019 period, with profit earned in each of the years 2011 through 2014 and losses sustained in each of the years 2015 through 2018.

Including the impact of the Bill 41 prejudgment interest provision on the 2011 through 2019 accident years, the industry total profit increases to \$353.7 million over the 2011 through 2019 period.

B. Based on Oliver Wyman Claims Costs, Dec. 2020 Analysis, Adjusted for 2017 Loss Development Pattern Change

Table 10 below calculates industry pre-tax profit using the claims costs from the Oliver Wyman December 2020 report, adjusted for the 2017 change in loss development patterns. With claims costs at this level, and with including the impact on PJI of Bill 41, total pre-tax profit for the period increases to \$1.055 billion, including a pre-tax profit of more than \$241 million for 2019.

Table 10: Annual Profit and Loss, Alberta Private Passenger Auto Insurance, Using Claims Amounts per Oliver Wyman Analysis as at Dec 2020, Adjusted for 2017 Loss Development Pattern Change

(Thousands of Dollars)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Premium	\$2,476,400	\$2,579,400	\$2,729,300	\$2,923,200	\$3,089,300	\$3,186,100	\$3,308,700	\$3,524,900	\$3,783,600	
Less: Claims Costs	\$1,654,400	\$1,943,400	\$2,102,700	\$2,303,800	\$2,521,700	\$2,612,100	\$2,576,600	\$2,738,900	\$2,768,900	
Less: Expenses	\$599,300	\$624,200	\$660,500	\$707,400	\$784,700	\$850,700	\$919,800	\$937,600	\$1,010,200	
Less: Health Cost Recovery	\$82,100	\$75,700	\$63,800	\$72,700	\$101,400	\$100,100	\$102,900	\$139,200	\$146,500	
Plus: Investment Income	\$297,500	\$288,200	\$242,900	\$321,800	\$303,700	\$244,900	\$307,200	\$203,800	\$351,000	
Total Profit, Pre-Tax, Excl. Bill 41	\$438,100	\$224,300	\$145,200	\$161,100	-\$14,800	-\$131,900	\$16,600	-\$87,000	\$209,000	\$960,600
Plus: Bill 41 Reduction in PJI by Acc Yr	\$1,600	\$1,200	\$2,200	\$3,600	\$7,500	\$8,600	\$13,700	\$23,900	\$32,300	\$94,600
Total Profit, Pre-Tax, Incl. Bill 41	\$439,700	\$225,500	\$147,400	\$164,700	-\$7,300	-\$123,300	\$30,300	-\$63,100	\$241,300	\$1,055,200

2. Industry Profit in 2020 and Projections for 2021

A. Based on Oliver Wyman Claims Costs and Claims Trends, Dec. 2020 Analysis

Table 11 below presents projected pre-tax profit for the industry for 2020 and 2021, based on claims costs and trends from the Oliver Wyman Dec. 2020 analysis. The projection for 2021, is

largely based on a continuation forward of premium components from the 2020 year, and claims amounts from the pre-COVID 2019 accident year, with the following adjustments:

- The projected earned premium for 2021 partially captures premium rate increases taken through late 2020. This done by adjusting the 2020 earned premium upward to the level of written premium in the second half of 2020. Since few company groups sought approval for rate increases in late 2020 and early 2021, this approach is an approximation of the premium to be earned in 2021.
- Claims costs for the 2019 accident year and claims trends to carry these costs to 2021 are as presented in the Oliver Wyman analysis as at December 2020.
- Claims costs between the 2019 level and the 2020 level are increased by the growth in the number of earned exposures of 0.5% between 2019 and 2020. As with the projected 2021 premium, no change is forecast in the number of earned exposures between 2020 and 2021
- Claims costs for the comprehensive, all perils and specified perils coverages are increased for the 51% catastrophe loading in the March 2021 benchmarks.
- Projected claims costs for the 2021 accident year are reduced, for the moving coverages, by 5% for ongoing effects into 2021 of the COVID-19 disruption. The factor of 5% is drawn from the analysis by J.S. Cheng and Partners, Inc. in its May 2020 report³ to the Automobile Insurance Advisory Committee.
- Projected claims costs for the 2021 accident year are reduced by \$76 per earned vehicle for changes to the definition of a minor injury in the Minor Injury Regulation (MIR), enacted in Bill 41. (It is approximated that this change takes effect on Jan. 1, 2021.) The saving of \$76 per vehicle is provided by IBC in its report “Driving Change: Auto Insurance that Works” issued on March 6, 2020.⁴
- Projected claims costs for the 2021 accident year are reduced by \$15 per earned vehicle for changes to the prejudgment interest rate for non-pecuniary damages. (It is approximated that this change takes effect on Jan. 1, 2021.) The saving of \$15 per vehicle is also provided by IBC in its report “Driving Change: Auto Insurance that Works” issued on March 6, 2020.

³ Actuarial Modelling for the Automobile Insurance Advisory Committee, J.S. Cheng and Partners, Inc., May 27, 2020, Appendix 5.8, p. 156.

⁴ “Driving Change: Auto Insurance that Works,” Insurance Bureau of Canada, March 6, 2020, p. 6.

- Projected claims costs for the 2021 accident year can be expected to be reduced for the restriction in Bill 41 on the number of expert reports. An estimate of the magnitude of savings has not been made, but additional savings can be expected.

Table 11: Projected Annual Profit, 2019 and 2020, Alberta Private Passenger Auto Insurance, Using Claims Amounts per Oliver Wyman Analysis as at December 2020

(Thousands of Dollars)

	Actual 2020	Projected 2021*	Total
Premium	\$4,071,500	\$4,386,100	
Less: Claims Costs	\$2,488,100	\$3,410,800	
Less: Expenses	\$1,058,600	\$1,140,400	
Less: Health Cost Recovery	\$115,800	\$74,200	
Plus: Investment Income	\$368,300	\$344,000	
Total Profit, Pre-Tax, Excl. Bill 41	\$777,300	\$104,700	\$882,000
Plus: Bill 41 Change in MIR Definition		\$212,600	\$212,600
Plus: Bill 41 Reduction in PJI	\$31,400	\$42,000	\$73,400
Total Profit, Pre-Tax, Incl. Bill 41	\$808,700	\$359,300	\$1,168,000

Detailed calculations used to determine the amounts in Table 11 are shown in the Appendix, Tables A 9.1 through A9.8.

B. Based on Oliver Wyman Claims Costs and Claims Trends, Dec. 2020 Analysis, Adjusted for 2017 Loss Development Pattern Change

Table 12 below presents projected pre-tax profit for the industry for 2020 and 2021, using Cheng's method, with adjustments for the 2017 loss development pattern change made to claims costs and trends from the Oliver Wyman Dec. 2020 analysis. The projection for 2021, is largely based on a continuation forward of premium components from the 2020 year, and claims amounts from the pre-COVID 2019 accident year, with the following adjustments:

- Claims trends from the Dec. 2020 Oliver Wyman analysis are replaced by a trend of 2% for general inflation, across all coverages, consistent with the stability seen (in 2016 dollars) in loss cost for all coverages combined.

Table 12: Projected Annual Profit, 2019 and 2020, Alberta Private Passenger Auto Insurance, Using Claims Amounts per Oliver Wyman Analysis as at December 2020, Adjusted for 2017 Loss Development Pattern Change

(Thousands of Dollars)

	Actual 2020	Projected 2021*	Total
Premium	\$4,071,500	\$4,386,100	
Less: Claims Costs	\$2,332,500	\$2,996,200	
Less: Expenses	\$1,058,600	\$1,140,400	
Less: Health Cost Recovery	\$115,800	\$74,200	
Plus: Investment Income	\$368,300	\$344,000	
Total Profit, Pre-Tax, Excl. Bill 41	\$932,900	\$519,300	\$1,452,200
Plus: Bill 41 Change in MIR Definition		\$212,600	\$212,600
Plus: Bill 41 Reduction in PJI	\$26,200	\$42,000	\$68,200
Total Profit, Pre-Tax, Incl. Bill 41	\$959,100	\$773,900	\$1,733,000

Detailed calculations used to determine the amounts in Table 12 are shown in the Appendix, Tables A 9.1 through A9.8.

VI. Conclusions

The following are the findings of this analysis.

Finding 1:

My finding is that inflation-adjusted loss and LAE costs per vehicle have remained approximately stable for accident years between 2016 and 2019 (with a marked decline in the pandemic year 2020). This is my finding for both bodily injury coverage and for all coverages combined. pre-2020 accident years. An apparent change in loss development patterns beginning in 2017 has complicated the task of assessing the trend in bodily injury loss costs. However, evidence to date suggests that the change in pattern is driven by case reserving practices, rather than a change in the underlying claims exposure. A continuation into the future of the stability seen for the last 4.5 years would be in contrast to the current bodily injury benchmark trend rate, which continues to project future growth well in excess of the general inflation rate.

Finding 2:

Inflation-adjusted premium levels per vehicle, both for bodily injury coverage and for all coverages combined, have increased at above the rate of general inflation since 2019, while inflation-adjusted claims costs have been approximately stable. Such premium increases were needed to remedy the unprofitable position of the industry between 2015 and 2018. However, stabilization of claims costs and the introduction of reforms under Bill 41 have put the industry in a profitable position in recent years.

Finding 3:

Oliver Wyman advises that its trend factors do not take account of the effect of COVID-19. However, they also acknowledge that the pandemic may continue to affect prospective loss experience, and advise that adjustments to historic loss experience be made for programs with such an ongoing impact.

Finding 4:

Industry pre-tax profits in 2019 and 2020 are projected at \$209.0 million and \$932.9.1 million respectively. Further, the impact of Bill 41 on prejudgment interest for claims from prior accident years that remain open is projected to add a one-time gain of over \$120 million to industry pre-tax profits. Projected pre-tax profits for 2021, when savings from Bill 41 and a 5% claims cost reduction on moving coverages for COVID-19 are \$773.9 million.

Appendix

1. Consumer Price Index for Alberta

Table A 1.1 Consumer Price Index for Alberta, and 12-Month Change in CPI

Date	Consumer Price Index, All Items, Alberta	12-Month Change in CPI
December 2013	129.1	
June 2014	132.3	
December 2014	131.5	1.9%
June 2015	134.5	1.7%
December 2015	133.5	1.5%
June 2016	136.3	1.3%
December 2016	134.9	1.0%
June 2017	136.9	0.4%
December 2017	137.6	2.0%
June 2018	140.7	2.8%
December 2018	140.5	2.1%
June 2019	142.7	1.4%
December 2019	143.7	2.3%
June 2020	145.0	1.6%
December 2020	144.8	0.8%
June 2021	148.9	2.7%

Source: Statistics Canada

<https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1810000402>

2. Calculation of Loss and LAE Cost per Vehicle, from Oliver Wyman Report as at December 2020

Table A 2.1: Ultimate Loss and LAE by Coverage, by Accident Semester

Accident Semester	[1] All Coverages Loss and LAE (000s)	[2] Bodily Injury Loss and LAE (000s)	[3] Property Damage Loss and LAE (000s)	[4] Accident Benefits Loss and LAE (000s)	[5] Collision Loss and LAE (000s)	[6] Comprehensive Loss and LAE (000s)	[7] All Perils Loss and LAE (000s)	[8] Specifd. Perils Loss and LAE (000s)	[9] Undrinsd Motorists Loss and LAE (000s)
2011.1	\$753,599	\$247,425	\$179,038	\$39,347	\$201,647	\$79,719	\$3,760	\$211	\$2,452
2011.2	\$900,772	\$323,549	\$175,586	\$49,473	\$186,703	\$152,993	\$5,003	\$384	\$7,081
2012.1	\$776,206	\$299,443	\$163,969	\$44,157	\$177,221	\$84,554	\$2,907	\$201	\$3,754
2012.2	\$1,167,189	\$363,945	\$208,166	\$56,759	\$225,674	\$296,883	\$5,893	\$740	\$9,129
2013.1	\$905,793	\$326,652	\$185,137	\$46,712	\$200,960	\$138,295	\$5,102	\$350	\$2,585
2013.2	\$1,196,889	\$414,133	\$226,185	\$57,707	\$250,559	\$238,497	\$5,148	\$360	\$4,300
2014.1	\$916,599	\$349,186	\$201,180	\$46,437	\$222,588	\$90,897	\$3,636	\$288	\$2,387
2014.2	\$1,387,216	\$475,012	\$231,264	\$62,607	\$259,962	\$343,986	\$6,826	\$650	\$6,909
2015.1	\$1,071,673	\$425,058	\$215,959	\$57,187	\$239,622	\$118,640	\$4,187	\$282	\$10,738
2015.2	\$1,450,046	\$531,666	\$234,349	\$78,621	\$256,512	\$333,503	\$6,203	\$591	\$8,601
2016.1	\$1,147,360	\$471,604	\$195,672	\$59,114	\$218,945	\$189,009	\$4,201	\$483	\$8,332
2016.2	\$1,592,473	\$576,747	\$228,591	\$80,626	\$272,644	\$413,806	\$7,041	\$676	\$12,342
2017.1	\$1,249,487	\$526,341	\$224,781	\$78,910	\$260,192	\$148,887	\$4,786	\$403	\$5,187
2017.2	\$1,510,668	\$613,685	\$242,323	\$89,287	\$286,576	\$263,395	\$5,254	\$751	\$9,397
2018.1	\$1,366,739	\$582,026	\$246,954	\$94,816	\$288,108	\$141,496	\$5,377	\$564	\$7,398
2018.2	\$1,573,693	\$668,435	\$235,194	\$89,149	\$286,226	\$279,395	\$6,167	\$657	\$8,470
2019.1	\$1,388,693	\$623,755	\$235,523	\$94,911	\$281,654	\$142,678	\$4,257	\$449	\$5,466
2019.2	\$1,592,762	\$692,555	\$239,076	\$107,870	\$271,848	\$265,728	\$6,067	\$603	\$9,015
2020.1	\$1,271,438	\$442,172	\$164,823	\$72,305	\$184,683	\$395,775	\$4,501	\$859	\$6,320
2020.2	\$1,216,656	\$524,364	\$179,890	\$82,645	\$184,470	\$234,949	\$4,265	\$677	\$5,396

Source:

Annual Review of Industry Experience – Preliminary Report as of December 31, 2020, Private Passenger Vehicles, Alberta Automobile Insurance Rate Board; Prepared by Oliver Wyman, June 9, 2021; Appendix B, Column (7)

Table A 2.2: Ultimate Loss and LAE by Coverage, by Accident Year,

Accident Year	[1] All Coverages Loss and LAE (000s)	[2] Bodily Injury Loss and LAE (000s)
2011	\$1,654,371	\$570,974
2012	\$1,943,395	\$663,388
2013	\$2,102,682	\$740,785
2014	\$2,303,815	\$824,198
2015	\$2,521,719	\$956,724
2016	\$2,739,833	\$1,048,351
2017	\$2,760,155	\$1,140,026
2018	\$2,940,432	\$1,250,461
2019	\$2,981,455	\$1,316,310
2020	\$2,488,094	\$966,536

Table A 2.3: Earned Exposures, Third Party Liability, by Accident Semester

Accident Semester	[1] Third Party Liability Earned Car Years
2011.1	1,128,676
2011.2	1,178,555
2012.1	1,171,059
2012.2	1,220,908
2013.1	1,210,580
2013.2	1,269,813
2014.1	1,257,071
2014.2	1,319,765
2015.1	1,302,868
2015.2	1,349,405
2016.1	1,324,208
2016.2	1,354,537
2017.1	1,323,345
2017.2	1,369,502
2018.1	1,348,691
2018.2	1,399,253
2019.1	1,372,279
2019.2	1,411,068
2020.1	1,374,975
2020.2	1,422,587

Source: Annual Review of Industry Experience – Preliminary Report as of December 31, 2020, Private Passenger Vehicles, Alberta Automobile Insurance Rate Board; Prepared by Oliver Wyman, June 9, 2021; Appendix B, Page 1, Column (3)

Table A 2.4: Earned Exposures, Third Party Liability, by Accident Year

Accident Year	[1] Third Party Liability Earned Car Years
2011	2,307,231
2012	2,391,968
2013	2,480,393
2014	2,576,836
2015	2,652,273
2016	2,678,745
2017	2,692,847
2018	2,747,944
2019	2,783,347
2020	2,797,562

Table A 2.5: Ultimate Loss and LAE Cost per Earned Vehicle by Accident Year

Accident Year	[1] All Coverages Loss and LAE Cost per Earned Vehicle	[2] Bodily Injury Loss and LAE Cost per Earned Vehicle	[3] Alberta CPI (June)	[4] Alberta CPI 2016	[5] All Coverages Loss and LAE Cost per Earned Vehicle, in 2016 Dollars	[6] Bodily Injury Loss and LAE Cost per Earned Vehicle, in 2016 Dollars
2011	\$717	\$247	125.3	135.2	\$774	\$267
2012	\$812	\$277	126.9	135.2	\$866	\$295
2013	\$848	\$299	129.8	135.2	\$883	\$311
2014	\$894	\$320	132.3	135.2	\$914	\$327
2015	\$951	\$361	134.5	135.2	\$956	\$363
2016	\$1,023	\$391	136.3	135.2	\$1,015	\$388
2017	\$1,025	\$423	136.9	135.2	\$1,012	\$418
2018	\$1,070	\$455	140.7	135.2	\$1,028	\$437
2019	\$1,071	\$473	142.7	135.2	\$1,015	\$448
2020	\$889	\$345	145.0	135.2	\$829	\$322

3. Loss and LAE Cost per Vehicle, from Oliver Wyman Report as of June 2019

Table A 3.1: Ultimate Loss and LAE Cost per Earned Vehicle, Bodily Injury, by Fiscal Accident Year

Fiscal Accident Year	[1] Bodily Injury Loss and LAE Cost per Earned Vehicle	[2] Alberta CPI (December)	[3] Alberta CPI 2016	[4] Bodily Injury Loss and LAE Cost per Earned Vehicle, in 2016 Dollars
2011-12	\$266	126.5	135.2	\$284
2012-13	\$284	126.5	135.2	\$304
2013-14	\$305	129.1	135.2	\$319
2014-15	\$348	131.5	135.2	\$358
2015-16	\$380	133.5	135.2	\$384
2016-17	\$419	134.9	135.2	\$420
2017-18	\$434	137.6	135.2	\$426
2018-19	\$428	140.5	135.2	\$412

Source:

[1]: Semi-Annual Review of Industry Experience – Final Report as of June 30, 2019, Private Passenger Vehicles, Alberta Automobile Insurance Rate Board; Prepared by Oliver Wyman, March 27, 2020; Appendix B, Page 1, Column (14)

4. Loss and LAE Cost per Vehicle, Bodily Injury, Underlying GISA Actual Loss Ratio Report as at December 2019

Table A 4.1: Ultimate Loss and LAE, Bodily Injury, GISA Actual Loss Ratio Report, Dec. 2019, by Accident Semester

Accident Semester	[1] Earned Car Years	[2] Case Incurred Loss and ALAE (in Thousands)	[3] GISA Loss Development Factor	[4] ULAE Factor	[5] Ultimate Incurred Loss and LAE (in Thousands)
2011.1	1,128,681	\$223,329	1.005	1.095	\$245,768
2011.2	1,178,562	\$292,748	1.008	1.095	\$323,124
2012.1	1,171,072	\$270,485	1.012	1.091	\$298,640
2012.2	1,220,939	\$329,448	1.016	1.091	\$365,179
2013.1	1,210,617	\$291,448	1.020	1.099	\$326,707
2013.2	1,269,842	\$367,563	1.023	1.099	\$413,243
2014.1	1,257,098	\$312,046	1.036	1.093	\$353,344
2014.2	1,319,792	\$417,457	1.048	1.093	\$478,182
2015.1	1,302,898	\$363,291	1.060	1.103	\$424,753
2015.2	1,349,438	\$442,669	1.080	1.103	\$527,325
2016.1	1,324,238	\$383,846	1.118	1.085	\$465,617
2016.2	1,354,559	\$455,404	1.130	1.085	\$558,348
2017.1	1,323,362	\$386,855	1.214	1.092	\$512,848
2017.2	1,369,522	\$406,332	1.310	1.092	\$581,266
2018.1	1,348,733	\$323,219	1.497	1.101	\$532,729
2018.2	1,399,350	\$327,553	1.672	1.101	\$602,983
2019.1	1,372,496	\$257,440	1.988	1.108	\$567,065
2019.2	1,412,408	\$210,044	2.617	1.108	\$609,051

Sources:

[1], [2]: Exhibit AUTO7001-AB-2019, General Insurance Statistical Agency (GISA)

[3]: Exhibit AUTO0001-AB-2019, General Insurance Statistical Agency (GISA)

[4]: ULAE Factor, published GISA accident year provision

[5]: [2] * [3] * [4]

Table A 4.2: Loss and LAE Cost per Vehicle, Bodily Injury, GISA Actual Loss Ratio Report, Dec. 2019, by Accident Year

Accident Year	[1] Earned Car Years	[2] Ultimate Incurred Loss and LAE (in Thousands)	[3] Loss and LAE Cost per Vehicle	[4] Alberta CPI (June)	[5] Alberta CPI (Avg for 2016)	[6] Loss and LAE Cost per Vehicle, 2016 Dollars
2011	2,307,243	\$568,892	\$247	125.3	135.2	\$266
2012	2,392,011	\$663,819	\$278	126.9	135.2	\$296
2013	2,480,459	\$739,950	\$298	129.8	135.2	\$311
2014	2,576,890	\$831,526	\$323	132.3	135.2	\$330
2015	2,652,336	\$952,078	\$359	134.5	135.2	\$361
2016	2,678,797	\$1,023,965	\$382	136.3	135.2	\$379
2017	2,692,885	\$1,094,114	\$406	136.9	135.2	\$401
2018	2,748,083	\$1,135,712	\$413	140.7	135.2	\$397
2019	2,784,904	\$1,176,116	\$422	142.7	135.2	\$400

Sources:

[1]: Table A 4.1, Column [1]

[2]: Table A 4.1, Column [2]

[3]: [2] / [1]

[6]: [3] * [5] / [4]

5. Favorable Development, Bodily Injury, Dec 2017 to Dec 2020, Accident Years 2011 through 2017

Table A 5.1: Percentage Change in Ultimate Loss and LAE, Bodily Injury, Dec 2017 to Dec. 2020, Accident Years 2011 through 2017

Accident Semester	[1] Ultimate Loss and LAE, by Accident Semester, as at Dec 2017 (in Thousands)	[2] Ultimate Loss and LAE, by Accident Semester, as at Dec 2020 (in Thousands)	[3] Ultimate Loss and LAE, by Accident Year, as at Dec 2017 (in Thousands)	[4] Ultimate Loss and LAE, by Accident Year, as at Dec 2020 (in Thousands)	[5] Percentage Change by Accident Year
2011.1	\$247,074	\$247,425			
2011.2	\$326,102	\$323,549	\$573,176	\$570,974	-0.4%
2012.1	\$306,730	\$299,443			
2012.2	\$368,125	\$363,945	\$674,855	\$663,388	-1.7%
2013.1	\$340,105	\$326,652			
2013.2	\$435,356	\$414,133	\$775,461	\$740,785	-4.5%
2014.1	\$373,748	\$349,186			
2014.2	\$512,556	\$475,012	\$886,304	\$824,198	-7.0%
2015.1	\$465,503	\$425,058			
2015.2	\$595,742	\$531,666	\$1,061,245	\$956,724	-9.8%
2016.1	\$512,104	\$471,604			
2016.2	\$643,874	\$576,747	\$1,155,978	\$1,048,351	-9.3%
2017.1	\$565,846	\$526,341			
2017.2	\$618,482	\$613,685	\$1,184,328	\$1,140,026	-3.7%

Sources:

[1]: Annual Review of Industry Experience – Final Report as of December 31, 2017, Private Passenger Vehicles, Alberta Automobile Insurance Rate Board; Prepared by Oliver Wyman, September 19, 2018; Appendix B, Page 1, Column (7)

[2]: Annual Review of Industry Experience – Preliminary Report as of December 31, 2020, Private Passenger Vehicles, Alberta Automobile Insurance Rate Board; Prepared by Oliver Wyman, June 9, 2021; Appendix B, Page 1, Column (7)

[5]: [4] / [3] - 1

6. Paid Claim Dollars and Closed Claim Counts, Bodily Injury

Table A 6.1: Ultimate Incurred and Paid Dollars and Ultimate and Closed Claim Counts, by Accident Semester, Bodily Injury

Accident Semester	[1] Third Party Liability Earned Car Years	[2] Bodily Injury Ultimate Incurred Loss and LAE (in Thousands)	[3] Bodily Injury Paid Loss and ALAE (in Thousands)	[4] Bodily Injury Ultimate Claim Count	[5] Bodily Injury Closed Claim Count
2011.1	1,128,676	\$247,425	\$220,394	7,016	7,007
2011.2	1,178,555	\$323,549	\$286,362	7,007	7,005
2012.1	1,171,059	\$299,443	\$263,569	6,656	6,646
2012.2	1,220,908	\$363,945	\$311,976	7,739	7,710
2013.1	1,210,580	\$326,652	\$274,633	7,168	7,142
2013.2	1,269,813	\$414,133	\$337,933	8,616	8,556
2014.1	1,257,071	\$349,186	\$288,839	7,562	7,515
2014.2	1,319,765	\$475,012	\$364,979	8,820	8,716
2015.1	1,302,868	\$425,058	\$301,129	8,092	7,939
2015.2	1,349,405	\$531,666	\$357,710	8,825	8,585
2016.1	1,324,208	\$471,604	\$289,639	7,755	7,436
2016.2	1,354,537	\$576,747	\$322,761	9,069	8,491
2017.1	1,323,345	\$526,341	\$253,627	8,606	7,963
2017.2	1,369,502	\$613,685	\$246,477	9,085	7,940
2018.1	1,348,691	\$582,026	\$171,909	8,731	7,216
2018.2	1,399,253	\$668,435	\$126,230	8,866	6,627
2019.1	1,372,279	\$623,755	\$70,494	8,780	5,579
2019.2	1,411,068	\$692,555	\$44,052	8,962	4,496
2020.1	1,374,975	\$442,172	\$12,264	5,797	2,001
2020.2	1,422,587	\$524,364	\$2,988	6,579	516

Sources:

[1], [3], [5]:

Exhibit AUTO7001-AB-2020, General Insurance Statistical Agency (GISA)

[2]: Annual Review of Industry Experience – Preliminary Report as of December 31, 2020, Private Passenger Vehicles, Alberta Automobile Insurance Rate Board; Prepared by Oliver Wyman, June 9, 2021; Appendix B, Page 1, Column (7)

[4]: Annual Review of Industry Experience – Preliminary Report as of December 31, 2020, Private Passenger Vehicles, Alberta Automobile Insurance Rate Board; Prepared by Oliver Wyman, June 9, 2021; Appendix B, Page 1, Column (4)

Table A 6.2: Ultimate Incurred and Paid Dollars and Ultimate and Closed Claim Counts, by Accident Year, Bodily Injury

Accident Year	[1] Third Party Liability Earned Car Years	[2] Bodily Injury Ultimate Incurred Loss and LAE (in Thousands)	[3] Bodily Injury Paid Loss and ALAE (in Thousands)	[4] Bodily Injury Unpaid Loss and LAE (in Thousands)	[5] Bodily Injury Paid Loss and ALAE as Pct of Ultimate Incurred Loss and LAE	[6] Bodily Injury Ultimate Claim Count	[7] Bodily Injury Closed Claim Count	[8] Bodily Injury Closed Claim Count as Pct of Ultimate
2011	2,307,231	\$570,974	\$506,756	\$64,218	89%	14,023	14,012	99%
2012	2,391,968	\$663,388	\$575,545	\$87,843	87%	14,395	14,356	99%
2013	2,480,393	\$740,785	\$612,566	\$128,219	83%	15,784	15,698	99%
2014	2,576,836	\$824,198	\$653,818	\$170,380	79%	16,382	16,231	99%
2015	2,652,273	\$956,724	\$658,839	\$297,885	69%	16,917	16,524	98%
2016	2,678,745	\$1,048,351	\$612,400	\$435,951	58%	16,824	15,927	95%
2017	2,692,847	\$1,140,026	\$500,104	\$639,922	44%	17,691	15,903	90%
2018	2,747,944	\$1,250,461	\$298,138	\$952,323	24%	17,597	13,843	79%
2019	2,783,347	\$1,316,310	\$114,545	\$1,201,765	9%	17,742	10,075	57%
2020	2,797,562	\$966,536	\$15,252	\$951,284	2%	12,376	2,517	20%

Table A 6.3: Paid and Unpaid Loss and LAE per Vehicle, Nominal and in 2016 Dollars, Bodily Injury

Accident Year	[1] Bodily Injury Paid Loss and ALAE per Vehicle	[2] Bodily Injury Unpaid Loss and LAE per Vehicle	[3] Alberta CPI (June)	[4] Alberta CPI (Avg for 2016)	[5] Bodily Injury Paid Loss and ALAE per Vehicle, in 2016 Dollars	[6] Bodily Injury Unpaid Loss and LAE per Vehicle, in 2016 Dollars
2011	\$220	\$28	125.3	135.2	\$237	\$30
2012	\$241	\$37	126.9	135.2	\$256	\$39
2013	\$247	\$52	129.8	135.2	\$257	\$54
2014	\$254	\$66	132.3	135.2	\$259	\$68
2015	\$248	\$112	134.5	135.2	\$250	\$113
2016	\$229	\$163	136.3	135.2	\$227	\$161
2017	\$186	\$238	136.9	135.2	\$183	\$235
2018	\$108	\$347	140.7	135.2	\$104	\$333
2019	\$41	\$432	142.7	135.2	\$39	\$409
2020	\$5	\$340	145.0	135.2	\$5	\$317

7. Calculation of Ultimate Loss and LAE Amounts, Adjusted for Change in Loss Development Pattern, Bodily Injury

Table A 7.1: Calculation of Ultimate Loss and LAE, Adjusted for Change in Loss Development Pattern, Bodily Injury

Accident Semester	[1] Case Incurred Loss and ALAE (000s)	[2] Adjustment Factor Age 6-12 Mos	[3] Adjustment Factor Age 12-18 Mos	[4] Adjusted Case Incurred Loss and ALAE (000s)	[5] Oliver Wyman Loss Dev Factor	[6] LDF Adjustment Factor Age 6-12 Mos	[7] LDF Adjustment Factor Age 12-18 Mos	[8] Adjusted Loss Dev Factor	[9] ULAE Factor	[10] Adjusted Ultimate Loss and LAE
2011.1	\$224,422	1.000	1.000	\$224,422	1.007	1.000	1.000	1.007	1.095	\$247,462
2011.2	\$293,431	1.000	1.000	\$293,431	1.007	1.000	1.000	1.007	1.095	\$323,556
2012.1	\$271,694	1.000	1.000	\$271,694	1.010	1.000	1.000	1.010	1.091	\$299,382
2012.2	\$329,281	1.000	1.000	\$329,281	1.013	1.000	1.000	1.013	1.091	\$363,916
2013.1	\$292,382	1.000	1.000	\$292,382	1.016	1.000	1.000	1.016	1.099	\$326,469
2013.2	\$369,579	1.000	1.000	\$369,579	1.019	1.000	1.000	1.019	1.099	\$413,884
2014.1	\$312,325	1.000	1.000	\$312,325	1.023	1.000	1.000	1.023	1.093	\$349,223
2014.2	\$423,616	1.000	1.000	\$423,616	1.026	1.000	1.000	1.026	1.093	\$475,051
2015.1	\$373,624	1.000	1.000	\$373,624	1.032	1.000	1.000	1.032	1.103	\$425,295
2015.2	\$462,509	1.000	1.000	\$462,509	1.042	1.000	1.000	1.042	1.103	\$531,573
2016.1	\$411,400	1.000	0.926	\$380,956	1.057	1.000	1.000	1.057	1.085	\$436,898
2016.2	\$491,645	0.905	0.926	\$412,013	1.081	1.000	1.000	1.081	1.085	\$483,244
2017.1	\$434,059	0.905	0.926	\$363,754	1.111	1.000	1.000	1.111	1.092	\$441,311
2017.2	\$483,880	0.905	0.926	\$405,506	1.162	1.000	1.000	1.162	1.092	\$514,548
2018.1	\$422,497	0.905	0.926	\$354,065	1.252	1.000	1.000	1.252	1.101	\$488,061
2018.2	\$438,395	0.905	0.926	\$367,388	1.385	1.000	1.000	1.385	1.101	\$560,225
2019.1	\$352,078	0.905	0.926	\$295,052	1.599	1.000	1.000	1.599	1.108	\$522,742
2019.2	\$338,924	0.905	0.926	\$284,029	1.844	1.000	1.000	1.844	1.108	\$580,314
2020.1	\$187,970	0.905	1.000	\$170,113	2.133	1.000	0.926	1.975	1.103	\$370,607
2020.2	\$161,105	1.000	1.000	\$161,105	2.952	0.905	0.926	2.474	1.103	\$439,603

Sources:

[1]: Exhibit AUTO7001-AB-2020, General Insurance Statistical Agency (GISA)

[4]: [1] * [2] * [3]

[5]: Annual Review of Industry Experience – Preliminary Report as of December 31, 2020, Private Passenger Vehicles, Alberta Automobile Insurance Rate Board; Prepared by Oliver Wyman, June 9, 2021; Appendix A, Page 3, Column (2)

[8]: [5] * [6] * [7]

[9]: Annual Review of Industry Experience – Preliminary Report as of December 31, 2020, Private Passenger Vehicles, Alberta Automobile Insurance Rate Board; Prepared by Oliver Wyman, June 9, 2021; Appendix B, Page 1, Column (6)

[10]: [4] * [8] * [9]

Table A 7.2: Calculation of Loss and LAE Cost per Vehicle, Adjusted for Change in Loss Development Pattern, Bodily Injury

	[1]	[2]	[3]	[4]	[5]	[6]
Accident Year	Earned Car Years	Ultimate Incurred Loss and LAE (in Thousands)	Loss and LAE Cost per Vehicle	Alberta CPI (June)	Alberta CPI (Avg for 2016)	Loss and LAE Cost per Vehicle, 2016 Dollars
2011	2,307,231	\$571,018	\$247	125.3	135.2	\$267
2012	2,391,968	\$663,298	\$277	126.9	135.2	\$295
2013	2,480,393	\$740,353	\$298	129.8	135.2	\$311
2014	2,576,836	\$824,274	\$320	132.3	135.2	\$327
2015	2,652,273	\$956,868	\$361	134.5	135.2	\$363
2016	2,678,745	\$920,142	\$343	136.3	135.2	\$341
2017	2,692,847	\$955,859	\$355	136.9	135.2	\$351
2018	2,747,944	\$1,048,286	\$381	140.7	135.2	\$367
2019	2,783,347	\$1,103,055	\$396	142.7	135.2	\$375
2020	2,797,562	\$810,211	\$290	145.0	135.2	\$270

Table A 7.3: Calculation of Adjustment Factors for Change in Loss Development Pattern, 6-12 Months

Accident Semester	[1] Case Incurred Loss and ALAE, Age 6 Months (in Thousands)	[2] Case Incurred Loss and ALAE, Age 12 Months (in Thousands)	[3] Weighted Average Age- to-Age Ratio
2012.2	\$147,335	\$177,626	
2013.1	\$122,754	\$150,964	
2013.2	\$158,085	\$201,330	
2014.1	\$139,295	\$170,205	
2014.2	\$181,499	\$220,251	
2015.1	\$157,887	\$199,168	
2015.2	\$193,905	\$242,166	
2016.1	\$156,971	\$197,097	
Subtotal for Pre-2017 Calendar Period	\$1,257,731	\$1,558,808	1.239
2016.2	\$174,369	\$251,531	
2017.1	\$169,629	\$229,155	
2017.2	\$202,756	\$277,061	
2018.1	\$197,315	\$242,620	
2018.2	\$199,756	\$278,187	
2019.1	\$182,157	\$257,440	
2019.2	\$210,044	\$292,335	
2020.1	\$136,535	\$187,970	
Subtotal for 2017-and- Later Calendar Period	\$1,472,561	\$2,016,299	1.369

Adjustment Factor = $1.239 / 1.369 = 0.905$

Sources:

[1], [2]: Exhibit AUTO7001-AB-2020, General Insurance Statistical Agency (GISA)

Table A 7.4: Calculation of Adjustment Factor for Change in Loss Development Pattern, 12-18 Months

Accident Semester	[1] Case Incurred Loss and ALAE, Age 12 Months (in Thousands)	[2] Case Incurred Loss and ALAE, Age 18 Months (in Thousands)	[3] Weighted Average Age- to-Age Ratio
2012.2	\$161,246	\$164,395	
2012.2	\$177,626	\$190,638	
2013.1	\$150,964	\$162,433	
2013.2	\$201,330	\$213,249	
2014.1	\$170,205	\$184,617	
2014.2	\$220,251	\$243,195	
2015.1	\$199,168	\$213,997	
2015.2	\$242,166	\$266,694	
Subtotal for Pre-2017 Calendar Period	\$1,522,956	\$1,639,217	1.076
2016.1	\$197,097	\$238,040	
2016.2	\$251,531	\$300,285	
2017.1	\$229,155	\$267,360	
2017.2	\$277,061	\$306,885	
2018.1	\$242,620	\$277,037	
2018.2	\$278,187	\$327,553	
2019.1	\$257,440	\$306,207	
2019.2	\$292,335	\$338,924	
Subtotal for 2017-and- Later Calendar Period	\$2,025,427	\$2,362,290	1.166

Adjustment Factor = $1.076 / 1.166 = 0.926$

Sources:

[1], [2]: Exhibit AUTO7001-AB-2020, General Insurance Statistical Agency (GISA)

8. Savings Due to Bill 41 and the Reduction in the Prejudgment Interest Rate on Non-pecuniary Damages

According to the closed claim study “Alberta Automobile Insurance Claims and Costs Study for Treasury Board and Finance,” performed by J.S. Cheng and Partners, Inc. and Cameron and Associates, and issued Nov. 7, 2019, the amounts paid for prejudgment interest on nonpecuniary loss, and total loss amounts paid, were recorded for three cohorts of claims, closed in 2010, 2012 and 2017 respectively. These items are reported in Appendix A3, Page 9 of 15, of the study.⁵

Table A 8.1: Paid PJI on Non-Pecuniary Loss to Total Bodily Injury Payments

	2010 Cohort	2012 Cohort	2017 Cohort	Total
PJI on Non-Pecuniary Loss	\$719,404	\$677,445	\$836,177	\$2,233,026
Aggregated Total BI Settlement	\$13,515,152	\$15,848,409	\$27,150,008	\$56,513,569
PJI on NonPec as Pct of Total BI Settlement	5.3%	4.3%	3.1%	4.0%

Based on a simple weighted average, prejudgment interest on non-pecuniary loss is 4% of the loss cost for the entire bodily injury coverage.

The reduction in the rate from 4% to the current rate of 0.2% is thus a saving of 3.8% of the total loss (not LAE) cost.

Ultimate loss cost can be approximately estimated by applying the Oliver Wyman loss and LAE factors, to case incurred losses alone. For the adjusted approach, the adjustment factors for the case incurred loss and the Oliver Wyman loss and LAE development factors are applied.

⁵ Alberta Automobile Insurance Claims and Costs Study for Treasury Board and Finance, J.S. Cheng and Partners, Inc., Cameron and Associates, Nov. 7, 2019, Appendix A3, Page 9 of 15.

Table A 8.2: Estimated Savings on PJI Under Bill 41, Oliver Wyman Loss Development Factors

(Dollar Amounts in Thousands)

Accident Semester	[1] Case Incurred Loss	[2] Oliver Wyman Loss and LAE Dev Factors	[3] Ultimate Loss	[4] Paid Loss	[5] Unpaid Loss	[6] Savings on PJI	[7] Savings on PJI by Accident Year
201101	\$201,738	1.007	\$203,150	\$198,001	\$32,396	\$1,231	
201102	\$266,342	1.007	\$268,206	\$259,628	\$8,578	\$326	\$1,557
201201	\$247,843	1.010	\$250,322	\$240,174	\$10,148	\$386	
201202	\$300,982	1.013	\$304,895	\$284,465	\$20,430	\$776	\$1,162
201301	\$265,554	1.016	\$269,803	\$248,713	\$21,090	\$801	
201302	\$336,213	1.019	\$342,601	\$306,287	\$36,313	\$1,380	\$2,181
201401	\$288,407	1.023	\$295,040	\$266,383	\$28,657	\$1,089	
201402	\$392,475	1.026	\$402,679	\$336,461	\$66,218	\$2,516	\$3,605
201501	\$345,068	1.032	\$356,110	\$276,258	\$79,852	\$3,034	
201502	\$430,365	1.042	\$448,440	\$330,413	\$118,027	\$4,485	\$7,519
201601	\$383,161	1.057	\$405,001	\$267,477	\$137,525	\$5,226	
201602	\$462,651	1.081	\$500,125	\$301,955	\$198,170	\$7,530	\$12,756
201701	\$411,008	1.111	\$456,630	\$238,436	\$218,195	\$8,291	
201702	\$459,510	1.162	\$533,950	\$232,834	\$301,116	\$11,442	\$19,734
201801	\$403,353	1.252	\$504,998	\$163,460	\$341,538	\$12,978	
201802	\$420,745	1.385	\$582,731	\$120,271	\$462,461	\$17,573	\$30,552
201901	\$339,061	1.599	\$542,159	\$66,905	\$475,254	\$18,060	
201902	\$326,558	1.844	\$602,174	\$42,039	\$560,135	\$21,285	\$39,345
202001	\$180,383	2.133	\$384,758	\$11,283	\$373,474	\$14,192	
202002	\$153,915	2.952	\$454,357	\$2,641	\$451,716	\$17,165	\$31,357
Total							\$149,769

Source:

[1], [4]: Exhibit AUTO7001-AB-2020, General Insurance Statistical Agency (GISA)

[2]: Annual Review of Industry Experience – Preliminary Report as of December 31, 2020, Private Passenger Vehicles, Alberta Automobile Insurance Rate Board; Prepared by Oliver Wyman, June 9, 2021; Appendix A, Page 3, Column (2)

[3]: [1] * [2]

[5]: [3] – [4]

[6]: [5] * (0.04 – 0.002)

Table A 8.3: Estimated Savings on PJI Under Bill 41, Oliver Wyman Loss Development Factors, with Adjustments for 2017 Change in Loss Development Patterns

(Dollar Amounts in Thousands)

Accident Semester	[1] Oliver Wyman LDF Ultimate Loss	[2] Adjment Factor for 6-12 Months	[3] Adjment Factor for 12-18 Months	[4] Ultimate Loss Adjusted for Change in Development Pattern	[5] Paid Loss	[6] Adjusted Unpaid Loss	[7] Savings on PJI	[8] Savings on PJI by Accident Year
201101	\$203,150	1.000	1.000	\$203,150	\$198,001	\$32,396	\$1,231	
201102	\$268,206	1.000	1.000	\$268,206	\$259,628	\$8,578	\$326	\$1,557
201201	\$250,322	1.000	1.000	\$250,322	\$240,174	\$10,148	\$386	
201202	\$304,895	1.000	1.000	\$304,895	\$284,465	\$20,430	\$776	\$1,162
201301	\$269,803	1.000	1.000	\$269,803	\$248,713	\$21,090	\$801	
201302	\$342,601	1.000	1.000	\$342,601	\$306,287	\$36,314	\$1,380	\$2,181
201401	\$295,040	1.000	1.000	\$295,040	\$266,383	\$28,657	\$1,089	
201402	\$402,679	1.000	1.000	\$402,679	\$336,461	\$66,218	\$2,516	\$3,605
201501	\$356,110	1.000	1.000	\$356,110	\$276,258	\$79,852	\$3,034	
201502	\$448,440	1.000	1.000	\$448,440	\$330,413	\$118,027	\$4,485	\$7,519
201601	\$405,001	1.000	0.926	\$375,031	\$267,477	\$107,554	\$4,087	
201602	\$500,125	0.905	0.926	\$419,120	\$301,955	\$117,165	\$4,452	\$8,539
201701	\$456,630	0.905	0.926	\$382,670	\$238,436	\$144,234	\$5,481	
201702	\$533,950	0.905	0.926	\$447,466	\$232,834	\$214,632	\$8,156	\$13,637
201801	\$504,998	0.905	0.926	\$423,203	\$163,460	\$259,743	\$9,870	
201802	\$582,731	0.905	0.926	\$488,346	\$120,271	\$368,075	\$13,987	\$23,857
201901	\$542,159	0.905	0.926	\$454,346	\$66,905	\$387,441	\$14,723	
201902	\$602,174	0.905	0.926	\$504,640	\$42,039	\$462,601	\$17,579	\$32,302
202001	\$384,758	0.905	0.926	\$322,439	\$11,283	\$311,156	\$11,824	
202002	\$454,357	0.905	0.926	\$380,765	\$2,641	\$378,124	\$14,369	\$26,193
Total								\$120,552

Sources:

[1]: Table A8.2 Column [3]

[4]: [1] * [2] * [3]

[6]: [4] – [5]

[7]: [6] * (0.04 – 0.002)

9. Profit and Loss for the Alberta Private Passenger Auto Insurance Industry

A. 2011 to 2019, Based on Oliver Wyman Claims Costs, Dec. 2020 Analysis

Table A 9.1: Estimated Profit and Loss, 2011 through 2019
(Dollar Amounts in Thousands)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
[1] Premium Earned, Current Year ⁽¹⁾	\$2,476,450	\$2,579,378	\$2,729,254	\$2,923,220	\$3,089,350	\$3,186,102	\$3,308,662	\$3,524,854	\$3,783,639	
[2] Premium Earned, Prior Year ⁽¹⁾	\$2,446,725	\$2,476,450	\$2,579,378	\$2,729,254	\$2,923,220	\$3,089,350	\$3,186,102	\$3,308,662	\$3,524,854	
[3] Claims ⁽²⁾	\$1,654,371	\$1,943,395	\$2,102,682	\$2,303,815	\$2,521,719	\$2,739,833	\$2,760,155	\$2,940,432	\$2,981,455	
[4] Expense Ratio ⁽³⁾	24.2%	24.2%	24.2%	24.2%	25.4%	26.7%	27.8%	26.6%	26.7%	
[5] Expenses = [1] * [4]	\$599,301	\$624,209	\$660,480	\$707,419	\$784,695	\$850,689	\$919,808	\$937,611	\$1,010,231	
[6] TPL Premium Written ⁽¹⁾	\$1,174,170	\$1,240,430	\$1,329,372	\$1,454,758	\$1,574,995	\$1,696,702	\$1,815,282	\$1,977,563	\$2,186,152	
[7] Health Cost Recovery Pct	6.99%	6.10%	4.80%	5.00%	6.44%	5.90%	5.67%	7.04%	6.70%	
[8] Health Cost Recovery \$ = [6] * [7]	\$82,074	\$75,666	\$63,810	\$72,738	\$101,430	\$100,105	\$102,926	\$139,220	\$146,472	
[9] U/W Profit = [1] – [3] – [5] – [8]	\$140,703	-\$63,893	-\$97,717	-\$160,752	-\$318,494	-\$504,526	-\$474,227	-\$492,409	-\$354,520	
[10] Premium Leverage ⁽⁴⁾	0.94	0.96	0.94	0.92	0.93	0.93	0.93	1.02	1.01	
[11] Allocated Equity, Current Year = [1] / [10]	\$2,634,545	\$2,684,642	\$2,892,908	\$3,163,003	\$3,319,990	\$3,422,803	\$3,546,166	\$3,472,093	\$3,753,584	
[12] Allocated Equity, Prior Year = [2] / [10]	\$2,602,922	\$2,577,513	\$2,734,045	\$2,953,127	\$3,141,457	\$3,318,863	\$3,414,808	\$3,259,136	\$3,496,856	
[13] Average Allocated Equity = ([11] + [12])/2	\$2,618,733	\$2,631,078	\$2,813,477	\$3,058,065	\$3,230,723	\$3,370,833	\$3,480,487	\$3,365,614	\$3,625,220	
[14] Reserves as Ratio to Equity ⁽⁵⁾	1.81	1.89	1.87	1.69	1.82	1.81	1.81	1.83	1.83	
[15] Investment Yield Rates ⁽⁶⁾	4.0%	3.8%	3.0%	3.9%	3.3%	2.6%	3.1%	2.1%	3.4%	
[16] Investment Income = [15]*[13] * (1 + [14])	\$297,481	\$288,176	\$242,945	\$321,836	\$303,690	\$244,858	\$307,155	\$203,827	\$351,045	
[17] Total Profit, Pre-Tax, Excl. Bill 41 = [9] + [16]	\$438,185	\$224,283	\$145,228	\$161,084	-\$14,804	-\$259,668	-\$167,073	-\$288,582	-\$3,475	\$238,652

Table A 9.1 (Cont'd): Estimated Profit and Loss, 2011 through 2019
(Dollar Amounts in Thousands)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
[17] Total Profit, Pre-Tax, Excl. Bill 41 = [9] + [16]	\$438,185	\$224,283	\$145,228	\$161,084	-\$14,804	-\$259,668	-\$167,073	-\$288,582	-\$3,475	\$238,652
[18] Plus: Bill 41 Reduction in PJI by Acc Yr	\$1,557	\$1,162	\$2,181	\$3,605	\$7,519	\$12,756	\$19,734	\$30,552	\$39,345	\$118,412
[19] Total Profit, Pre-Tax, Incl. Bill 41 = [17] + [18]	\$439,742	\$225,445	\$147,409	\$164,689	-\$7,284	-\$246,912	-\$147,339	-\$258,030	\$35,869	\$353,589

Sources:

- (1): Exhibit AUTO7001-AB-2020, General Insurance Statistical Agency (GISA)
- (2): Table A2.2, Column [1]
- (3): Benchmark Expense Ratio, April of subsequent year, Alberta Auto Insurance Rate Board (AIRB)
- (4): Table A9.8, Column [3]
- (5): Table A9.8, Column [12]
- (6): Table A9.8, Column [6]

**B. 2011 to 2019, Based on Oliver Wyman Claims Costs, Dec. 2020 Analysis, Adjusted for
2017 Loss Development Pattern Change**

Table A 9.2: Estimated Profit and Loss, 2011 through 2019, with Claims Costs Adjusted for 2017 Loss
Development Pattern Change
(Dollar Amounts in Thousands)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
[1] Premium Earned, Current Year ⁽¹⁾	\$2,476,450	\$2,579,378	\$2,729,254	\$2,923,220	\$3,089,350	\$3,186,102	\$3,308,662	\$3,524,854	\$3,783,639	
[2] Premium Earned, Prior Year ⁽¹⁾	\$2,446,725	\$2,476,450	\$2,579,378	\$2,729,254	\$2,923,220	\$3,089,350	\$3,186,102	\$3,308,662	\$3,524,854	
[3] Claims ⁽²⁾	\$1,654,371	\$1,943,395	\$2,102,682	\$2,303,815	\$2,521,719	\$2,612,103	\$2,576,564	\$2,738,889	\$2,768,864	
[4] Expense Ratio ⁽³⁾	24.2%	24.2%	24.2%	24.2%	25.4%	26.7%	27.8%	26.6%	26.7%	
[5] Expenses = [1] * [4]	\$599,301	\$624,209	\$660,480	\$707,419	\$784,695	\$850,689	\$919,808	\$937,611	\$1,010,231	
[6] TPL Premium Written ⁽¹⁾	\$1,174,170	\$1,240,430	\$1,329,372	\$1,454,758	\$1,574,995	\$1,696,702	\$1,815,282	\$1,977,563	\$2,186,152	
[7] Health Cost Recovery Pct	6.99%	6.10%	4.80%	5.00%	6.44%	5.90%	5.67%	7.04%	6.70%	
[8] Health Cost Recovery \$ = [6] * [7]	\$82,074	\$75,666	\$63,810	\$72,738	\$101,430	\$100,105	\$102,926	\$139,220	\$146,472	
[9] U/W Profit = [1] – [3] – [5] – [8]	\$140,703	-\$63,893	-\$97,717	-\$160,752	-\$318,494	-\$376,795	-\$290,636	-\$290,866	-\$141,929	
[10] Premium Leverage ⁽⁴⁾	0.94	0.96	0.94	0.92	0.93	0.93	0.93	1.02	1.01	
[11] Allocated Equity, Current Year = [1] / [10]	\$2,634,545	\$2,684,642	\$2,892,908	\$3,163,003	\$3,319,990	\$3,422,803	\$3,546,166	\$3,472,093	\$3,753,584	
[12] Allocated Equity, Prior Year = [2] / [10]	\$2,602,922	\$2,577,513	\$2,734,045	\$2,953,127	\$3,141,457	\$3,318,863	\$3,414,808	\$3,259,136	\$3,496,856	
[13] Average Allocated Equity = ([11] + [12])/2	\$2,618,733	\$2,631,078	\$2,813,477	\$3,058,065	\$3,230,723	\$3,370,833	\$3,480,487	\$3,365,614	\$3,625,220	
[14] Reserves as Ratio to Equity ⁽⁵⁾	1.81	1.89	1.87	1.69	1.82	1.81	1.81	1.83	1.83	
[15] Investment Yield Rates ⁽⁶⁾	4.0%	3.8%	3.0%	3.9%	3.3%	2.6%	3.1%	2.1%	3.4%	
[16] Investment Income = [15]*[13] * (1 + [14])	\$297,481	\$288,176	\$242,945	\$321,836	\$303,690	\$244,858	\$307,155	\$203,827	\$351,045	
[17] Total Profit, Pre-Tax, Excl. Bill 41 = [9] + [16]	\$438,185	\$224,283	\$145,228	\$161,084	-\$14,804	-\$131,938	\$16,519	-\$87,039	\$209,115	\$960,633

Table A 9.2 (Cont'd): Estimated Profit and Loss, 2011 through 2019 with Claims Costs Adjusted for 2017
Loss Development Pattern Change

(Dollar Amounts in Thousands)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
[17] Total Profit, Pre-Tax, Excl. Bill 41 = [9] + [16]	\$438,185	\$224,283	\$145,228	\$161,084	-\$14,804	-\$131,938	\$16,519	-\$87,039	\$209,115	\$960,633
[18] Plus: Bill 41 Reduction in PJI by Acc Yr	\$1,557	\$1,162	\$2,181	\$3,605	\$7,519	\$8,555	\$13,656	\$23,878	\$32,324	\$94,437
[19] Total Profit, Pre-Tax, Incl. Bill 41 = [17] + [18]	\$439,742	\$225,445	\$147,409	\$164,689	-\$7,284	-\$123,383	\$30,175	-\$63,161	\$241,439	\$1,055,070

Sources:

- (1): Exhibit AUTO7001-AB-2020, General Insurance Statistical Agency (GISA)
- (2): Table A7.2, Column [2]
- (3): Benchmark Expense Ratio, April of subsequent year, Alberta Auto Insurance Rate Board (AIRB)
- (4): Table A9.8, Column [3]
- (5): Table A9.8, Column [12]
- (6): Table A9.8, Column [6]

C. 2020 and Projected 2021, Based on Oliver Wyman Claims Costs, Dec. 2020 Analysis

Table A 9.3: Estimated Profit and Loss, 2020 and Projection for 2021
(Dollar Amounts in Thousands)

	2020	Projected 2021	Total
[1] Premium Earned, Current Year ⁽¹⁾	\$4,071,507	\$4,386,089	
[2] Premium Earned, Prior Year ⁽¹⁾	\$3,783,639	\$4,071,507	
[3] Claims ⁽²⁾	\$2,488,094	\$3,410,785	
[4] Expense Ratio ⁽³⁾	26.0%	26.0%	
[5] Expenses = [1] * [4]	\$1,058,592	\$1,140,383	
[6] TPL Premium Written ⁽¹⁾	\$2,442,584	\$2,522,607	
[7] Health Cost Recovery Pct	4.74%	2.94%	
[8] Health Cost Recovery \$ = [6] * [7]	\$115,778	\$74,165	
[9] U/W Profit = [1] – [3] – [5] – [8]	\$409,043	-\$239,244	
[10] Premium Leverage ⁽⁴⁾	1.04	1.04	
[11] Allocated Equity, Current Year = [1] / [10]	\$3,917,189	\$4,219,848	
[12] Allocated Equity, Prior Year = [2] / [10]	\$3,640,231	\$3,917,189	
[13] Average Allocated Equity = ([11] + [12])/2	\$3,778,710	\$4,068,518	
[14] Reserves as Ratio to Equity ⁽⁵⁾	1.82	1.82	
[15] Investment Yield Rates ⁽⁶⁾	3.5%	3.0%	
[16] Investment Income = [15]*[13] * (1 + [14])	\$368,278	\$344,039	
[17] Total Profit, Pre-Tax, Excl. Bill 41 = [9] + [16]	\$777,321	\$104,795	\$882,116
[18] Bill 41 Change in MIR Definition		\$212,615	\$212,615
[19] Bill 41 Reduction in PJI by Acc Yr	\$31,357	\$41,963	\$73,320
[20] Total Profit, Pre-Tax, Incl. Bill 41 = [17] + [18] + [19]	\$808,679	\$359,373	\$1,168,051

**D. 2020 and Projected 2021, Based on Oliver Wyman Claims Costs, Dec. 2020 Analysis,
Adjusted for 2017 Loss Development Pattern Change**

Table A 9.4: Estimated Profit and Loss, 2019 and Projection for 2020, with Claims Costs Adjusted for
2017 Loss Development Pattern Change

(Dollar Amounts in Thousands)

	2020	Projected 2021	Total
[1] Premium Earned, Current Year ⁽¹⁾	\$4,071,507	\$4,386,089	
[2] Premium Earned, Prior Year ⁽¹⁾	\$3,783,639	\$4,071,507	
[3] Claims ⁽²⁾	\$2,332,476	\$2,996,171	
[4] Expense Ratio ⁽³⁾	26.0%	26.0%	
[5] Expenses = [1] * [4]	\$1,058,592	\$1,140,383	
[6] TPL Premium Written ⁽¹⁾	\$2,442,584	\$2,522,607	
[7] Health Cost Recovery Pct	4.74%	2.94%	
[8] Health Cost Recovery \$ = [6] * [7]	\$115,778	\$74,165	
[9] U/W Profit = [1] – [3] – [5] – [8]	\$564,661	\$175,370	
[10] Premium Leverage ⁽⁴⁾	1.04	1.04	
[11] Allocated Equity, Current Year = [1] / [10]	\$3,917,189	\$4,219,848	
[12] Allocated Equity, Prior Year = [2] / [10]	\$3,640,231	\$3,917,189	
[13] Average Allocated Equity = ([11] + [12])/2	\$3,778,710	\$4,068,518	
[14] Reserves as Ratio to Equity ⁽⁵⁾	1.82	1.82	
[15] Investment Yield Rates ⁽⁶⁾	3.5%	3.0%	
[16] Investment Income = [15]*[13] * (1 + [14])	\$368,278	\$344,039	
[17] Total Profit, Pre-Tax, Excl. Bill 41 = [9] + [16]	\$932,939	\$519,408	\$1,452,347
[18] Bill 41 Change in MIR Definition		\$212,615	\$212,615
[19] Bill 41 Reduction in PJI by Acc Yr	\$26,209	\$41,963	\$68,172
[20] Total Profit, Pre-Tax, Incl. Bill 41 = [17] + [18] + [19]	\$959,148	\$773,986	\$1,733,134

Sources:

- (1): For 2020, Exhibit AUTO7001-AB-2020, General Insurance Statistical Agency (GISA)
For 2021, Table A9.5 Total
- (2): For 2020, Table A7.1
For 2021, Table A9.7
- (3): Benchmark Expense Ratio, April 2021, Alberta Auto Insurance Rate Board (AIRB)
- (4): Table A9.8, Column [3], 2020
- (5): Table A9.8, Column [12], 2020
- (6): For 2020, Table A9.8, Column [6], 2020
For 2021, Reduced by judgment to 3.0% to recognize volatility in 2020 financial markets

Table A 9.5: Calculation of 2021 Earned Premium at the Level of Written Premium in Second Half of 2020

(Dollar Amounts in Thousands)

Coverage	[1] Accident Semester	[2] Earned Premium (000s)	[3] Earned Vehicles (000s)	[4] Average Earned Premium per Vehicle = [2] / [3]	[5] Written Premium (000s)	[6] Written Vehicles (000s)	[7] Average Written Premium per Vehicle = [5] / [6]	[8] On-Level Factor = [7] _{2020.2} / [4]	[9] Earned Premium at Level of Written Premium, 2020-2 (000s) = [2] * [8]
Third Party Liability	2020.1	\$1,103,038	1,375	\$802				1.121	\$1,236,921
	2020.2	\$1,204,656	1,423	\$847	\$1,275,922	1,418	\$900	1.062	\$1,279,752
Accident Benefits	2020.1	\$96,857	1,375	\$70				1.232	\$119,317
	2020.2	\$110,281	1,422	\$78	\$123,144	1,419	\$87	1.119	\$123,415
Un/Underinsured Motorists	2020.1	\$40,888	1,375	\$30				1.026	\$41,943
	2020.2	\$42,033	1,422	\$30	\$42,082	1,379	\$31	1.032	\$43,384
Collision	2020.1	\$394,261	1,007	\$391				1.013	\$399,432
	2020.2	\$397,289	1,034	\$384	\$409,762	1,033	\$397	1.032	\$409,988
Comprehensive	2020.1	\$323,730	1,187	\$273				1.089	\$352,657
	2020.2	\$339,029	1,207	\$281	\$359,952	1,211	\$297	1.058	\$358,782
All Perils	2020.1	\$8,259	11	\$757				1.075	\$8,875
	2020.2	\$8,846	11	\$785	\$10,253	13	\$814	1.036	\$9,164
Specified Perils	2020.1	\$1,160	12	\$98				1.034	\$1,200
	2020.2	\$1,181	12	\$95	\$1,264	12	\$101	1.065	\$1,257
Total		\$4,071,507							\$4,386,089

Source: Exhibit AUTO7001-AB-2020, General Insurance Statistical Agency (GISA)

Table A 9.6: Projected 2021 Claims Costs, Under Oliver Wyman Claim Cost and Trend Assumptions
(Dollar Amounts in Thousands)

	Bodily Injury	Property Damage	Accident Benefits	Un/Under Insured Motorist	Collision	Comprehensive	All Perils	Specified Perils	All Coverages
Base Line ⁽¹⁾	\$1,316,310	\$474,599	\$202,781	\$14,481	\$553,502	\$408,406	\$10,324	\$1,052	\$2,981,455
Growth in Number of Vehicles, 2019-2020	+0.5%	+0.5%	+0.5%	+0.5%	+0.5%	+0.5%	+0.5%	+0.5%	
Past Trend for 2019 to 2020	+7.0%	+1.5%	+11.5%	+4.0%	+2.5%	+6.5%	+2.5%	+4.0%	
Future Trend for 2020 to 2021	+5.0%	+1.5%	+11.5%	+4.0%	+2.5%	+6.5%	+2.5%	+4.0%	
Catastrophe Load						+51%	+51%	+51%	
COVID-19 Impact ⁽²⁾	-5%	-5%	-5%	-5%	-5%	0	0	0	
Claims Costs Excl. Bill 41	\$1,411,955	\$466,819	\$240,695	\$14,954	\$555,209	\$702,966	\$16,460	\$1,727	\$3,410,785
Bill 41, Change in MIR Definition ⁽³⁾	-\$212,615								-\$212,615
Bill 41, Change in PJI ⁽⁴⁾ Definition	-\$41,963								-\$41,963
Claims Costs Incl. Bill 41	\$1,157,377	\$466,819	\$240,695	\$14,954	\$555,209	\$702,966	\$16,460	\$1,727	\$3,156,207

(1): 2019 Incurred Loss and LAE, Source, Tables A 2.1 and A 2.2

(2): Reduction for moving coverages: 5% in 2021, as per the report “Actuarial Modelling for the Automobile Insurance Advisory Committee,” J.S. Cheng and Partners, Inc., May 27, 2020, Appendix 5.8, p. 156.

(3): Savings from the change in the definition of MIR are estimated at 2,797,562 vehicles in 2020 multiplied by the IBC estimated saving of \$76 per vehicle. This estimate per vehicle was published in “Driving Change: Auto Insurance that Works,” Insurance Bureau of Canada, March 6, 2020, p. 6.

(4): Savings from the reduction of prejudgment interest on non-pecuniary damages are estimated at 2,797,562 vehicles in 2020 multiplied by the IBC estimated saving of \$15 per vehicle. This estimate per vehicle was published in “Driving Change: Auto Insurance that Works,” Insurance Bureau of Canada, March 6, 2020, p. 6.

Table A 9.7: Projected 2021 Claims Costs, Under Oliver Wyman Claim Cost and Trend Assumptions, Adjusted for 2017 Change in Loss Development Pattern
(Dollar Amounts in Thousands)

	Bodily Injury	Property Damage	Accident Benefits	Un/Under Insured Motorist	Collision	Comprehensive	All Perils	Specified Perils	All Coverages
Base Line ⁽¹⁾	\$1,103,719	\$474,599	\$202,781	\$14,481	\$553,502	\$408,406	\$10,324	\$1,052	\$2,768,864
Growth in Number of Vehicles, 2019-2020	+0.5%	+0.5%	+0.5%	+0.5%	+0.5%	+0.5%	+0.5%	+0.5%	
Past Trend for 2019 to 2020	+2.0%	+2.0%	+2.0%	+2.0%	+2.0%	+2.0%	+2.0%	+2.0%	
Future Trend for 2020 to 2021	+2.0%	+2.0%	+2.0%	+2.0%	+2.0%	+2.0%	+2.0%	+2.0%	
Catastrophe Load						+51%	+51%	+51%	
COVID-19 Impact ⁽²⁾	-5%	-5%	-5%	-5%	-5%	0	0	0	
Claims Costs Excl. Bill 41	\$1,096,349	\$471,430	\$201,427	\$14,384	\$549,806	\$644,815	\$16,300	\$1,661	\$2,996,171
Bill 41, Change in MIR Definition ⁽³⁾	-\$212,615								-\$212,615
Bill 41, Change in PJI ⁽⁴⁾ Definition	-\$41,963								-\$41,963
Claims Costs Incl. Bill 41	\$841,770	\$471,430	\$201,427	\$14,384	\$549,806	\$644,815	\$16,300	\$1,661	\$2,741,593

(1): 2019 Incurred Loss and LAE, Source, Tables A 2.1 and A 2.2 for coverages other than bodily injury, and Table A 7.2 for bodily injury.

(2): Reduction for moving coverages: 5% in 2021, as per the report “Actuarial Modelling for the Automobile Insurance Advisory Committee,” J.S. Cheng and Partners, Inc., May 27, 2020, Appendix 5.8, p. 156.

(3): Savings from the change in the definition of MIR are estimated at 2,797,562 vehicles in 2020 multiplied by the IBC estimated saving of \$76 per vehicle. This estimate per vehicle was published in “Driving Change: Auto Insurance that Works,” Insurance Bureau of Canada, March 6, 2020, p. 6.

(4): Savings from the reduction of prejudgment interest on non-pecuniary damages are estimated at 2,797,562 vehicles in 2020 multiplied by the IBC estimated saving of \$15 per vehicle. This estimate per vehicle was published in “Driving Change: Auto Insurance that Works,” Insurance Bureau of Canada, March 6, 2020, p. 6.

Table A 9.8: Ratios for the Insurance Industry Operating in Canada, from P&C Returns Filed with OSFI
(Dollar Amounts in Millions)

		[1] Net Written Premium	[2] Total Equity	[3] Premium Leverage = [1]/[2]	[4] Net Investmt Income	[5] Total Investmts	[6] Investmt Yield Rate = [4] / [5]
2011	Canadian Foreign Cdn Mortgage	\$27,808 \$7,844	\$26,028 \$11,900		\$2,667 \$888	\$61,412 \$26,524	
	Total	\$35,652	\$37,928	0.94	\$3,555	\$87,936	4.0%
2012	Canadian Foreign Cdn Mortgage	\$30,178 \$7,656	\$27,098 \$12,280		\$2,820 \$811	\$66,767 \$28,898	
	Total	\$37,834	\$39,378	0.96	\$3,631	\$95,665	3.8%
2013	Canadian Foreign Cdn Mortgage	\$31,089 \$7,735 \$0	\$28,087 \$13,065 \$0		\$2,164 \$755 \$0	\$67,162 \$29,974 \$0	
	Total	\$38,824	\$41,152	0.94	\$2,919	\$97,136	3.0%
2014	Canadian Foreign Cdn Mortgage	\$32,585 \$7,865 \$0	\$29,595 \$14,173 \$0		\$3,016 \$859 \$0	\$73,246 \$25,815 \$0	
	Total	\$40,450	\$43,768	0.92	\$3,875	\$99,061	3.9%
2015	Canadian Foreign Cdn Mortgage	\$34,109 \$6,718 \$0	\$31,295 \$12,580 \$0		\$2,543 \$958 \$0	\$80,005 \$25,119 \$0	
	Total	\$40,827	\$43,875	0.93	\$3,501	\$105,124	3.3%
2016	Canadian Foreign Cdn Mortgage	\$35,128 \$6,909 \$0	\$32,088 \$13,072 \$0		\$2,184 \$422 \$0	\$73,650 \$27,093 \$0	
	Total	\$42,037	\$45,160	0.93	\$2,606	\$100,743	2.6%
2017	Canadian Foreign Cdn Mortgage	\$34,620 \$6,964 \$0	\$31,119 \$13,450 \$0		\$2,601 \$425 \$0	\$69,101 \$27,202 \$0	
	Total	\$41,584	\$44,569	0.93	\$3,026	\$96,303	3.1%
2018	Canadian Foreign Cdn Mortgage	\$37,140 \$8,249 \$975	\$25,054 \$15,208 \$5,408		\$1,339 \$526 \$229	\$59,282 \$30,231 \$8,213	
	Total	\$46,364	\$45,670	1.02	\$2,094	\$97,726	2.1%
2019	Canadian Foreign Cdn Mortgage	\$37,172 \$9,014 \$1,150	\$26,140 \$15,543 \$5,277		\$2,454 \$797 \$265	\$62,492 \$31,879 \$8,423	
	Total	\$47,336	\$46,960	1.01	\$3,516	\$102,794	3.4%
2020	Canadian	\$41,921	\$29,351		\$2,695	\$67,685	
	Foreign	\$10,360	\$17,033		\$958	\$35,481	
	Cdn Mortgage	\$1,674	\$5,526		\$233	\$9,222	
	Total	\$53,955	\$51,910	1.04	\$3,886	\$112,388	3.5%

Source: OSFI, Financial Data for Property and Casualty Companies

<https://www.osfi-bsif.gc.ca/Eng/wt-ow/Pages/FINDAT-pc.aspx>

Note that amounts for “Canadian” insurers prior to 2018 include “Canadian Mortgage Insurers.” For consistency, the amounts for Canadian Mortgage Insurers are added to the industry total for 2018 through 2020.

Table A 9.8 (cont'd): Ratios for the Insurance Industry Operating in Canada, from P&C Returns Filed with OSFI

(Dollar Amounts in Millions)

		[7] Gross Unpaid Claims & LAE	[8] Gross Unearned Premium Reserve	[9] Ceded Unpaid Claims & LAE	[10] Ceded Unearned Premium Reserve	[11] Net Reserves = [7] + [8] – [9] – [10]	[12] Reserves/ Equity = [11]/[2]
2011	Canadian	\$41,294	\$17,529	\$7,592	\$1,208		
	Foreign	\$18,547	\$3,508	\$2,631	\$800		
	Cdn Mortgage	\$0					
	Total	\$59,841	\$21,037	\$10,223	\$2,008	\$68,647	1.81
2012	Canadian	\$44,612	\$19,237	\$8,069	\$1,732		
	Foreign	\$19,383	\$4,528	\$2,757	\$947		
	Cdn Mortgage	\$0					
	Total	\$63,995	\$23,765	\$10,826	\$2,679	\$74,255	1.89
2013	Canadian	\$47,586	\$20,624	\$9,263	\$2,384		
	Foreign	\$20,024	\$4,478	\$3,026	\$941		
	Cdn Mortgage	\$0	\$0	\$0	\$0		
	Total	\$67,610	\$25,102	\$12,289	\$3,325	\$77,098	1.87
2014	Canadian	\$49,939	\$21,876	\$10,610	\$2,690		
	Foreign	\$15,539	\$4,180	\$3,226	\$1,022		
	Cdn Mortgage	\$0	\$0	\$0	\$0		
	Total	\$65,478	\$26,056	\$13,836	\$3,712	\$73,986	1.69
2015	Canadian	\$55,298	\$23,848	\$11,579	\$3,684		
	Foreign	\$15,770	\$4,443	\$3,023	\$1,109		
	Cdn Mortgage	\$0	\$0	\$0	\$0		
	Total	\$71,068	\$28,291	\$14,602	\$4,793	\$79,964	1.82
2016	Canadian	\$58,090	\$24,574	\$15,077	\$3,590		
	Foreign	\$17,878	\$4,573	\$3,645	\$1,148		
	Cdn Mortgage	\$0	\$0	\$0	\$0		
	Total	\$75,968	\$29,147	\$18,722	\$4,738	\$81,655	1.81
2017	Canadian	\$58,646	\$25,688	\$17,103	\$4,101		
	Foreign	\$17,766	\$4,599	\$3,734	\$1,154		
	Cdn Mortgage	\$0	\$0	\$0	\$0		
	Total	\$76,412	\$30,287	\$20,837	\$5,255	\$80,607	1.81
2018	Canadian	\$56,273	\$23,361	\$14,779	\$3,782		
	Foreign	\$19,125	\$5,171	\$4,082	\$1,130		
	Cdn Mortgage	\$152	\$3,102	\$0	\$0		
	Total	\$75,550	\$31,634	\$18,861	\$4,912	\$83,411	1.83
2019	Canadian	\$57,733	\$25,220	\$16,057	\$4,679		
	Foreign	\$20,060	\$5,998	\$4,285	\$1,471		
	Cdn Mortgage	\$172	\$3,295	\$0	\$0		
	Total	\$77,965	\$34,513	\$20,342	\$6,150	\$85,986	1.83
2020	Canadian	\$64,020	\$27,188	\$18,717	\$5,070		
	Foreign	\$22,599	\$ 6,998	\$4,941	\$1,848		
	Cdn Mortgage	\$235	\$3,945	\$0	\$0		
	Total	\$86,854	\$38,131	\$23,658	\$6,918	\$94,409	1.82

Source: OSFI, Financial Data for Property and Casualty Companies

<https://www.osfi-bsif.gc.ca/Eng/wt-ow/Pages/FINDAT-pc.aspx>

Note that amounts for “Canadian” insurers prior to 2018 include “Canadian Mortgage Insurers.” For consistency, the amounts for Canadian Mortgage Insurers are added to the industry total for 2018 and 2019.

10. Alternative Profit Measure

In 2020 the Alberta Ministry of Treasury Board and Finance reported that the Alberta private passenger auto (PPA) insurance industry sustained an after-tax loss of \$667.3 million over the years 2013 through 2018. The Ministry reported that it obtained this amount from the annual Profit and Loss report published by GISA. (On a pre-tax basis, the reported amounts show a pre-tax loss over this period of \$870.4 million.)

The analyses in this report calculate industry profit by using the same method that J.S. Cheng and Partners, Inc. (“Cheng”) used in its 2007 analysis of Alberta auto insurance reform.⁶ Over the 2013 to 2018 period, and using claims costs from the Oliver Wyman Dec. 2020 analysis, the Cheng method shows a pre-tax loss of \$423.6 million over the same period. With adjustments to the Oliver Wyman claims costs, for the apparent change in the claims reserving process starting in 2017, the result for the 2013 to 2018 period using the Cheng method is a pre-tax profit of \$89.2 million.

The following outlines differences in the two results, and suggests that the calculations using Cheng’s method have the attributes of transparency and consistency, both between companies and from year to year.

A. GISA Profit/Loss Report, 2013 to 2019

The amounts for Alberta PPA in the GISA annual Profit and Loss report⁷, for 2013 through 2019, broken down into the major revenue and expense items, are as in Table 8 below:

Table A A.1: GISA Profit and Loss Report, Alberta Private Passenger Auto Insurance

(Thousands of Dollars)

	2013	2014	2015	2016	2017	2018	2019	Total
Premium and Other Revenue	\$2,685,200	\$2,985,000	\$3,032,000	\$3,097,200	\$2,848,700	\$3,225,600	\$3,262,800	
Less: Claims Costs	\$2,219,500	\$2,442,400	\$2,448,800	\$2,793,500	\$2,432,200	\$2,715,000	\$2,726,000	
Less: Expenses	\$708,800	\$751,500	\$802,100	\$866,500	\$829,400	\$860,500	\$906,600	
Plus: Investment Income	\$165,900	\$236,600	\$192,100	\$182,400	\$222,500	\$126,600	\$229,800	
Total Profit, Pre-Tax	-\$77,200	\$27,700	-\$26,800	-\$380,400	-\$190,400	-\$223,300	-\$140,000	-\$1,010,400
Less: Income Taxes	-\$17,700	\$27,700	-\$9,800	-\$78,500	-\$61,200	-\$63,600	-\$35,400	
Total Profit, After Tax	-\$59,500	\$0	-\$17,000	-\$301,900	-\$129,200	-\$159,700	-\$104,700	-\$772,000

⁶ “REPORT ON THE REVIEW of Insurance Reform – Premium and Claim Analysis by Gordon G. Smith and Theresa K. Reichert of Deloitte and Touche LLP,” J.S. Cheng and Partners, Inc., March 29, 2007

⁷ AUTO9501-AB

B. Attributes of the GISA Profit and Loss Report

In preparing its annual Profit and Loss Report, GISA's statistical service provider, the Insurance Bureau of Canada (IBC) collects and aggregates financial data submitted by each licensed automobile insurer in nine jurisdictions in Canada, including Alberta.

Some of this data is taken directly from the insurer's Property and Casualty (P&C) return filed with its regulator (usually OSFI). However, other data is not reported in the P&C at the Alberta and PPA level of detail. Thus, these data items must be allocated to Alberta and PPA based on other individual company information.

In the Notes to Users and in the General Disclaimers published with the report (provided in Section 7 in the Appendix), GISA advises users to be aware of the following issues. These issues bear on the consistency and reliability of the report, depending on the user's purpose.

- The reporting insurers have used their own company-specific allocation methodology, which thus may vary from insurer to insurer, and from year to year.
- The quality of the report is dependent on the accuracy of the data filed by insurers. For amounts taken directly from the P&C Return, GISA relies on the work of the insurer's internal and external auditors. However, for the data items allocated to finer levels of detail, GISA advises that no independent audit has been performed.
- Since the report was first published for 2012, GISA has advised that "the reliability of the information is expected to improve over time, as GISA fine-tunes the processes and requirements for the collection and reporting of the financial information in subsequent years." This suggests that the processes used in the earlier years (i.e. back to 2013) may be of poorer quality, and may produce less consistent and reliable results.
- The report is based on insurers' fiscal year. Thus, the claims costs reported in a given year will combine current-year accidents and changes to prior-year accidents, combining results for accidents of several years. GISA advises that such data may also be subject to abnormal accounting activity in a particular year.
- The report is primarily on a net basis. Thus it does not report amounts ceded by the insurers to reinsurers, limiting the report's transparency regarding these amounts. GISA advises that a major insurance group was identified to have reported its reinsurance contrary to instructions. While this issue has been identified as specific to Ontario, it illustrates that issues can arise in the consistency of data reporting. Further, it is seen in Table A.5.1 that the net earned premium reported for 2017 shows a marked decrease compared to that of 2016. This was followed by a rebound in the net earned premium in

2018. This pattern is not seen in the gross earned premiums for 2016 through 2018, thus suggesting a significant yet unknown variation in reinsurance reported.

It is noted that GISA advises that its Profit and Loss Report should not be used to assess whether current rates are adequate to cover future costs.

C. Comparison of the Cheng Method to the GISA Profit and Loss Report

By contrast, Cheng's method of allocating insurer operating results to Alberta and to PPA has the following attributes:

- It uses claims and premium data specific to Alberta PPA for individual accident years.
- Allocations to Alberta and PPA of equity, expenses and investment income are based on ratios drawn from industry-wide financial statistics, that aggregate financial amounts taken directly from insurers' P&C returns. These financial statistics have thus been subject to insurers' internal and external audit processes.
- Allocations based on these industry-wide statistics are consistent and transparent, using the same allocation method for all insurers and from year to year.

These attributes can be expected to provide a more transparent measure of industry-wide profitability than a measure based on allocation processes that are not subject to audit, that vary between insurers and that vary from one year to the next year.

11. Loss and ALAE Dollar and Count Triangles

Table A 11.1: Loss and ALAE Incurred, Bodily Injury

(in thousands)

Accident Semester	Age in Months									
	6	12	18	24	30	36	42	48	54	60
201101	\$125,730	\$133,891	\$133,993	\$140,110	\$153,119	\$168,234	\$183,071	\$191,723	\$203,468	\$206,782
201102	\$149,121	\$171,113	\$179,144	\$194,363	\$210,816	\$229,263	\$243,350	\$257,564	\$268,776	\$273,774
201201	\$133,650	\$161,246	\$164,395	\$177,049	\$197,651	\$213,666	\$225,539	\$233,536	\$246,873	\$254,609
201202	\$147,335	\$177,626	\$190,638	\$211,508	\$228,276	\$251,222	\$270,044	\$281,383	\$296,732	\$306,201
201301	\$122,754	\$150,964	\$162,433	\$177,339	\$197,480	\$217,747	\$238,976	\$253,470	\$266,653	\$281,920
201302	\$158,085	\$201,330	\$213,249	\$236,592	\$263,728	\$292,902	\$317,538	\$335,729	\$348,764	\$355,478
201401	\$139,295	\$170,205	\$184,617	\$203,851	\$231,400	\$251,932	\$271,379	\$286,887	\$301,751	\$305,972
201402	\$181,499	\$220,251	\$243,195	\$279,311	\$314,681	\$345,024	\$373,204	\$397,499	\$408,096	\$414,908
201501	\$157,887	\$199,168	\$213,997	\$243,680	\$279,567	\$309,808	\$333,893	\$346,601	\$354,238	\$363,291
201502	\$193,905	\$242,166	\$266,694	\$309,810	\$360,044	\$396,524	\$416,011	\$434,570	\$442,669	\$452,641
201601	\$156,971	\$197,097	\$238,040	\$275,068	\$309,202	\$335,497	\$364,451	\$383,846	\$399,780	\$411,400
201602	\$174,369	\$251,531	\$300,285	\$341,647	\$385,835	\$424,328	\$455,404	\$478,245	\$491,645	
201701	\$169,629	\$229,155	\$267,360	\$302,718	\$347,424	\$386,855	\$418,904	\$434,059		
201702	\$202,756	\$277,061	\$306,885	\$353,893	\$406,332	\$452,614	\$483,880			
201801	\$197,315	\$242,620	\$277,037	\$323,219	\$383,966	\$422,497				
201802	\$199,756	\$278,187	\$327,553	\$385,626	\$438,395					
201901	\$182,157	\$257,440	\$306,207	\$352,078						
201902	\$210,044	\$292,335	\$338,924							
202001	\$136,535	\$187,970								
202002	\$161,105									

Table A 11.2: Loss and ALAE Incurred, Age-to-Age Ratios, Bodily Injury

Accident Semester	Age-to-Age Interval in Months								
	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60
201101	1.065	1.001	1.046	1.093	1.099	1.088	1.047	1.061	1.016
201102	1.147	1.047	1.085	1.085	1.088	1.061	1.058	1.044	1.019
201201	1.206	1.020	1.077	1.116	1.081	1.056	1.035	1.057	1.031
201202	1.206	1.073	1.109	1.079	1.101	1.075	1.042	1.055	1.032
201301	1.230	1.076	1.092	1.114	1.103	1.097	1.061	1.052	1.057
201302	1.274	1.059	1.109	1.115	1.111	1.084	1.057	1.039	1.019
201401	1.222	1.085	1.104	1.135	1.089	1.077	1.057	1.052	1.014
201402	1.214	1.104	1.149	1.127	1.096	1.082	1.065	1.027	1.017
201501	1.261	1.074	1.139	1.147	1.108	1.078	1.038	1.022	1.026
201502	1.249	1.101	1.162	1.162	1.101	1.049	1.045	1.019	1.023
201601	1.256	1.208	1.156	1.124	1.085	1.086	1.053	1.042	1.029
201602	1.443	1.194	1.138	1.129	1.100	1.073	1.050	1.028	
201701	1.351	1.167	1.132	1.148	1.113	1.083	1.036		
201702	1.366	1.108	1.153	1.148	1.114	1.069			
201801	1.230	1.142	1.167	1.188	1.100				
201802	1.393	1.177	1.177	1.137					
201901	1.413	1.189	1.150						
201902	1.392	1.159							
202001	1.377								

Table A 11.3: Loss and ALAE Paid, Bodily Injury

(in thousands)

Accident Semester	Age in Months									
	6	12	18	24	30	36	42	48	54	60
201101	\$4,815	\$18,420	\$29,100	\$40,439	\$58,682	\$73,122	\$88,723	\$109,153	\$125,976	\$148,278
201102	\$3,956	\$19,625	\$36,521	\$54,210	\$78,880	\$99,981	\$128,166	\$147,217	\$175,215	\$194,083
201201	\$4,521	\$20,719	\$33,978	\$50,200	\$73,623	\$95,994	\$120,300	\$140,535	\$161,607	\$182,760
201202	\$4,041	\$21,608	\$37,385	\$57,967	\$87,599	\$107,131	\$140,287	\$164,366	\$194,258	\$213,454
201301	\$3,561	\$16,614	\$31,480	\$49,525	\$73,054	\$96,866	\$124,527	\$145,224	\$168,186	\$196,896
201302	\$4,194	\$20,590	\$42,311	\$67,868	\$97,700	\$123,372	\$156,936	\$188,466	\$222,484	\$248,983
201401	\$4,387	\$23,201	\$37,775	\$57,968	\$85,333	\$110,742	\$140,083	\$167,569	\$194,866	\$221,806
201402	\$4,230	\$25,696	\$47,548	\$70,276	\$105,928	\$139,507	\$183,824	\$222,560	\$264,545	\$295,616
201501	\$4,925	\$20,324	\$36,057	\$56,329	\$87,847	\$126,353	\$157,895	\$194,459	\$223,879	\$256,679
201502	\$4,375	\$22,299	\$41,841	\$68,507	\$123,366	\$170,872	\$215,852	\$255,484	\$294,336	\$324,611
201601	\$5,487	\$20,786	\$39,307	\$69,858	\$109,595	\$147,901	\$182,330	\$226,766	\$255,837	\$289,639
201602	\$3,736	\$23,564	\$50,441	\$85,079	\$137,566	\$179,466	\$237,496	\$278,131	\$322,761	
201701	\$5,029	\$23,121	\$42,799	\$76,059	\$116,628	\$165,343	\$209,879	\$253,627		
201702	\$4,737	\$22,251	\$51,793	\$84,009	\$135,369	\$190,710	\$246,477			
201801	\$4,677	\$21,897	\$40,317	\$71,482	\$120,204	\$171,909				
201802	\$4,524	\$20,935	\$45,695	\$76,311	\$126,230					
201901	\$4,815	\$21,002	\$40,781	\$70,494						
201902	\$3,941	\$21,615	\$44,052							
202001	\$3,454	\$12,264								
202002	\$2,988									

Table A 11.4: Loss and ALAE Paid, Age-to-Age Ratios, Bodily Injury

Accident Semester	Age-to-Age Interval in Months								
	6-12	12-18	18-24	24-30	30-36	36-42	42-48	48-54	54-60
201101	3.826	1.580	1.390	1.451	1.246	1.213	1.230	1.154	1.177
201102	4.960	1.861	1.484	1.455	1.268	1.282	1.149	1.190	1.108
201201	4.583	1.640	1.477	1.467	1.304	1.253	1.168	1.150	1.131
201202	5.347	1.730	1.551	1.511	1.223	1.309	1.172	1.182	1.099
201301	4.666	1.895	1.573	1.475	1.326	1.286	1.166	1.158	1.171
201302	4.909	2.055	1.604	1.440	1.263	1.272	1.201	1.180	1.119
201401	5.288	1.628	1.535	1.472	1.298	1.265	1.196	1.163	1.138
201402	6.075	1.850	1.478	1.507	1.317	1.318	1.211	1.189	1.117
201501	4.127	1.774	1.562	1.560	1.438	1.250	1.232	1.151	1.147
201502	5.096	1.876	1.637	1.801	1.385	1.263	1.184	1.152	1.103
201601	3.788	1.891	1.777	1.569	1.350	1.233	1.244	1.128	1.132
201602	6.307	2.141	1.687	1.617	1.305	1.323	1.171	1.160	
201701	4.598	1.851	1.777	1.533	1.418	1.269	1.208		
201702	4.697	2.328	1.622	1.611	1.409	1.292			
201801	4.681	1.841	1.773	1.682	1.430				
201802	4.628	2.183	1.670	1.654					
201901	4.362	1.942	1.729						
201902	5.485	2.038							
202001	3.551								

Table A 11.5: Reported Claim Count, Bodily Injury

Accident Semester	Age in Months									
	6	12	18	24	30	36	42	48	54	60
201101	8,415	8,009	7,645	7,322	7,245	7,176	7,172	7,127	7,095	7,063
201102	8,069	8,287	7,615	7,464	7,303	7,190	7,162	7,119	7,076	7,050
201201	7,868	7,635	7,209	7,049	6,926	6,806	6,783	6,749	6,721	6,686
201202	7,970	8,650	8,249	8,119	7,958	7,884	7,884	7,842	7,793	7,795
201301	7,398	7,562	7,304	7,266	7,237	7,239	7,274	7,253	7,233	7,213
201302	8,448	9,139	8,718	8,702	8,764	8,729	8,757	8,715	8,695	8,688
201401	7,867	7,843	7,617	7,627	7,690	7,646	7,661	7,650	7,632	7,612
201402	8,605	8,989	8,714	8,801	8,940	8,930	8,941	8,909	8,878	8,862
201501	8,058	8,125	7,984	8,068	8,213	8,170	8,179	8,152	8,144	8,133
201502	7,891	8,778	8,647	8,785	8,887	8,894	8,919	8,908	8,892	8,875
201601	7,327	7,548	7,584	7,625	7,807	7,822	7,859	7,823	7,802	7,797
201602	7,735	8,823	8,740	8,886	9,109	9,131	9,169	9,158	9,132	
201701	7,830	8,150	8,177	8,394	8,660	8,663	8,707	8,687		
201702	7,240	8,518	8,508	8,806	9,113	9,156	9,195			
201801	7,683	8,142	8,176	8,409	8,776	8,804				
201802	7,053	8,264	8,241	8,609	8,920					
201901	7,476	8,173	8,237	8,554						
201902	7,134	8,342	8,464							
202001	5,077	5,452								
202002	5,277									

Table A 11.6: Closed Claim Count, Bodily Injury

Accident Semester	Age in Months									
	6	12	18	24	30	36	42	48	54	60
201101	1,020	3,333	4,704	5,475	6,130	6,324	6,464	6,614	6,698	6,788
201102	810	3,310	4,613	5,431	6,098	6,311	6,481	6,583	6,703	6,772
201201	855	3,046	4,316	5,087	5,739	5,935	6,103	6,250	6,331	6,416
201202	758	3,291	4,782	5,775	6,630	6,854	7,043	7,203	7,322	7,410
201301	732	2,921	4,371	5,364	6,125	6,357	6,539	6,682	6,811	6,916
201302	733	3,383	5,234	6,388	7,246	7,568	7,790	7,969	8,160	8,286
201401	806	3,366	4,772	5,673	6,441	6,693	6,912	7,094	7,242	7,333
201402	764	3,756	5,431	6,475	7,358	7,706	7,991	8,195	8,410	8,535
201501	964	3,557	5,029	5,928	6,750	7,110	7,342	7,540	7,716	7,800
201502	819	3,581	5,122	6,328	7,343	7,746	8,033	8,230	8,393	8,494
201601	896	3,058	4,597	5,575	6,384	6,737	6,993	7,208	7,327	7,436
201602	701	3,498	5,319	6,395	7,321	7,722	8,084	8,303	8,491	
201701	993	3,517	5,048	6,121	7,008	7,439	7,734	7,963		
201702	792	3,389	5,064	6,145	7,128	7,595	7,940			
201801	959	3,295	4,736	5,783	6,765	7,216				
201802	771	3,127	4,638	5,707	6,627					
201901	985	3,289	4,683	5,579						
201902	749	3,159	4,496							
202001	713	2,001								
202002	516									

Source: Exhibit AUTO7001-AB-2020, General Insurance Statistical Agency (GISA)