



QUARTERLY VALUATION HIGHLIGHTS

FACILITY ASSOCIATION RESIDUAL MARKET

(FARM)

as at June 30, 2019

FA Actuarial

12/23/2019

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Contents

A. Executive Summary	3
B. General Information	7
B.1 Appointed Actuary and Hybrid Actuarial Services Model	8
B.2 Intended Audience and Use	8
B.3 Data	8
B.3.1 FARM Valuation Data	8
B.3.2 Industry AIX Data	9
B.3.3 Other Data	9
B.4 Actual vs Projected (AvsP)	9
B.5 Uncertainty	10
C. ALL JURISDICTIONS	11
C.1 Valuation Highlights	11
C.2 Booked results for the prior valuation implementation	12
C.3 Booked results for the current valuation implementation	13
C.4 Actual vs Projected (AvsP)	14
C.5 Current valuation IBNR selections	15
C.6 Premium Liabilities / Future Accident Years	16
C.7 Actuarial Present Value Adjustments	16
C.7.1 Selected Claims Payment Patterns	16
C.7.2 Selected Discount Rate	16
C.7.3 Selected Margins for Adverse Deviations	16
D. ONTARIO	17
D.1 Valuation Highlights – Indemnity Only	17
D.2 Actual vs Projected (AvsP)	18
D.3 Special IBNR Provisions / Adjustments	18
E. ALBERTA	19
E.1 Valuation Highlights – Indemnity Only	19
E.2 Actual vs Projected (AvsP)	20
E.3 Special IBNR Provisions / Adjustments	21
F. ATLANTIC REGION	22
F.1 Valuation Highlights – Indemnity Only	22
F.2 Actual vs Projected (AvsP)	23
F.3 Special IBNR Provisions / Adjustments	23
G. NORTHERN TERRITORIES	24
G.1 Valuation Highlights – Indemnity Only	24

G.2	Actual vs Projected (AvsP)	24
G.3	Special IBNR Provisions / Adjustments	25
H.	Appendix 1: Changes in process introduced since the September 30, 2018 valuation	26
I.	Appendix 2: Recent Regulatory and/or Legislative Initiatives	27
I.1	Ontario	27
I.2	Alberta.....	27
I.3	Harmonized Sales Tax	27
I.4	Harmonized Sales Tax Class Action – Ontario	28
J.	Appendix 3: Court Decisions.....	29
J.1	Nova Scotia Court of Appeal	29
K.	Appendix 4: General description of the FARM valuation process.....	30
L.	Appendix 5: Exhibits.....	32

A. Executive Summary

We have completed a valuation of the Facility Association Residual Market (FARM) as at June 30, 2019¹ for Private Passenger Vehicle (PPV) and non-Private Passenger Vehicle (non-PPV) business segments and all jurisdictions, with the results summarized by jurisdiction in the table below (for indemnity only). The previous valuation was completed at March 31, 2019 and included both PPV and non-PPV business segments and all jurisdictions.

Jurisdiction	2018 & Prior	2018 & Prior	% of	2019	Change	Change	2020	Change	Change	unfavourable / (favourable)		
	Beginning	Accident Year								Beginning	Indemnity	from Prior
	Unpaid (000s)	Indemnity	Unpaid	Loss Ratio	Valuation	Earned Prem	Loss Ratio	Valuation	Proj Earned	Rate at	from Prior	Effect from
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Ontario	84,493	(3,918)	(4.6%)	43.5%	(3.1%)	(3,542)	48.3%	(0.6%)	(726)	1.44%	-4 bps	124
Alberta	74,950	3,320	4.4%	55.7%	4.5%	4,368	54.8%	2.5%	2,513	1.44%	-4 bps	108
Newfoundland & Labrador	45,536	1,547	3.4%	67.2%	0.4%	119	64.1%	(0.8%)	(256)	1.44%	-4 bps	46
New Brunswick	33,710	(1,814)	(5.4%)	65.1%	0.2%	56	58.0%	(1.0%)	(260)	1.44%	-4 bps	42
Nova Scotia	25,429	(1,970)	(7.7%)	66.2%	(1.7%)	(461)	63.9%	(1.6%)	(500)	1.44%	-4 bps	31
Prince Edward Island	9,907	(744)	(7.5%)	58.9%	0.5%	25	53.6%	1.3%	61	1.44%	-4 bps	9
Yukon Territory	2,803	(168)	(6.0%)	50.9%	1.0%	18	53.9%	2.8%	51	1.44%	-4 bps	2
Northwest Territories	3,255	(421)	(12.9%)	48.3%	2.7%	112	40.1%	(4.2%)	(181)	1.44%	-4 bps	5
Nunavut	1,153	(235)	(20.4%)	34.6%	(1.9%)	(18)	31.6%	(4.1%)	(39)	1.44%	-4 bps	-
Total	281,236	(4,403)	(1.6%)	53.9%	0.2%	677	54.1%	0.2%	662			367

In total, the **favourable prior accident year** change of **\$4.4 million** (column [2] in the table above) represents **1.6%** (column [3]) of the \$281.2 million beginning unpaid (column [1])². This brings the calendar year-to-date change for prior accident years to \$7.9 million unfavourable (2.5% of the unpaid estimate as at the beginning of the calendar year) as summarized in the right table below.

FARM - All Jurisdictions (All Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable during Quarter					FARM - All Jurisdictions (All Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable YTD				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total	Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(1,418)	(320)	261	(1,477)	2014 & Prior	(1,371)	761	103	(507)
2015	559	(534)	(23)	2	2015	38	(852)	47	(767)
2016	(1,377)	(858)	(20)	(2,255)	2016	149	(973)	(10)	(834)
2017	(750)	(1,541)	(173)	(2,464)	2017	1,335	(1,333)	(309)	(307)
2018	3,273	(604)	(881)	1,788	2018	7,495	(46)	2,847	10,296
TOTAL	287	(3,857)	(836)	(4,406)	TOTAL	7,646	(2,443)	2,678	7,881

The total column in the left chart above is consistent with column [2] of the earlier table, with some rounding differences.

Tables summarizing valuation changes in ultimate during the quarter are provided in section C.1 (page 11), including tables at the business segment level. Similar tables are available in each of the jurisdiction sections (D.1 for Ontario; E.1 for Alberta; F.1 for the Atlantic region; G.1 for the Northern Territories).

The valuation quarters ending June 30 and December 31 reflect a full valuation update of assumptions. Impacts of these updates tend to be more material since the impact of actual emerged experience from the last full valuation will be incorporated into the revised assumptions. In contrast, the “off-half” valuation quarters ending March 31 and September 30 do not reflect a full valuation update of assumptions, but

¹The June 30, 2019 valuation result was implemented into the FARM Participation Results for the month of August 2019. The valuation implementation impact is discussed in the respective August 2019 Actuarial Highlights.

²The beginning unpaid is the sum of the case reserves and selected nominal IBNR as per the valuation completed as at March 31, 2019.

would rather “roll-forward” key assumptions from the previous valuation. Loss development factors as brought forward through this process are interpolated assuming linear emergence.

As the current valuation is as at June 30, it reflects a full valuation update of assumptions. Further, the Appointed Actuary reviews MfAD’s and premium and claims expense assumptions annually with the June 30 valuation and hence, in general, we expect the June 30 valuation to reflect all material changes to assumptions in the current fiscal year, with the exception of the discount rate which is updated at each quarter based on current risk free interest rates.

The current valuation for all FARM jurisdictions/business segments use updated trend assumptions selected as part of the FA Industry trend analysis using AIX Industry private passenger vehicle (PPV) and commercial vehicle (CV) 2018-H2 along with updated a priori premium assumptions.

Changes in selected loss ratios for the current **accident year 2019** (AY2019; column [4], in the table at the top of the prior page) were driven by **high levels of Alberta non-PPV third party liability bodily injury** reported claim experience in recent periods and **updated loss cost adjustment factors** based on industry 2018-H2 trend analysis. The impact of these changes, relative to projected full year 2019 earned premium, is unfavourable by \$0.7 million (column [6]).

Changes in selected loss ratios for the future **accident year 2020** (AY2020; column [7]) were driven by updated a priori loss ratio selections in response to continuing high levels of recorded claims activity on third part liability bodily injury along with the use of updated claims trends. The impact of these changes has an anticipated complete accident year 2020 unfavourable impact of \$0.7 million (column [9]) in relation to the current projected complete AY2020 earned premium level.

These AY2019 and AY2020 changes also collectively imply an immediate unfavourable impact in relation to policy liabilities with the valuation’s implementation.

As indicated in columns [10] and [11] in the summary table at the top of the previous page, the **discount rates were decreased**, reflecting June 2019 Government of Canada yields, with an initial **estimated \$0.4 million unfavourable** impact (column [12]).

The selected investment income (25 basis points) margin for adverse deviation (MfAD) was reviewed and unchanged with the current valuation. The claims development margins for adverse deviations (MfADs) for all FARM jurisdictions and business segments were reviewed with the valuation as at June 30, 2019 as per our regular annual valuation process. In particular, selected claims development MfADs for older accident years were reviewed and judgmentally decreased to reflect the decreasing uncertainty over time resulting in an **estimated \$1.1 million favourable implementation impact**.

The **FARM (all jurisdictions) favourable prior accident year (PAY) development**³ was driven by continuing low levels of recent accident year (AY2016-AY2018) reported third party liability bodily injury and accident benefits claims experience across most jurisdictions (particularly in Ontario and New Brunswick). The favourable PAY development was partially offset by continuing high levels of bodily injury claims experience and large loss bodily injury case reserves increase in Alberta non-PPV. Additional discussion of the actual recorded and payment activity relative to projected activity can be found in the all jurisdiction (section C.4) and by jurisdiction actual versus projected discussion further in these highlights.

³The term “development” throughout this document refers to claims activity during the period, and “favourable” or “unfavourable” development is in relation to projections or underlying assumptions per the previous valuation.

The table below shows historical changes in valuation selected ultimates on an annual fiscal-accident year basis on the left with changes in the most recent quarterly valuations on a calendar-accident year basis⁴ on the right.

FARM – All Jurisdictions (All Vehicles) Changes in PAY Selected Ultimates through time

	Change in Selected Ultimates from prior Sept 30th							Change in Selected Ultimates from Prior Quarter End				
	Sep-12	Sep-13	Sep-14	Sep-15	Sep-16	Sep-17	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19
AY2009 & Prior	(22,279)	442	1,966	(8,269)	(128)	(200)	(4,888)	(654)	(887)	(204)		
AY2010	(3,935)	(7,433)	1,208	(2,318)	(828)	(489)	(85)	171	(186)	(493)		
AY2011	(3,420)	(478)	(2,921)	(382)	627	(184)	(559)	250	(530)	(264)		
AY2012		(6,687)	5,315	847	1,809	(3,513)	(481)	(95)	74	327		
AY2013			(3,928)	(2,307)	(2,919)	(545)	1,154	(201)	856	(424)		
AY2014				(621)	(2,979)	(284)	(2,612)	(140)	1,642	(416)		
AY2015					2,737	(449)	(9)	2,614	(769)	2		
AY2016						4,625	(2,606)	270	1,420	(2,255)		
AY2017							(2,830)	(960)	2,158	(2,465)		
AY2018									8,509	1,788		
Total	(29,634)	(14,155)	1,641	(13,051)	(1,680)	(1,040)	(12,916)	1,255	12,287	(4,404)		

The **Ontario FARM** favourable PAY development, presented in the table below, was driven by low levels of third party liability bodily injury and accident benefits recorded claims activity reported during the quarter with one AY 2017 accident benefits large claim being closed without payment.

FARM – Ontario (All Vehicles) Changes in PAY Selected Ultimates through time

	Change in Selected Ultimates from prior Sept 30th							Change in Selected Ultimates from Prior Quarter End				
	Sep-12	Sep-13	Sep-14	Sep-15	Sep-16	Sep-17	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19
AY2009 & Prior	(20,870)	(5,919)	(3,803)	(3,917)	2,049	70	(3,783)	(399)	(865)	(44)		
AY2010	(5,384)	(3,126)	(2,025)	(1,172)	(7)	(761)	5	182	(172)	(448)		
AY2011	(3,049)	(2,902)	(6,860)	(935)	2,079	1,048	(1,025)	(177)	(241)	(122)		
AY2012		(5,131)	346	(1,102)	3,235	(1,644)	275	(72)	144	(76)		
AY2013			1,157	(3,580)	(718)	(1,050)	495	(387)	993	(133)		
AY2014				(3,679)	(2,319)	(737)	(1,463)	(87)	2,267	186		
AY2015					(910)	238	(417)	1,783	(328)	86		
AY2016						361	(1,389)	282	(14)	(832)		
AY2017							(2,371)	(1,469)	54	(1,221)		
AY2018									1,593	(1,314)		
Total	(29,304)	(17,078)	(11,185)	(14,386)	3,409	(2,475)	(9,673)	(343)	3,431	(3,919)		

A similar summary for the **Alberta FARM** is presented in the table below. The unfavourable PAY was mainly driven by large claim case reserves increases in AY 2018.

FARM – Alberta (All Vehicles) Changes in PAY Selected Ultimates through time

	Change in Selected Ultimates from prior Sept 30th							Change in Selected Ultimates from Prior Quarter End				
	Sep-12	Sep-13	Sep-14	Sep-15	Sep-16	Sep-17	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19
AY2009 & Prior	4,818	9,181	1,671	(1,818)	(1,083)	899	(831)	(16)	(0)	(148)		
AY2010	607	846	812	(1,011)	(269)	(125)	(193)	(11)	(9)	(14)		
AY2011	1,891	3,399	2,738	(970)	(1,800)	(446)	530	386	(254)	66		
AY2012		1,556	2,654	570	(2,522)	(1,335)	46	(175)	(64)	433		
AY2013			1,503	2,351	(1,653)	(306)	64	187	29	(246)		
AY2014				2,702	(421)	359	(907)	(68)	(653)	(116)		
AY2015					1,642	713	(551)	806	(286)	10		
AY2016						2,250	(337)	162	(19)	(192)		
AY2017							(272)	580	1,550	647		
AY2018									5,759	2,880		
Total	7,316	14,982	9,378	1,823	(6,105)	2,010	(2,452)	1,850	6,053	3,320		

The **Atlantics** favourable PAY development, presented in the table at the top of the next page, was driven by favourable New Brunswick and Prince Edward Island PAY PPV paid claim settlements in the quarter. This was partially offset by large claim case reserve increases for two Newfoundland PPV claims totaling \$1.1 million, one in accident years 2016 and another in accident year 2018.

⁴Due to FA's October 31 year-end, the runoff table is shown on a fiscal accident year basis. However, valuations are treated on a calendar accident year basis. As a result, the "Change in Selected Ultimates from Prior Quarter End" will not necessarily sum to the annual view for the most recent "prior" accident year. The valuation change discussions focus on the calendar accident basis.

FARM – Atlantic (All Vehicles) Changes in PAY Selected Ultimates through time

	Change in Selected Ultimates from prior Sept 30th							Change in Selected Ultimates from Prior Quarter End				
	Sep-12	Sep-13	Sep-14	Sep-15	Sep-16	Sep-17	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19
AY2009 & Prior	(8,051)	(2,524)	4,290	(1,801)	(1,106)	(1,135)	(240)	(240)	(22)	(12)		
AY2010	1,289	(4,792)	2,205	102	(512)	365	115	(0)	(5)	(30)		
AY2011	(1,286)	(600)	1,176	1,540	332	(585)	(44)	42	(34)	(203)		
AY2012		(2,507)	2,446	1,398	1,153	(523)	(780)	154	(2)	(24)		
AY2013			(6,038)	(522)	(361)	1,036	666	2	(157)	(37)		
AY2014				219	23	788	(205)	(160)	47	(468)		
AY2015					1,116	(330)	1,591	125	(186)	(22)		
AY2016						2,044	(576)	(13)	1,463	(863)		
AY2017							(288)	51	680	(1,611)		
AY2018									935	289		
Total	(8,048)	(10,422)	4,080	935	645	1,660	241	(38)	2,719	(2,982)		

The **Combined Northern Territories** favourable PAY development, presented in the table immediately below, was likely driven by process variance.

FARM – Combined Northern Territories (All Vehicles) Changes in PAY Selected Ultimates through time

	Change in Selected Ultimates from prior Sept 30th							Change in Selected Ultimates from Prior Quarter End				
	Sep-12	Sep-13	Sep-14	Sep-15	Sep-16	Sep-17	Sep-18	Dec-18	Mar-19	Jun-19	Sep-19	Dec-19
AY2009 & Prior	1,824	(297)	(191)	(732)	13	(34)	(34)	-	-	-		
AY2010	(446)	(361)	216	(236)	(40)	32	(11)	0	-	(1)		
AY2011	(976)	(375)	24	(18)	17	(201)	(21)	(0)	(0)	(4)		
AY2012		(604)	(131)	(18)	(58)	(11)	(23)	(2)	(3)	(7)		
AY2013			(438)	(556)	(388)	(226)	(71)	(3)	(9)	(7)		
AY2014				294	(263)	(694)	(37)	175	(19)	(17)		
AY2015					833	(1,071)	(632)	(100)	31	(72)		
AY2016						(57)	(305)	(160)	(9)	(367)		
AY2017							185	(123)	(126)	(280)		
AY2018									221	(68)		
Total	402	(1,637)	(520)	(1,266)	315	(2,262)	(949)	(213)	86	(823)		

Similar tables for individual jurisdictions are included with the supporting exhibits provided with this report in section L (Appendix 5).

Caution must be exercised in reviewing the variances as volumes for some jurisdictions are very low and single claim transactions that are normal course for the business may look unusual and generate relatively significant variances that in nominal value terms are not that significant. With this in mind, when reviewing the results, we have attributed the older accident year claims experience as random and process variance driven.

The remainder of this report consists of 11 sections. Section C includes valuation details related to All FARM Jurisdictions with sections D through G providing detailed sections by jurisdiction, including valuation highlights and a discussion of actual vs. projected activity. General information about this report can be found in section B. The final 5 sections are appendices:

- the valuation process is described in detail in section K (Appendix 4);
- a summary of changes to the process during this fiscal year is provided in section H (Appendix 1);
- a summary of recent regulatory changes is provided in section I (Appendix 2) and recent applicable court decisions is provided in section J (Appendix 3); and
- supporting exhibits are provided in section L (Appendix 5).

B. General Information

This report summarizes the results of the valuation of the Facility Association Residual Market as at **June 30, 2019** and completed for the following jurisdictions and separately by business segment (Private Passenger Vehicle and non-Private Passenger Vehicle) within each jurisdiction.

- Ontario (ON);
- Alberta (AB);
- Newfoundland & Labrador (NL);
- New Brunswick (NB);
- Nova Scotia (NS);
- Prince Edward Island (PE);
- Yukon (YT);
- Northwest Territories (NT); and
- Nunavut (NU).

The results of this valuation were reflected for the first time in the **August 2019 FARM Participation Reports**.

The valuations have been prepared in accordance with Canadian Accepted Actuarial Practice and comply with the appropriate Standards of Practice of the Canadian Institute of Actuaries as well as applicable regulatory requirements. Canadian Accepted Actuarial Practice requires all policy liabilities recognize both the time value of money and provisions for adverse deviations.

Unless specifically noted in this document, no explicit provision has been made for causes of loss which are not already reflected in the historical data, nor for otherwise unforeseen changes to the legal or economic environment in which claims are settled, including changes in the interpretation of existing legislation or regulation on matters currently before the courts.

Automobile insurance product reforms occur from time to time and consideration is given to the associated impact, if any. Please see Section I for a discussion of recent product reforms considered for the purposes of this valuation.

For ease of reference, we will use the term “claims amount” in reference to the more proper and descriptive term “indemnity” and the terms “loss ratio”, “claims ratio”, or “claims amount ratio” in reference to the ratio of “claims amount” to “earned premium”. (Please see footnote 6 on page 8 for a description of Servicing Carrier claims fees and allowed claims adjustment expenses that are generally considered separately from indemnity.)

General information regarding the Facility Association and on the FARM in particular can be found on the Facility Association website:

www.facilityassociation.com

B.1 Appointed Actuary and Hybrid Actuarial Services Model

Liam McFarlane of Ernst & Young LLP is Facility Association’s Appointed Actuary (effective as of June 1, 2013).

Facility Association operates under a “hybrid” model in relation to the management and provision of actuarial services. Under this model, actuarial services are performed by both Facility Association’s internal staff and its external actuarial consulting firm. The hybrid model approach maximizes the efficiency of resource allocation while providing access to additional expertise and capacity as needed.

B.2 Intended Audience and Use

This report is intended for the Member Companies of the Facility Association (Members) to provide additional information on the results of the most recent valuation of the FARM in relation to the results of prior such valuations. It is not intended, nor necessarily suitable, for any other purpose.

B.3 Data

Two primary data sets were used for the purposes of this valuation:

- FARM valuation data, which is aggregated premium and claim information primarily intended for valuation purposes; and
- Industry AIX data, which is developed from detailed statistical records recorded by insurers to the Insurance Bureau of Canada (IBC)⁵ in accordance with the Automobile Statistical Plan.

B.3.1 FARM Valuation Data

Much of this analysis was based on FARM valuation data collected from FARM Servicing Carriers and aggregated by IBC on behalf of Facility Association. The claims data excludes all loss adjustment expenses except certain specific reimbursed expenses (“claims fees and allowed claims expenses”)⁶. The data is reconciled to information contained in Facility Association’s Participation Reports, the results of which are reviewed by the Appointed Actuary for reasonableness. Procedures are in place to provide reasonable assurance that the data used is reliable and sufficient for the proper valuation of the liabilities.

The valuation data, for the purposes of the valuation, is aggregated to the level of:

- jurisdiction;

⁵IBC is the statistical agent of the General Insurance Statistical Agency (GISA), with responsibility of managing the Automobile Statistical Plan reporting. In addition, Facility Association outsources its IT to IBC.

⁶Servicing Carriers for the Residual Market are compensated via an initial claims fee paid as a percentage of earned premium. This fee is retroactively adjusted and settled at age 72 months for each accident year based on the formula as laid out in the Plan of Operation. The claims fee is meant to cover Servicing Carrier costs for claims management and adjudication except for certain categories of claims expenses (first party legal and professional consulting fees as described in the Facility Association’s “Claims Guide” manual under the “Legal & Professional Fees” section). These latter fees are reimbursable upon proof of closure of the applicable coverage of the claim, and upon verification of eligibility.

We refer to these fees/expenses collectively as “claims fees and allowed claims expense”, or alternately as “retro claims expenses”, and these are generally NOT included in this discussion, although reference is made to them from time to time as deemed appropriate. The claims fees and allowed claims expenses may be reviewed in the valuation process and any associated changes in unpaid amounts are reflected in the Participation Report.

These “claims expense” type provisions are adjusted to an actuarial present value basis, consistent with other policy liabilities.

- business segment;
- kind-of-loss / coverage;
- accident year and half-year; and
- development half-year⁷.

Data elements captured include earned premium, claims⁸ paid, case reserves, recorded claims (being the sum of claims paid and case reserves), and recorded claim counts.

For the purposes of the valuation described in this report, the valuation data is as at **June 30, 2019**.

B.3.2 Industry AIX Data

Although the FARM valuation data is the primary source of data for valuation purposes, the following Industry AIX data files prepared by IBC (on behalf of GISA) is used to supplement the FARM valuation data and is used in the determination of loss cost trend structures, being models describing changes in loss costs (average claim amount per exposure unit) over time, including the impacts of product reforms:

- industry experience (indemnity only) as per the 2018-H2 AIX Development Exhibits for Private Passenger Vehicles (PPV) and Commercial Vehicles (CV⁹) in the applicable jurisdictions, compiled as at December 31, 2018.

IBC (on behalf of GISA) assembles Industry AIX data from the submissions made under the Automobile Statistical Plan by each of the insurers writing automobile business in the applicable jurisdiction. As there are many insurers providing this information and due to remoteness from the individual data elements, it is not practical for IBC to directly put in place audit or audit-like procedures. However, IBC does perform various data edit checks which are designed to promote data integrity.

Industry AIX data is relied upon without the benefit of any independent audit and has been used without modification. Nonetheless, the data is deemed to be reliable and appropriate for the purposes of this valuation and the trend analysis completed in relation to the data.

B.3.3 Other Data

Reliance has also been placed on other quantitative and qualitative information supplied by Facility Association without audit or independent verification. Wherever possible, such information was reviewed for reasonableness and internal consistency by the Appointed Actuary.

B.4 Actual vs Projected (AvsP)

With each valuation, we project, by accident year, future claim activity (recorded and paid). Both projected recorded claim activity and projected paid claim activity are used as a means of providing feedback on our prior selections of ultimate losses. In addition, the paid projections are used directly as

⁷Development quarter is also available for purposes of performing roll forward valuations in relation to valuation periods ending March 31 and September 30.

⁸For purposes of this report, the terms “claims” or “loss” will refer to “indemnity” unless otherwise indicated.

⁹Industry experience (indemnity only) using AIX development exhibits for Private Passenger Motorcycles in Ontario and Alberta are reviewed annually, including determination of loss cost trend structures, and are currently used for FA pricing purposes only.

projected cash flows for claims in the determination of the discount rate selection for the policy liabilities.

The challenge in interpreting actual versus projected (AvsP) variances as a feedback mechanism is how much of the variance is attributed to:

- process variance (i.e. randomness) inherent in the activities themselves (i.e. recorded and paid activity);
- model selection (i.e. that our emergence model is not a good representation or predictor of future emergence even if we've correctly estimated ultimate);
- parameter selection within the model (i.e. that our emergence model can be a good representation of emergence, but we selected the “wrong” emergence factors);
- our selection of ultimate (i.e. that our emergence model and emergence factors selections are good, but we're applying the model and factors to the “wrong” ultimate); and
- changes to our model (i.e. changes made with the goal of improving its predictive capability).

Nonetheless, the AvsP exercise is an important validation process for us. Our discussion in the by jurisdiction AvsP section will focus on our interpretation of feedback the variances provide to our prior selections of ultimate, and how this provides information in relation to our current selections of ultimate.

B.5 Uncertainty

The establishment of provisions for the unpaid, unrecorded, and/or unreported claims is based on numerical data and the interpretation of current and anticipated circumstances. It is a complex and dynamic process influenced by a large variety of factors. These factors include the experience of the FARM and the experience of the voluntary market in the associated jurisdiction, claim frequency and severity, indemnity and allowed claims expense payment patterns, case reserving practices, and lags between when the event giving rise to the claim occurred, when the claim is reported to a Servicing Carrier, when the Servicing Carrier records claim information on their own system, and when that information is transmitted to Facility Association to be recorded. The process of determining the provisions necessarily involves uncertainty such that the actual results will deviate, perhaps substantially, from the best estimates made through the valuation process.

C. ALL JURISDICTIONS

C.1 Valuation Highlights

A summary of the valuation results through time is available in the “A” exhibit (see section L for all exhibits), with detail related to the current valuation provided in the “B” exhibits.

The change in selected ultimate for **prior accident years** was **\$4.4 million favourable** with this valuation (**1.6%** of the unpaid estimate as at last quarter), bringing the **calendar year-to-date total to an unfavourable \$7.9 million impact (2.5%** of the unpaid estimate as at the beginning of the **2019 calendar year**). These changes are presented in total and by business segment, accident year and government line in the tables below.

FARM - All Jurisdictions (All Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable during Quarter					FARM - All Jurisdictions (All Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable YTD				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total	Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(1,418)	(320)	261	(1,477)	2014 & Prior	(1,371)	761	103	(507)
2015	559	(534)	(23)	2	2015	38	(852)	47	(767)
2016	(1,377)	(858)	(20)	(2,255)	2016	149	(973)	(10)	(834)
2017	(750)	(1,541)	(173)	(2,464)	2017	1,335	(1,333)	(309)	(307)
2018	3,273	(604)	(881)	1,788	2018	7,495	(46)	2,847	10,296
TOTAL	287	(3,857)	(836)	(4,406)	TOTAL	7,646	(2,443)	2,678	7,881

FARM - All Jurisdictions (Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable during Quarter					FARM - All Jurisdictions (Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable YTD				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total	Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(1,256)	(94)	(2)	(1,352)	2014 & Prior	(1,444)	371	(13)	(1,086)
2015	441	(247)	(4)	190	2015	163	(273)	67	(43)
2016	(708)	(201)	(12)	(921)	2016	507	(5)	(14)	488
2017	(1,203)	(927)	1	(2,129)	2017	(1,311)	(679)	-	(1,990)
2018	298	(39)	(151)	108	2018	428	238	917	1,583
TOTAL	(2,428)	(1,508)	(168)	(4,104)	TOTAL	(1,657)	(348)	957	(1,048)

FARM - All Jurisdictions (Non-Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable during Quarter					FARM - All Jurisdictions (Non-Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable YTD				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total	Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(163)	(224)	264	(123)	2014 & Prior	72	388	117	577
2015	117	(288)	(18)	(189)	2015	(126)	(578)	(20)	(724)
2016	(669)	(657)	(8)	(1,334)	2016	(358)	(968)	4	(1,322)
2017	452	(615)	(173)	(336)	2017	2,646	(656)	(308)	1,682
2018	2,974	(565)	(731)	1,678	2018	7,067	(284)	1,931	8,714
TOTAL	2,711	(2,349)	(666)	(304)	TOTAL	9,301	(2,098)	1,724	8,927

The **favourable prior accident year development** in the quarter was driven by continuing low levels of recent accident year (AY2016-AY2018) reported third party liability bodily injury and accident benefits claims experience across most jurisdictions (particularly in Ontario, and New Brunswick). The favourable PAY development was partially offset by continuing high levels of bodily injury claims experience and large loss bodily injury case reserves increase in Alberta non-PPV.

Selected loss ratios aggregated across all jurisdictions for **accident year 2019** (the current accident year) **increased** in total (+0.2 point to 53.9%) while **accident year 2020** (the future accident year) **increased** in total (+0.2 points to 54.1%). Changes in selected loss ratios for **accident year 2019** were driven by updated a priori loss ratio selections as a result of using updated claims trends.

Consideration was given to recent regulatory and legislative initiatives (see summary descriptions in section I) and court decisions (see summary descriptions in section J).

The valuation process is described in more detail in section K, and a summary of changes to the process during this fiscal year is provided in section H.

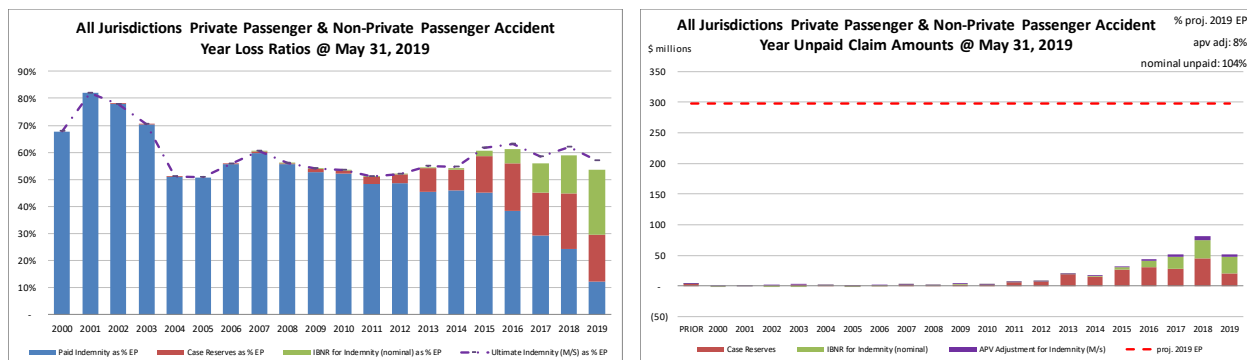
Policy liability projected cash flows and June 2019 Government of Canada bond yield curves were used to determine the applicable discount rate. The selected investment income margin for adverse deviation was maintained at 25 basis points with the current valuation.

The claims development margins for adverse deviations (MfADs) for all FARM jurisdictions and business segments were reviewed with the valuation as at June 30, 2019 as per our regular annual valuation process. In particular, selected claims development MfADs for older accident years were reviewed and judgmentally decreased to reflect the decreasing uncertainty over time (see Exhibit D in section L for claims development margins).

C.2 Booked results for the prior valuation implementation

It is helpful to consider how the portfolio looked after the **prior valuation** was implemented. In this case, the **May 2019 booked results** were **based on** assumptions derived from **the prior (March 31, 2019) valuation** and were discussed in the associated monthly Actuarial Highlights.

The charts below show the levels of claim liabilities booked by accident year¹⁰ on that basis. The left chart displays life-to-date payments, case reserves, IBNR, and the total including actuarial present value adjustments against accident year earned premium. The right chart shows the associated dollar amounts for the components of the claim liabilities and the then-current projected amount of 2019 full year earned premium (the red hash-mark line) to provide some perspective.



“M/S” refers to “Member Statement” values – that is, actuarial present value adjustments at the selected discount rate.

The associated policy liabilities are presented and discussed in the tables that follow.

¹⁰The loss ratio chart has been limited to show the most recent 20 accident years; the unpaid provision chart has been limited to show the most recent 20 accident years, and show all accident years older than 20 years collectively as “PRIOR”.

claim liabilities (\$000s)	amt	%
case	214,696	64.2%
ibnr	95,687	28.6%
M/S apv adj	23,879	7.1%
M/S indemnity	334,262	100.0%
retro claims	31,059	
retro apv adj	4,823	
M/S total	370,144	

The table to the left breaks down the Member Statement (M/S) unpaid claims liabilities total into its component parts. The first four rows of this table reflect indemnity only as indicated, with the majority of the unpaid in case reserves. The unpaid claims fees and allowed claims expenses liability is shown in the row labelled “retro claims” (see footnote 6 on page 8) and the associated actuarial present value adjustments are shown in the row labelled “retro apv adj”.

The tables immediately below summarize premium and policy liabilities.

premium liabilities (\$000s)	amt	%
unearned prem	148,827	108.1%
prem def/(dpac)	(11,584)	(8.4%)
M/S apv adjust.	450	0.3%
M/S total	137,693	100.0%

policy liabilities (\$000s)	amt	%
claim	341,442	67.2%
premium	137,243	27.0%
M/S apv adjust.	29,152	5.7%
M/S total	507,837	100.0%

M/S total by juris (rounded at juris level)	
Ontario	176,106
Alberta	137,009
Newfoundland & Labrador	68,989
New Brunswick	53,681
Nova Scotia	47,322
Prince Edward Island	13,175
Yukon	4,026
Northwest Territories	5,739
Nunavut	1,790
All Jurisdictions	507,837

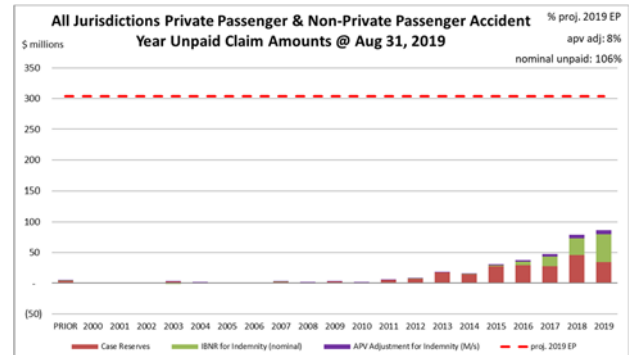
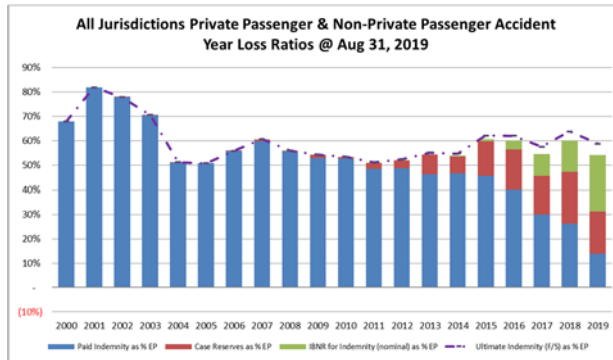
Total policy liabilities are summarized by jurisdiction in the table to the left. Collectively, the Atlantic provinces represent the largest exposure, with \$183 million in policy liabilities (on an actuarial present value basis; rounding differences may apply between the total in the table to the left and the policy liabilities table above and to the right).

C.3 Booked results for the current valuation implementation

The **August 2019 booked results** were based on assumptions derived from **the current (June 30, 2019) valuation** and are discussed in the associated monthly Actuarial Highlights.

The charts at the top of the next page show the levels of claim liabilities booked by accident year¹¹ on that basis. The left chart displays life-to-date payments, case reserves, IBNR, and the total including actuarial present value adjustments against accident year earned premium. The right chart shows the associated dollar amounts for the components of the claim liabilities and the current projected amount of 2019 full year earned premium (the red hash-mark line) to provide some perspective.

¹¹The loss ratio chart has been limited to show the most recent 20 accident years; the unpaid provision chart has been limited to show the most recent 20 accident years, and show all accident years older than 20 years collectively as “PRIOR”.



“M/S” refers to “Member Statement” values – that is, actuarial present value adjustments at the selected discount rate.

The associated policy liabilities are presented and discussed in the tables that follow.

claim liabilities (\$000s)

	amt	%
case	224,048	64.4%
ibnr	99,478	28.6%
M/S apv adj	24,268	7.0%
M/S indemnity	347,794	100.0%
retro claims	28,149	
retro apv adj	4,806	
M/S total	380,749	

The table to the left breaks down the Member Statement (M/S) unpaid claims liabilities total into its component parts. The first four rows of this table reflect indemnity only as indicated, with the majority of the unpaid in case reserves. The unpaid claims fees and allowed claims expenses liability is shown in the row labelled “retro claims” (see footnote 6 on page 8) and the associated actuarial present value adjustments are shown in the row labelled “retro apv adj”.

The tables immediately below summarize premium and policy liabilities.

premium liabilities (\$000s)

	amt	%
unearned prem	169,724	108.1%
prem def/(dpac)	(12,984)	(8.3%)
M/S apv adjust.	281	0.2%
M/S total	157,021	100.0%

policy liabilities (\$000s)

	amt	%
claim	351,675	65.4%
premium	156,740	29.1%
M/S apv adjust.	29,355	5.5%
M/S total	537,770	100.0%

M/S total by juris (rounded at juris level)

Ontario	188,238
Alberta	152,360
Newfoundland & Labrador	73,395
New Brunswick	52,288
Nova Scotia	48,563
Prince Edward Island	11,658
Yukon	4,214
Northwest Territories	5,451
Nunavut	1,603
All Jurisdictions	537,770

Total policy liabilities are summarized by jurisdiction in the table to the left. Collectively, the Atlantic provinces represent the second largest exposure (after Ontario), with \$186 million in policy liabilities (on an actuarial present value basis; rounding differences apply between the total in the table to the left and the policy liabilities table above and to the right).

C.4 Actual vs Projected (AvsP)

Projected recorded and paid emergence are reviewed and selected at a jurisdiction, business segment, kind of loss/coverage and accident half-year level at each valuation. Total variances in projected

recorded and paid emergence are aggregated and the associated actual emergence is presented in the two following tables.

FARM Total - All Vehicles												
Accident Year	Third Party Liability			Accident Benefits			Other Coverages			Total		
	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
			= [2]-[1]			= [5]-[4]			= [8]-[7]	= [10]-[9]	= [11]-[10]	
2014 & Prior	125	(1,158)	(1,283)	530	258	(272)	-	262	262	655	(638)	(1,293)
2015	652	610	(42)	273	(162)	(435)	-	(22)	(22)	925	426	(499)
2016	2,170	258	(1,912)	792	(60)	(852)	16	(9)	(25)	2,978	189	(2,789)
2017	2,502	1,403	(1,099)	812	(438)	(1,250)	(8)	(130)	(122)	3,306	835	(2,471)
2018	4,666	6,665	1,999	1,104	711	(393)	(560)	(466)	94	5,210	6,910	1,700
2019	12,842	12,107	(735)	2,281	1,607	(674)	8,046	9,867	1,821	23,169	23,581	412
Total	22,957	19,885	(3,072)	5,792	1,916	(3,876)	7,494	9,502	2,008	36,243	31,303	(4,940)
2018 & prior	10,115	7,778	(2,337)	3,511	309	(3,202)	(552)	(365)	187	13,074	7,722	(5,352)

*projected recorded claims based on recorded emergence model as at 2019-Q1

As indicated in the table above, total recorded emergence at \$31.3 million was \$4.9 million (13.6%) less than the \$36.2 million projected (columns [11], [12] and [10] respectively).

The favourable variance was driven by **continuing low levels of recent accident year (AY2016-AY2019) reported third party liability bodily injury and accident benefits claims experience across most jurisdictions** (particularly in Ontario and New Brunswick). This was partially offset by continuing high levels of Alberta non-PPV bodily injury claims experience and large loss case reserves in AY2017-2018, with AY 2018 contributing to the vast majority of the unfavourable variance. The monthly individual claims experience was reviewed and confirmed at a jurisdiction level, and we view the current quarter favourable recorded and paid activity as process variance, however, we are continuing to monitor the continuing favourable bodily injury claims development relative to selected claims estimates and changes in claims emergence.

FARM Total - All Vehicles												
Accident Year	Third Party Liability			Accident Benefits			Other Coverages			Total		
	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected
	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]
			= [14]-[13]			= [17]-[16]			= [20]-[19]	= [22]-[21]	= [23]-[22]	
2014 & Prior	6,979	5,004	(1,975)	3,669	730	(2,939)	60	(17)	(77)	10,708	5,717	(4,991)
2015	2,363	2,820	457	1,106	152	(954)	9	62	53	3,478	3,034	(444)
2016	2,842	3,314	472	891	924	33	6	(8)	(14)	3,739	4,230	491
2017	2,535	2,019	(516)	856	562	(294)	(3)	(95)	(92)	3,388	2,486	(902)
2018	4,144	4,615	471	1,562	1,086	(476)	3,405	1,903	(1,502)	9,111	7,604	(1,507)
2019	4,809	3,927	(882)	460	306	(154)	7,990	8,293	303	13,259	12,526	(733)
Total	23,672	21,699	(1,973)	8,544	3,760	(4,784)	11,467	10,138	(1,329)	43,683	35,597	(8,086)
2018 & prior	18,863	17,772	(1,091)	8,084	3,454	(4,630)	3,477	1,845	(1,632)	30,424	23,071	(7,353)

*projected paid claims based on paid emergence model as at 2019-Q1

As indicated in the table above, total paid emergence at \$35.6 million was \$8.1 million (18.6%) less than the \$43.7 million projected (columns [23], [24] and [22] respectively).

Further discussion of the Actual versus Projected emergence variances is provided in the by jurisdiction sections of this report.

C.5 Current valuation IBNR selections

Exhibit “4.1” (see Section L for all exhibits) summarizes the overall change in ultimate with this valuation and “4.2” shows selected loss ratios over the most recent 4 valuations for comparison purposes on an “all coverages basis”.

C.6 Premium Liabilities / Future Accident Years

In order to provide a basis for estimating the full premium liability level for monthly statements (i.e. the level of premium deficiency liability / deferred policy acquisition cost asset to carry) we leverage the a priori loss ratios for the accident year underlying the unearned premium levels.

The test of recoverability leverages assumptions set by the Appointed Actuary. These include the servicing carrier expense allowances (per the Plan of Operation) and policy administration / maintenance expense assumptions.

C.7 Actuarial Present Value Adjustments

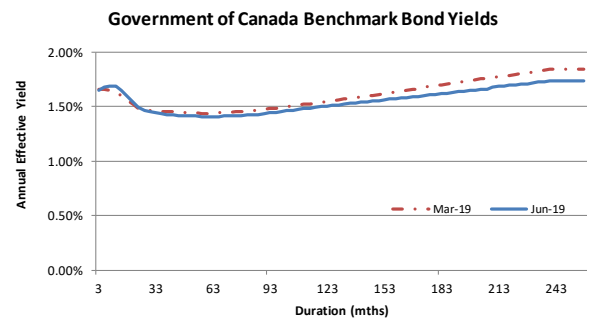
C.7.1 Selected Claims Payment Patterns

Payment patterns are selected through the emergence models (the same used for projecting future claims paid and recorded activity for the AvSP process), currently leveraging a “paid to ultimate” metric.

C.7.2 Selected Discount Rate

The projected future claims paid cash flow are aggregated across all jurisdictions and business segments and matched to a simulated portfolio of Government of Canada benchmark monthly bonds (yields anchored to the valuation date), and 15 basis point investment expense is assumed.

A **discount rate of 1.44% per annum was selected** for all jurisdictions for the valuation of the claim liabilities and premium liabilities at June 30, 2019, **down from 1.48%** selected with the March 31, 2019 valuation. The chart to the right shows the Government of Canada benchmark bond yield curves at June 2019 and March 2019.



Sensitivity to the discount rate assumption is presented in Exhibit C (see Section L).

C.7.3 Selected Margins for Adverse Deviations

The **margin for adverse deviation for investment income** was **maintained at 25 basis points** with the current valuation.

Selected **claims development MfADs** were reviewed for all coverages and accident half years and **updated** as summarized in Exhibit D (see section L), resulting in an estimated implementation impact of **\$1.1 million favourable**.

D. ONTARIO

D.1 Valuation Highlights – Indemnity Only

A summary of the valuation results through time is available in the “A” exhibit (see section L for all exhibits), with detail related to the current valuation provided in the “B” exhibits.

The change in selected ultimate for **prior accident years** was **\$3.9 million favourable** with this valuation (4.6% of the unpaid estimate as at last quarter), bringing the **calendar year-to-date total favourable to \$0.5 million (0.6% of the unpaid estimate as at the beginning of the 2019 calendar year)**. These changes are presented by business segment, accident year and government line in the tables below.

FARM - Ontario (All Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable during Quarter					FARM - Ontario (All Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable YTD				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total	Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(414)	(219)	(6)	(639)	2014 & Prior	694	953	(162)	1,485
2015	304	(219)	-	85	2015	74	(387)	71	(242)
2016	(486)	(333)	(14)	(833)	2016	(500)	(333)	(14)	(847)
2017	(449)	(740)	(31)	(1,220)	2017	(356)	(788)	(23)	(1,167)
2018	(881)	(444)	11	(1,314)	2018	(703)	(416)	1,398	279
TOTAL	(1,926)	(1,955)	(40)	(3,921)	TOTAL	(791)	(971)	1,270	(492)

FARM - Ontario (Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable during Quarter					FARM - Ontario (Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable YTD				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total	Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(51)	(53)	(1)	(105)	2014 & Prior	36	511	(10)	537
2015	116	(162)	-	(46)	2015	60	(164)	71	(33)
2016	(217)	(19)	(4)	(240)	2016	(254)	178	(4)	(80)
2017	(210)	(531)	(1)	(742)	2017	(198)	(542)	9	(731)
2018	(269)	(144)	172	(241)	2018	(129)	(145)	879	605
TOTAL	(631)	(909)	166	(1,374)	TOTAL	(485)	(162)	945	298

FARM - Ontario (Non-Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable during Quarter					FARM - Ontario (Non-Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable YTD				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total	Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(364)	(166)	(4)	(534)	2014 & Prior	659	442	(151)	950
2015	188	(58)	-	130	2015	14	(223)	-	(209)
2016	(269)	(315)	(10)	(594)	2016	(246)	(512)	(10)	(768)
2017	(240)	(210)	(30)	(480)	2017	(157)	(247)	(31)	(435)
2018	(611)	(300)	(161)	(1,072)	2018	(573)	(270)	519	(324)
TOTAL	(1,296)	(1,049)	(205)	(2,550)	TOTAL	(303)	(810)	327	(786)

The **favourable prior accident year development** was driven by lower than expected levels of claim activity reported during the quarter for third party liability bodily injury and accident benefits across PPV and non-PPV along with one AY2017 PPV accident benefits large loss being closed without payment.

The **selected loss ratio** for **accident year 2019** (the current accident year, down 3.1 points to 43.5%) and the selected loss ratio for **accident year 2020** (the future accident year, down 0.6 points to 48.3 %) **both decreased**. The selected loss ratios for accident years 2019 and 2020 were **driven by** low levels of non-PPV third party liability DCPD and accident benefits reported claim experience.

Notable changes occurred in the business mix for Ontario non-PPV associated with the significant increase in Commercial Vehicle (CV) and Interurban (IU) written premium over the last several years.

CV written premiums increased from \$9.2 million in 2016 to \$19.9 million in 2018, and increased another \$11.2 million (123% from 2018) over year-to-date in 2019 to June 30. Similarly, **IU written premiums** increased from \$2.7 million in 2016 to \$30.3 million in 2018 and further increased another \$9.6 million (82% from 2018) year-to-date in 2019.

Consideration was given to recent regulatory and legislative initiatives (see summary descriptions in section I) and court decisions (see summary descriptions in section J).

D.2 Actual vs Projected (AvsP)

Variances in projected recorded and paid emergence and the associated actual emergence are presented in the following two tables.

Ontario - All Vehicles												
Recorded Emergence	Third Party Liability			Accident Benefits			Other Coverages			Total		
	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected
Accident Year	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
			= [2]-[1]			= [5]-[4]			= [8]-[7]	= [10]-[9]	= [11]-[10]	= [12]-[11]
2014 & Prior	(1)	(399)	(398)	512	315	(197)	-	(5)	(5)	511	(89)	(600)
2015	32	114	82	124	(65)	(189)	-	-	-	156	49	(107)
2016	447	(138)	(585)	231	(116)	(347)	16	1	(15)	694	(253)	(947)
2017	545	178	(367)	267	(342)	(609)	14	(5)	(19)	826	(169)	(995)
2018	1,680	663	(1,017)	513	105	(408)	136	137	1	2,329	905	(1,424)
2019	3,607	2,223	(1,384)	861	416	(445)	1,848	2,546	698	6,316	5,185	(1,131)
Total	6,310	2,641	(3,669)	2,508	313	(2,195)	2,014	2,674	660	10,832	5,628	(5,204)
2018 & prior	2,703	418	(2,285)	1,647	(103)	(1,750)	166	128	(38)	4,516	443	(4,073)

*projected recorded claims based on recorded emergence model as at 2019-Q1

As indicated in the table above, total recorded emergence at \$5.6 million was \$5.2 million (48.0%) less than the \$10.8 million projected (columns [11], [12] and [10] respectively). The favourable variance was driven by low levels of non-PPV third party liability DCPD and accident benefits claims activity, where one AY2017 large claim was closed without payment.

Ontario - All Vehicles												
Paid Emergence	Third Party Liability			Accident Benefits			Other Coverages			Total		
	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected
Accident Year	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]
			= [14]-[13]			= [17]-[16]			= [20]-[19]	= [22]-[21]	= [23]-[22]	= [24]-[23]
2014 & Prior	1,973	1,994	21	1,712	369	(1,343)	58	(1)	(59)	3,743	2,362	(1,381)
2015	281	24	(257)	880	110	(770)	8	81	73	1,169	215	(954)
2016	201	28	(173)	313	682	369	4	2	(2)	518	712	194
2017	262	96	(166)	170	158	(12)	6	3	(3)	438	257	(181)
2018	1,124	524	(600)	357	377	20	644	1,066	422	2,125	1,967	(158)
2019	1,889	883	(1,006)	100	50	(50)	1,821	1,965	144	3,810	2,898	(912)
Total	5,730	3,549	(2,181)	3,532	1,746	(1,786)	2,541	3,116	575	11,803	8,411	(3,392)
2018 & prior	3,841	2,666	(1,175)	3,432	1,696	(1,736)	720	1,151	431	7,993	5,513	(2,480)

*projected paid claims based on paid emergence model as at 2019-Q1

As indicated above, total paid emergence at \$8.4 million was \$3.4 million (28.7%) less than the \$11.8 million projected (columns [23], [24] and [22] respectively).

It is difficult to determine how much of the continuing poor paid and recorded emergence projection result is due to the various causes as discussed in Section B.4 (i.e. being driven by significant changes in Ontario private passenger volumes/mix of business, the significant reductions in IBNR over the prior valuations, impacts of various reforms or changes in payment emergence patterns).

D.3 Special IBNR Provisions / Adjustments

There are currently no special IBNR provisions or adjustments.

E. ALBERTA

E.1 Valuation Highlights – Indemnity Only

A summary of the valuation results through time is available in the “A” exhibit (see section L for all exhibits), with detail related to the current valuation provided in the “B” exhibits.

The change in selected ultimate for **prior accident years** was **\$3.3 million unfavourable** with this valuation (4.4% of the unpaid estimate as at last quarter), bringing the **calendar year-to-date total unfavourable to \$9.4 million (12.5% of the unpaid estimate as at the beginning of the 2019 calendar year)**. These changes are presented by business segment, accident year and government line in the tables below.

FARM - Alberta (All Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable during Quarter					FARM - Alberta (All Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable YTD				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total	Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(12)	(12)	(5)	(29)	2014 & Prior	(953)	(21)	(6)	(980)
2015	124	(95)	(19)	10	2015	(173)	(83)	(20)	(276)
2016	(65)	(131)	3	(193)	2016	(73)	(153)	15	(211)
2017	881	(128)	(106)	647	2017	2,495	(164)	(133)	2,198
2018	3,209	48	(378)	2,879	2018	7,052	121	1,466	8,639
TOTAL	4,137	(318)	(505)	3,314	TOTAL	8,348	(300)	1,322	9,370

FARM - Alberta (Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable during Quarter					FARM - Alberta (Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable YTD				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total	Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(544)	-	-	(544)	2014 & Prior	(725)	1	(1)	(725)
2015	(98)	(1)	-	(99)	2015	(206)	(1)	-	(207)
2016	(126)	(3)	-	(129)	2016	(88)	(5)	1	(92)
2017	(318)	(5)	(2)	(325)	2017	(403)	(7)	2	(408)
2018	(164)	25	(47)	(186)	2018	(111)	113	13	15
TOTAL	(1,250)	16	(49)	(1,283)	TOTAL	(1,533)	101	15	(1,417)

FARM - Alberta (Non-Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable during Quarter					FARM - Alberta (Non-Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable YTD				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total	Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	534	(13)	(4)	517	2014 & Prior	(226)	(22)	(5)	(253)
2015	222	(95)	(18)	109	2015	33	(83)	(19)	(69)
2016	61	(128)	4	(63)	2016	15	(148)	14	(119)
2017	1,197	(122)	(105)	970	2017	2,896	(157)	(136)	2,603
2018	3,374	24	(331)	3,067	2018	7,164	8	1,453	8,625
TOTAL	5,388	(334)	(454)	4,600	TOTAL	9,882	(402)	1,307	10,787

The **unfavourable prior accident year development** was driven by **increases to large claim case reserves to non-PPV third party liability bodily injury**, in particular one **AY2012** and three **AY2018** Interurban claims along with higher than expected case reserve increases in **AY2017** non-PPV Other Coverages. These were partially offset by lower than expected levels of PPV bodily injury claims activity reported during the quarter.

The **selected loss ratios for accident year 2019** (the current accident year) increased 4.5 points to 55.7% while **accident year 2020** (the future accident year) increased 2.5 points to 54.8%. The change in current and future accident year loss ratios were driven by high levels of non-PPV third party liability bodily

injury reported claims experience in recent periods and updated loss cost adjustment factors based on industry 2018-2 trend analysis.

Notable changes occurred in the business mix for Alberta non-PPV associated with the significant increase in Commercial Vehicle (CV) and Interurban (IU) written premium over the last several years. **CV written premiums** increased from \$18.5 million in 2016 to \$24.0 million in 2018 and further increased another \$2.7 million (24% from 2018) over the first half of 2019. Similarly, **IU written premiums** increased from \$7.1 million in 2016 to \$30.4 million in 2018 and further increased another \$14.6 million (154% from 2018) over the first half of 2019.

Consideration was given to recent regulatory and legislative initiatives (see summary descriptions in section I) and court decisions (see summary descriptions in section J).

E.2 Actual vs Projected (AvsP)

Variations in projected recorded and paid emergence and the associated actual emergence are presented in the two following tables.

Alberta - All Vehicles												
Recorded Emergence	Third Party Liability			Accident Benefits			Other Coverages			Total		
	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected
Accident Year	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
			= [2]-[1]			= [5]-[4]			= [8]-[7]	= [10]+[4]+[7]	= [11]+[5]+[8]	= [12]-[10]
2014 & Prior	51	176	125	-	-	-	-	(4)	(4)	51	172	121
2015	392	52	(340)	11	(2)	(13)	-	(18)	(18)	403	32	(371)
2016	849	251	(598)	129	(2)	(131)	-	-	-	978	249	(729)
2017	766	819	53	202	(2)	(204)	(14)	(127)	(113)	954	690	(264)
2018	1,386	3,306	1,920	205	198	(7)	(306)	(32)	(274)	1,285	3,472	2,187
2019	3,220	3,502	282	277	314	37	3,517	4,213	696	7,014	8,029	1,015
Total	6,664	8,106	1,442	824	506	(318)	3,197	4,032	835	10,685	12,644	1,959
2018 & prior	3,444	4,604	1,160	547	192	(355)	(320)	(181)	139	3,671	4,615	944

*projected recorded claims based on recorded emergence model as at 2019-Q1

As indicated above, total recorded emergence at \$12.6 million was \$2.0 million (15.5%) more than the \$10.7 million projected (columns [11], [12] and [10] respectively). The unfavourable variance was driven by three accident year 2018 non-PPV third party liability bodily injury IU large claims reported in the quarter, which totaled \$1.5 million.

Alberta - All Vehicles												
Paid Emergence	Third Party Liability			Accident Benefits			Other Coverages			Total		
	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected
Accident Year	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]
			= [14]-[13]			= [17]-[16]			= [20]-[19]	= [13]+[16]+[19]	= [14]+[17]+[20]	= [23]-[22]
2014 & Prior	1,898	1,079	(819)	1,008	32	(976)	2	(22)	(24)	2,908	1,089	(1,819)
2015	717	1,605	888	35	(1)	(36)	-	(18)	(18)	752	1,586	834
2016	962	526	(436)	194	7	(187)	-	(1)	(1)	1,156	532	(624)
2017	714	294	(420)	178	20	(158)	(16)	(107)	(91)	876	207	(669)
2018	1,083	2,715	1,632	221	225	4	2,101	817	(1,284)	3,405	3,757	352
2019	1,072	1,199	127	110	98	(12)	3,197	3,376	179	4,379	4,673	294
Total	6,446	7,418	972	1,746	381	(1,365)	5,284	4,045	(1,239)	13,476	11,844	(1,632)
2018 & prior	5,374	6,219	845	1,636	283	(1,353)	2,087	669	(1,418)	9,097	7,171	(1,926)

*projected paid claims based on paid emergence model as at 2019-Q1

As indicated above, total paid emergence at \$11.8 million was \$1.6 million, 12.1%, less than the \$13.5 million projected (columns [23], [24] and [22] respectively). Variances are attributed to process variance.

E.3 Special IBNR Provisions / Adjustments

There are currently no special IBNR provisions or adjustments.

F. ATLANTIC REGION

F.1 Valuation Highlights – Indemnity Only

A summary of the valuation results through time is available in the “A” exhibit (see section L for all exhibits), with detail related to the current valuation provided in the “B” exhibits.

The change in selected ultimate for **prior accident years** was **\$3.0 million favourable** with this valuation (2.6% of the unpaid estimate as at last quarter), bringing the **calendar year-to-date total favourable to \$0.3 million (0.0%** of the unpaid estimate as at the beginning of the **2019 calendar year**). These changes are presented by business segment, accident year and government line in the tables below.

FARM - Combined Atlantics (All Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable during Quarter					FARM - Combined Atlantics (All Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable YTD				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total	Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(956)	(88)	270	(774)	2014 & Prior	(1,045)	(172)	270	(947)
2015	200	(218)	(4)	(22)	2015	175	(379)	(4)	(208)
2016	(510)	(344)	(11)	(865)	2016	1,046	(433)	(14)	599
2017	(947)	(658)	(6)	(1,611)	2017	(506)	(362)	(63)	(931)
2018	1,006	(194)	(523)	289	2018	1,087	226	(89)	1,224
TOTAL	(1,207)	(1,502)	(274)	(2,983)	TOTAL	757	(1,120)	100	(263)

FARM - Combined Atlantics (Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable during Quarter					FARM - Combined Atlantics (Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable YTD				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total	Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(598)	(43)	-	(641)	2014 & Prior	(673)	(139)	-	(812)
2015	467	(83)	(4)	380	2015	373	(107)	(4)	262
2016	(178)	(135)	(9)	(322)	2016	1,050	(131)	(13)	906
2017	(618)	(381)	(9)	(1,008)	2017	(590)	(119)	21	(688)
2018	824	86	(311)	599	2018	779	275	(48)	1,006
TOTAL	(103)	(556)	(333)	(992)	TOTAL	939	(221)	(44)	674

FARM - Combined Atlantics (Non-Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable during Quarter					FARM - Combined Atlantics (Non-Private Passenger Vehicles) Valuation changes in selected ultimate (favourable) / unfavourable YTD				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total	Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(357)	(45)	270	(132)	2014 & Prior	(372)	(30)	270	(132)
2015	(267)	(136)	-	(403)	2015	(198)	(272)	-	(470)
2016	(332)	(209)	(1)	(542)	2016	(4)	(302)	(1)	(307)
2017	(329)	(276)	3	(602)	2017	84	(242)	(83)	(241)
2018	182	(279)	(213)	(310)	2018	308	(50)	(42)	216
TOTAL	(1,103)	(945)	59	(1,989)	TOTAL	(182)	(896)	144	(934)

The current valuation for FARM non-PPV Atlantics incorporates updated trend assumptions using AIX Industry 2018-H2 data.

The favourable prior accident year development was driven by better than expected claims settlements in the quarter across the New Brunswick and Prince Edward Island PPV segments. The favourable overall development was partially offset by bodily injury large claim case reserve increases for two Newfoundland PPV claims totaling \$1.1 million, occurring in accident years 2016 and 2018.

Consideration was given to recent regulatory and legislative initiatives (see summary descriptions in section I) and court decisions (see summary descriptions in section J).

F.2 Actual vs Projected (AvsP)

Variances in projected recorded and paid emergence and the associated actual emergence are presented in the following two tables below.

Recorded Emergence	Combined Atlantics - All Vehicles											
	Third Party Liability			Accident Benefits			Other Coverages			Total		
	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Accident Year			= [2]-[1]			= [5]-[4]			= [8]-[7]	= [10]+[4]+[7]	= [11]+[5]+[8]	= [11]-[10]
2014 & Prior	69	(932)	(1,001)	16	(59)	(75)	-	270	270	85	(721)	(806)
2015	183	444	261	138	(97)	(235)	-	(4)	(4)	321	343	22
2016	736	181	(555)	427	98	(329)	-	(10)	(10)	1,163	269	(894)
2017	1,063	425	(638)	320	(93)	(413)	(10)	(21)	(11)	1,373	311	(1,062)
2018	1,433	2,466	1,033	374	416	42	(329)	(593)	(264)	1,478	2,289	811
2019	5,730	6,007	277	1,130	872	(258)	2,560	2,864	304	9,420	9,743	323
Total	9,214	8,591	(623)	2,405	1,137	(1,268)	2,221	2,506	285	13,840	12,234	(1,606)
2018 & prior	3,484	2,584	(900)	1,275	265	(1,010)	(339)	(358)	(19)	4,420	2,491	(1,929)

*projected recorded claims based on recorded emergence model as at 2019-Q1

As indicated above, total recorded emergence at \$12.2 million was \$1.6 million (11.6%) less than the \$13.8 million projected (columns [11], [12] and [10] respectively). The favourable overall experience was partially offset by unfavourable third party liability bodily injury paid and recorded activities from large claims in the quarter (one PE AY2016 large claim settlement of \$0.8 million and one NL AY2018 large claim case reserves increase of \$0.5 million).

Paid Emergence	Combined Atlantics - All Vehicles											
	Third Party Liability			Accident Benefits			Other Coverages			Total		
	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected
	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]
Accident Year			= [14]-[13]			= [17]-[16]			= [20]-[19]	= [23]+[16]+[19]	= [24]+[17]+[20]	= [23]-[22]
2014 & Prior	2,936	1,930	(1,006)	948	325	(623)	-	5	5	3,884	2,260	(1,624)
2015	1,346	1,192	(154)	191	41	(150)	-	-	-	1,537	1,233	(304)
2016	1,627	2,623	996	370	99	(271)	2	(9)	(11)	1,999	2,713	714
2017	1,469	1,554	85	496	383	(113)	3	(15)	(18)	1,968	1,922	(46)
2018	1,811	1,230	(581)	966	481	(485)	582	(48)	(630)	3,359	1,663	(1,696)
2019	1,762	1,784	22	244	157	(87)	2,796	2,701	(95)	4,802	4,642	(160)
Total	10,951	10,313	(638)	3,215	1,486	(1,729)	3,383	2,634	(749)	17,549	14,433	(3,116)
2018 & prior	9,189	8,529	(660)	2,971	1,329	(1,642)	587	(67)	(654)	12,747	9,791	(2,956)

*projected paid claims based on paid emergence model as at 2019-Q1

As indicated above, total paid emergence at \$14.4 million was \$3.1 million (17.8%) less than the \$17.5 million projected (columns [23], [24] and [22] respectively).

Claims transaction activity is generally volatile and differences between actual and projected claims emergence are anticipated due to this natural process variance. This is particularly true where volumes are low (as is the case here), so caution must be exercised in reviewing the variances as single claim transactions that are normal course for the business may look unusual and generate relatively significant variances that, in nominal value terms, are not that significant overall. With this in mind, and after our review, we have attributed the claims experience variance here as random and process variance driven.

That being said, it is difficult to determine how much of the continuing poor paid emergence projection result is due to the various causes as discussed in Section B.4 (i.e. being driven by changes in mix of business, impacts of various reforms or changes in payment emergence patterns).

F.3 Special IBNR Provisions / Adjustments

There are currently no special IBNR provisions or adjustments.

G. NORTHERN TERRITORIES

G.1 Valuation Highlights – Indemnity Only

A summary of the valuation results through time is available in the “A” exhibit (see section L for all exhibits), with detail related to the current valuation provided in the “B” exhibits.

The change in selected ultimate for **prior accident years** was **\$0.8 million favourable** with this valuation (**11.4%** of the unpaid estimate as at last quarter), bringing the **calendar year-to-date total favourable to \$0.7 million (10.2%** of the unpaid estimate as at the beginning of the **2019 calendar year**). These changes are presented by business segment, accident year and government line in the tables below.

FARM - Combined Territories (All Vehicles)				
Valuation changes in selected ultimate				
<i>(favourable) / unfavourable during Quarter</i>				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(36)	-	-	(36)
2015	(70)	(2)	(1)	(73)
2016	(317)	(50)	-	(367)
2017	(234)	(16)	(30)	(280)
2018	(62)	(15)	9	(68)
TOTAL	(719)	(83)	(22)	(824)

FARM - Combined Territories (All Vehicles)				
Valuation changes in selected ultimate				
<i>(favourable) / unfavourable YTD</i>				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(67)	-	(1)	(68)
2015	(37)	(3)	(1)	(41)
2016	(324)	(54)	2	(376)
2017	(297)	(19)	(90)	(406)
2018	57	23	73	153
TOTAL	(668)	(53)	(17)	(738)

FARM - Combined Territories (Private Passenger Vehicles)				
Valuation changes in selected ultimate				
<i>(favourable) / unfavourable during Quarter</i>				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(61)	-	-	(61)
2015	(43)	(2)	-	(45)
2016	(187)	(44)	-	(231)
2017	(58)	(10)	13	(55)
2018	(91)	(5)	35	(61)
TOTAL	(440)	(61)	48	(453)

FARM - Combined Territories (Private Passenger Vehicles)				
Valuation changes in selected ultimate				
<i>(favourable) / unfavourable YTD</i>				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	(81)	-	-	(81)
2015	(63)	(2)	-	(65)
2016	(200)	(47)	1	(246)
2017	(120)	(10)	(32)	(162)
2018	(111)	(5)	73	(43)
TOTAL	(575)	(64)	42	(597)

FARM - Combined Territories (Non-Private Passenger)				
Valuation changes in selected ultimate				
<i>(favourable) / unfavourable during Quarter</i>				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	25	-	-	25
2015	(27)	-	(1)	(28)
2016	(130)	(6)	-	(136)
2017	(176)	(6)	(42)	(224)
2018	29	(10)	(26)	(7)
TOTAL	(279)	(22)	(69)	(370)

FARM - Combined Territories (Non-Private Passenger)				
Valuation changes in selected ultimate				
<i>(favourable) / unfavourable YTD</i>				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2014 & Prior	14	-	-	14
2015	25	(1)	(1)	23
2016	(124)	(7)	1	(130)
2017	(177)	(9)	(58)	(244)
2018	168	28	-	196
TOTAL	(94)	11	(58)	(141)

Consideration was given to recent regulatory and legislative initiatives (see summary descriptions in section I) and court decisions (see summary descriptions in section J).

G.2 Actual vs Projected (AvsP)

Variances in projected recorded and paid emergence and the associated actual emergence are presented in the following two tables at the top of the next page.

Recorded Emergence

Combined Territories - All Vehicles												
Accident Year	Third Party Liability			Accident Benefits			Other Coverages			Total		
	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected	Projected Recorded Claims in 2019-Q2	Actual Recorded Claims in 2019-Q2	Actual Less Projected
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
			= [2]-[1]			= [5]-[4]			= [8]-[7]	= [1]+[4]+[7]	= [2]+[5]+[8]	= [11]-[10]
2014 & Prior	6	-	(6)	-	-	-	-	-	-	6	-	(6)
2015	45	-	(45)	-	-	-	-	(1)	(1)	45	(1)	(46)
2016	138	(37)	(175)	4	(41)	(45)	-	-	-	142	(78)	(220)
2017	127	(20)	(147)	22	-	(22)	3	22	19	152	2	(150)
2018	167	232	65	13	(7)	(20)	(60)	22	82	120	247	127
2019	284	375	91	13	5	(8)	121	244	123	418	624	206
Total	767	550	(217)	52	(43)	(95)	64	287	223	883	794	(89)
2018 & prior	483	175	(308)	39	(48)	(87)	(57)	43	100	465	170	(295)

*projected recorded claims based on recorded emergence model as at 2019-Q1

As indicated in the table above, total recorded emergence at \$0.8 million was \$0.1 million (10.1%) less than the \$0.9 million projected (columns [11], [12] and [10] respectively).

Paid Emergence

Combined Territories - All Vehicles												
Accident Year	Third Party Liability			Accident Benefits			Other Coverages			Total		
	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected	Projected Paid Claims in 2019-Q2	Actual Paid Claims in 2019-Q2	Actual Less Projected
	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]
			= [14]-[13]			= [17]-[16]			= [20]-[19]	= [13]+[16]+[19]	= [14]+[17]+[20]	= [23]-[22]
2014 & Prior	174	-	(174)	-	-	-	-	-	-	174	-	(174)
2015	21	-	(21)	-	-	-	-	(1)	(1)	21	(1)	(22)
2016	51	137	86	14	136	122	-	-	-	65	273	208
2017	91	75	(16)	12	-	(12)	3	23	20	106	98	(8)
2018	127	148	21	17	5	(12)	79	68	(11)	223	221	(2)
2019	85	61	(24)	6	-	(6)	177	250	73	268	311	43
Total	549	421	(128)	49	141	92	259	340	81	857	902	45
2018 & prior	464	360	(104)	43	141	98	82	90	8	589	591	2

*projected paid claims based on paid emergence model as at 2019-Q1

As indicated above, total paid emergence at \$0.9 million was \$45 thousand (5.3%) more than the \$0.9 million projected (columns [23], [24] and [22] respectively).

Claims transaction activity is generally volatile and differences between actual and projected claims emergence are anticipated due to this natural process variance. This is particularly true where volumes are low (as is the case here), so caution must be exercised in reviewing the variances as single claim transactions that are normal course for the business may look unusual and generate relatively significant variances that, in nominal value terms, are not that significant overall. With this in mind, and after our review, we have attributed the claims experience variance here as random and process variance driven.

G.3 Special IBNR Provisions / Adjustments

There are currently no special IBNR provisions or adjustments.

H. Appendix 1: Changes in process introduced since the September 30, 2018 valuation

The September 30, 2018 valuation supported the October 31, 2018 fiscal year-end financial statements. There have been no significant changes to the valuation process since that valuation.

A more detailed description of the current valuation process is presented in section K.

I. Appendix 2: Recent Regulatory and/or Legislative Initiatives

Consideration and assessment of potential impacts of legal decisions and changes in legislation / regulation constitutes a regular part of the valuation process. Descriptions of some of the more recent changes are provided below.

I.1 Ontario

Ontario Bill 91 (Building Ontario Up Act (Budget Measures), 2015) was introduced into the Legislature by the Minister of Finance on April 23, 2015 and **received Royal Assent on June 4, 2015**. Bill 91 announced a number of amendments to regulations made under the Insurance Act, including: updating the Catastrophic Impairment Definition and changes to the standard benefit level under the Statutory Accident Benefits Schedule (SABS); restrictions on insurance premium increases and lowering of the maximum interest rate charged on monthly auto insurance premium payments; and adjustments to the monetary threshold beyond which the tort deductible does not apply to reflect inflation (adjustments to reflect inflation in the associated tort deductible were undertaken via an update to regulation 461/96). On August 26, 2015, the Ontario government filed Ontario regulations 250/15 and 251/15 implementing reforms set out in Bill 91. With the most recent valuation (June 30, 2019), reform adjustments (originally introduced with the September 30, 2015 valuation) specifically related to changes to the SABS impacting the bodily injury and accident benefits coverages, were included with the updated industry trend analysis (completed using industry data as at December 31, 2018), impacting the selection of ultimates.

I.2 Alberta

In the **Alberta Treasury Board and Finance Notice 04-2018** (Clarification of Minor Injury Regulation), dated **May 17, 2018**, the Alberta Superintendent of Insurance advised that clarifying amendments have been made to the definition of minor injuries under the Minor Injury Regulation (MIR). With the most recent valuation (June 30, 2019), adjustments have been made to our valuation estimates to reflect our estimates of the impact of these amendments, including a one-time adjustment of -10.0% applied to account for MIR change effective June 1, 2018, reflected in the most recent updated industry trend analyses completed using industry data as at June 30, 2018.

The **Minister of Treasury Board and Finance issued Ministerial Order 14/2018**, on **October 31, 2018**, which states unless otherwise directed by the Minister, the AIRB may not approve filing from insurers for cumulative rate increases on private passenger vehicles greater than +5.0% during the period between December 1, 2018, and August 31, 2019. At the current time, no explicit adjustments have been made to our valuation estimates or views based on this order.

I.3 Harmonized Sales Tax

In the **New Brunswick** fiscal 2016-17 provincial budget released February 2, 2016, the New Brunswick Finance Minister announced a 2 percentage point increase in the provincial component of the harmonized sales tax (“HST”) **effective July 1st, 2016** increasing the combined HST rate in the province from 13% to 15%.

In the **Newfoundland and Labrador** fiscal 2016-17 provincial budget released April 4, 2016, the Newfoundland and Labrador Finance Minister announced a 2 percentage point increase in the provincial

component of the HST effective **July 1st, 2016** increasing the combined HST rate in the province from 13% to 15%.

In the **Prince Edward Island** fiscal 2016-17 provincial budget released April 19, 2016, the Prince Edward Island Finance Minister announced a 1 percentage point increase in the provincial component of the HST effective **October 1st, 2016** increasing the combined HST rate in the province from 14% to 15%.

With the most recent valuation (June 30, 2019), **HST adjustments** for **Newfoundland & Labrador, New Brunswick and Prince Edward Island** were no longer explicitly taken into account with the updated industry trend analyses (completed using industry data as at December 31, 2018), impacting the selection of ultimates.

I.4 Harmonized Sales Tax Class Action – Ontario

Since the end of October 2018, class action lawsuits have been brought against multiple insurers related to HST and limits / sub-limits of benefits per the Statutory Accident Benefits Schedule and FSCO's Professional Services Guideline as part of claims settlement practices in Ontario.

At the current time, no adjustments have been made to our valuation estimates, but in conjunction with FA's Appointed Actuary, FA management continues to review and consider the implications of the potential outcomes related to the class action lawsuits. Please contact Shawn Doherty at sdoherty@facilityassociation.com if you need further information.

J. Appendix 3: Court Decisions

J.1 Nova Scotia Court of Appeal

The **Nova Scotia Court of Appeal** confirmed, in a unanimous decision released on **January 18, 2019** in relation to **Sparks v Holland (2019 NSCA 3)**, that future Canada Pension Plan (CPP) disability benefits are deductible from future income loss awards in motor-vehicle accident claims in that province. Sparks sustained injuries as a result of a motor vehicle accident in Nova Scotia and sought damages for personal injuries and loss of income. The decision supported an earlier decision (*Tibbets v Murphy*, 2017 NSCA 35) that both past and future CPP disability benefits are deductible under section 133A of the Insurance Act. At the current time, no adjustments have been made to our valuation estimates as a result of this decision.

K. Appendix 4: General description of the FARM valuation process

- 1) select a priori loss ratios
 - a. start with prior valuation a priori model
 - b. update with prior valuation final selected ultimates
 - c. update with trend / rate as available
 - d. final selection approved by Appointed Actuary
- 2) collect / prepare / reconcile / validate valuation data
 - a. results presented for review and acceptance by Appointed Actuary
- 3) complete Actual vs Projected process
 - a. prepare exhibits and metrics
 - b. share with Appointed Actuary for review and consideration
- 4) calculate ultimate estimates based on incurred link ratio method¹²
 - a. prepare triangles and link ratio averages
 - b. prepare estimates based on pre-determined default link ratio selections
 - c. final link ratio selections reviewed and accepted by Appointed Actuary
- 5) calculate ultimate estimates based on a priori loss ratio method
 - a. prepare estimates
 - b. final estimates reviewed and accepted by Appointed Actuary
- 6) calculate ultimate estimates based on Bornhuetter / Ferguson method
 - a. prepare estimates
 - b. final estimates reviewed and accepted by Appointed Actuary
- 7) final IBNR selection
 - a. prepare summary of IBNR estimates underlying each valuation method at coverage / accident half-year level
 - b. Appointed Actuary selects final IBNR by coverage and accident half-year, taking into consideration IBNR estimated from valuation methods employed and other information
- 8) complete paid emergence and apv factor models (coverage / accident half-year)
 - a. load triangles, selected ultimates, current yield curves into model

¹²We also calculate ultimate estimates based on 3 additional “link-ratio” valuation methodologies (“Mack”, “Murphy”, and “ICRFS Cape Cod”), although no selections to date have been based on these additional methods, we are monitoring how well these alternate methods and the associated statistical ranges for their estimated unpaid claims liabilities work on FA data.

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- b. select initial emergence ratios (currently using initial paid / ultimate ratios to determine emergence ratios) and calculate associated payment / cash flow estimates
 - c. select discount rate and investment rate margin
 - d. select development margins
 - e. final selections reviewed / accepted by Appointed Actuary
- 9) select expense ratios for premium liabilities
 - a. initial selections prepared
 - b. Appointed Actuary selects final ratios
 - 10) present results to Actuarial Committee
 - a. prepare and post analysis package (including preliminary implementation impact analysis)
 - b. update analysis and selections based on discussion and review
 - c. posted updated analysis package
 - 11) summarize valuation assumptions
 - a. Appointed Actuary reviews and signs off
 - b. assumptions given to Facility Association for implementation
 - c. implementation impact estimated
 - 12) present results to Audit & Risk Committee
 - a. prepare and post valuation summary and implementation impact package
 - b. present / review / discuss results
 - 13) complete recorded emergence models (coverage / accident half-year)
 - a. load triangles, selected ultimates
 - b. select initial emergence ratios (currently using recorded / ultimate ratios to determine emergence ratios) and calculate associated recorded emergence
 - c. final selections reviewed / accepted by Appointed Actuary
 - 14) implement valuation
 - 15) prepare summary of year-on-year change in process and liabilities for review by Accounting Committee (annual only – occurs in December to align with October Statement preparation)
 - 16) prepare summary of year-on-year change in process and liabilities for review by Audit & Risk Committee (annual only – occurs in December to align with October Statement preparation)
 - 17) prepare Appointed Actuary Report (annual only – occurs in February/March to align with release of Board approved Financial Statements)

L. Appendix 5: Exhibits

Summary exhibits are provided by jurisdiction on an all vehicles/all coverages basis. Additional detail and summary exhibits by jurisdiction; segment (i.e. private passenger vs non-private passenger) and government line/coverage is available upon request. Exhibits are posted separately on the FA website.

Exhibit A Changes in Ultimate Selection over time

Exhibit B.4 (“All vehicles”; “**total**” government line/coverage level)

B.4.1 Summary

B.4.2 Loss Ratios over time

Exhibit C Interest Rate Sensitivity

Exhibit D Margins for Adverse Deviations