



**ONTARIO RISK SHARING POOL**

**FEBRUARY 2020 OPERATIONAL REPORT**

**ACTUARIAL HIGHLIGHTS**

Related Bulletin: [F2020-020 Ontario Risk Sharing Pool - February 2020 Operational Report](#)

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**ACTUARIAL HIGHLIGHTS****RSP ONTARIO****OPERATIONAL REPORT****FEBRUARY 2020**

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## 1 Summary

### Key Points

(a) The month's claims activities were generally aligned with projections from last month.

#### 1.1 Valuation Schedule (Fiscal Year 2020)

The February 2020 Operational Report leverages actuarial assumptions consistent with last month (that is, it does not reflect the results of an updated valuation). The table below summarizes the valuation implementations scheduled for fiscal year 2020.

ONTARIO RISK SHARING POOL FISCAL YEAR 2020 – SCHEDULE OF VALUATIONS			
Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep. 30, 2019 (completed)	1.41% mfad 25 bp	Oct. 2019	updated valuation (roll forward): accident year 2019 loss ratio <u>de</u> creased 0.7 points to 122.3%; discount rate <u>in</u> creased 1 basis point; no change to selected margins for adverse deviations
Dec. 31, 2019	% mfad -- bp	Mar. 2020	update valuation
Mar. 31, 2020	% mfad -- bp	May 2020	update valuation (roll-forward)
Jun. 30, 2020	% mfad -- bp	Aug. 2020	update valuation
Sep. 30, 2020	% mfad -- bp	Oct. 2020	update valuation (roll-forward)

Under the proposed schedule for fiscal year 2020, the off-half valuation quarters ending March 31, 2020 and September 30, 2020 would not reflect a full valuation update of assumptions, but would rather roll-forward key assumptions from the previous valuation.

#### 1.2 Appointed Actuary and Hybrid Actuarial Services Model

Mr. Cosimo Pantaleo of Ernst & Young LLP (EY) was appointed as Actuary by the FA Board at its February 18, 2020 meeting.

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.

### **1.3 Consideration of Recent Legal Decisions and Changes in Legislation / Regulation<sup>1</sup>**

There have been no changes in these descriptions since last month's Highlights.

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 (i.e. within the last five years) are provided below.

**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 (September 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.

### **1.4 Harmonized Sales Tax Class Action - Ontario**

There have been no changes in these descriptions since last month's Highlights.

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](mailto:sdoherty@facilityassociation.com) if you need further information.

### **1.5 Current Provision Summary**

The charts at the top of the next page show the current levels of claim liabilities<sup>2</sup> booked by accident year<sup>3</sup>. 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

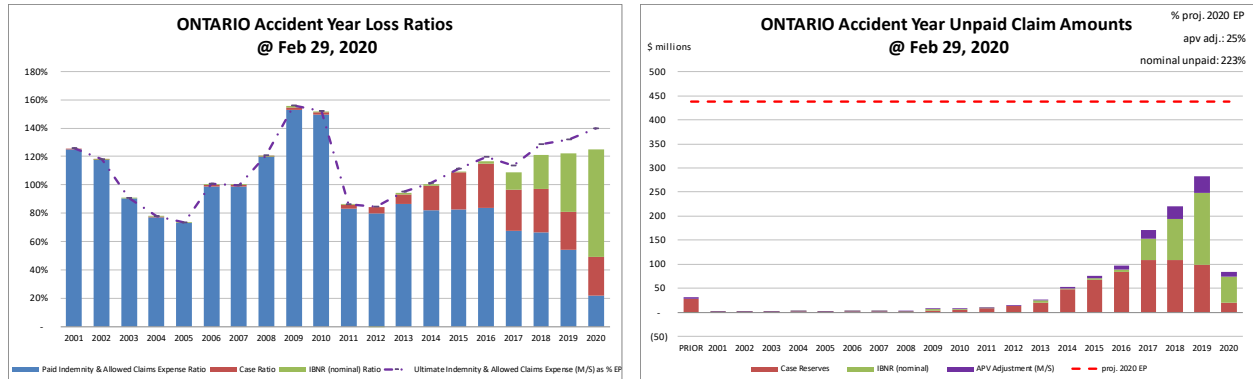
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<sup>1</sup>This url to a pdf is to a helpful guide on how bills become laws: <https://www.ola.org/sites/default/files/common/how-bills-become-law-en.pdf>.

<sup>2</sup>Claim liabilities refer to provision for unpaid indemnity and allowed claims expenses. Allowed claims expenses are first party legal and other expenses as listed in the RSP Claims Guide. Claims expenses paid through the member company expense allowance are NOT included in this discussion.

<sup>3</sup>The 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".

of 2020 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 current actuarial present value adjustments provision for claims liabilities (\$110.3 million – see table below) represents 25% of the earned premium projected for the full year 2020 (see the upper right corner of the right chart above). If our current estimates of the nominal unpaid amounts prove to match actual claims payments, the actuarial present value adjustments will be released into the net operating result over future periods.

claim liabilities (\$000s)

	amt	%
case	618,014	57.0%
ibnr	356,522	32.9%
M/S apv adjust.	110,291	10.2%
<b>M/S total</b>	<b>1,084,827</b>	<b>100.0%</b>

The table to the left breaks down the Member Statement (M/S) claim liabilities total into component parts, showing that the majority of the claim liabilities for this RSP is in case reserves. Approximately 57% of the IBNR balance relates to accident years 2019 and 2020 (see Exhibit B). Approximately 79% of the M/S total claim

liabilities are related to accident years 2016–2020 inclusive (i.e. the most recent 5 accident years), and approximately 5% is related to accident years 2010 and prior (i.e. prior to the most recent 10 accident years).

The tables below summarize the premium liabilities and the total policy liabilities.

premium liabilities (\$000s)

	amt	%
unearned prem	227,296	72.2%
prem def/(dpac)	57,903	18.4%
M/S apv adjust.	29,483	9.4%
<b>M/S total</b>	<b>314,682</b>	<b>100.0%</b>

policy liabilities (\$000s)

	amt	%
claim	974,536	69.6%
premium	285,199	20.4%
M/S apv adjust.	139,774	10.0%
<b>M/S total</b>	<b>1,399,509</b>	<b>100.0%</b>

## 2 Activity During the Month of February 2020

### 2.1 Recorded Premium and Claims Activity

The table at the top of the next page summarizes the extent to which premiums and claims amounts recorded during the month differ from projections reflected in the prior month’s Operational Report<sup>4</sup>.

<sup>4</sup>There may be rounding differences in values in this document compared with the associated Bulletin and/or Operational Report.

Ontario RSP Actual vs Projected Summary: Recorded Transaction Amounts (\$ thousands)

Table 01 Accident Year	Earned Premium		Paid Indemnity & Allowed Claims Expense		Case increase / (decrease)		Recorded increase / (decrease)	
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	(62)	(62)	7,656	(2,971)	(6,148)	1,874	1,508	(1,097)
2018	(39)	(39)	2,108	(627)	235	(1,160)	2,343	(1,787)
2019	(219)	(219)	8,692	3,562	(2,232)	(4,887)	6,459	(1,326)
2020	34,990	1,183	11,848	2,068	8,639	(883)	20,487	1,185
TOTAL	34,671	863	30,304	2,032	494	(5,056)	30,798	(3,024)

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

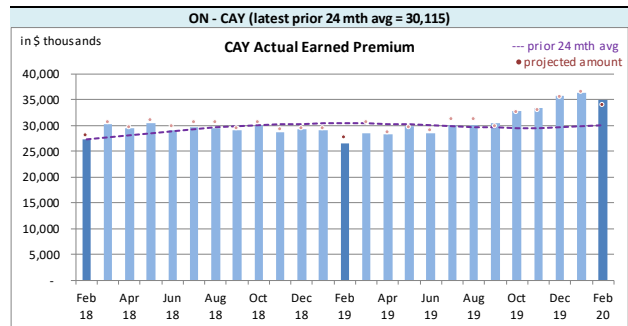
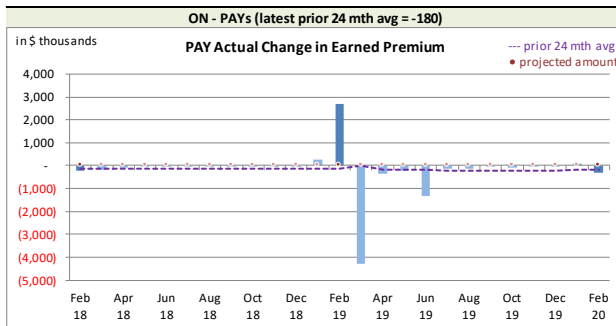
It is unusual to see actual earned premium transactions affecting prior accident years beyond the first prior at this time in the calendar year –prior accident years changes in the month include activity undertaken by a member reflecting recent audit findings.

Claims transaction activity is generally volatile and changes from one month to the next are anticipated due to this natural “process variance” (i.e. random variation). Each month, the projection variances are reviewed for signs of projection bias and to identify potential ways to reduce the level of the variance. Commentary from our review is provided in the sub-sections that follow.

### 2.1.a Actual vs. Projected (AvsP): Earned Premium

The charts below show actual **earned premium**<sup>5</sup> activity in each of the most recent 25 calendar months, along with a “prior 24-month average” to show how each month’s actual compares with the average amount of the preceding 24 calendar months.

Ontario RSP Actual **Earned Premium** by Calendar Month



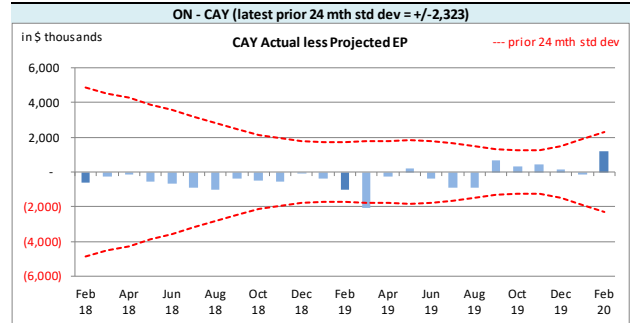
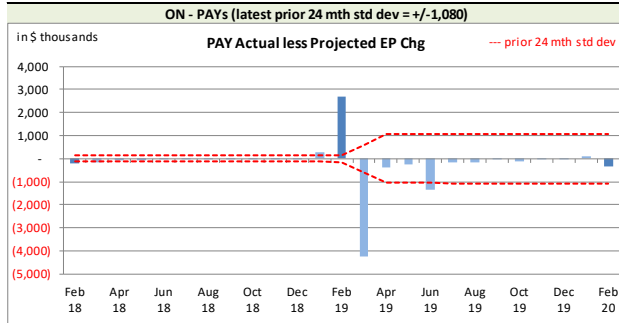
**Earned premium** changes during a given calendar month in relation to prior accident years tend to be at modest levels (note the different scales in the charts above), although relatively high levels generally occur at the beginning of each year.

The associated variance between the actual changes and the projections from the previous month are shown in the charts at the top of the next page. **Earned premium** change projections are all attributed to the current accident year as the projection upload does not accept **earned premium** changes for other accident years. We do not see this limitation as being significant for our purposes, but it does

<sup>5</sup>Premium is earned on a daily basis based on the transaction term measured in days. As a result, months with 31 days earned relatively more than those with 30 days, and February earns the least.

mean that the actual less projection variance will equal the actual **earned premium** change in relation to prior accident years.

*Ontario RSP Actual vs. Projected Summary: **Earned Premium** Variances by Calendar Month*



On Latest \$ thousands		
Earned Premium	PAYS	CAY
Mthly Avg EP Chg (prior 24 mths)	(180)	30,115
std dev	1,080	2,323
A-P <> std dev	6	1
% <> std dev	24.0%	4.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	better

We project **earned premium** changes from known unearned premium and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years’ (PAYS) bias<sup>6</sup>, with actuals generally lower than projected, although the magnitude is not high relative to monthly premium. In addition to the PAYS’ bias, the CAY

has also shown bias<sup>7</sup>, with actuals being generally lower than projected, and while we modified our projections processes in response, bias still exists. Over time, we may consider other projection approaches to narrow monthly variance levels further, but it is not currently deemed a priority. Readers will also note the significant fluctuations in the CAY standard deviation band, reflecting significant volume changes and the impact as those changes were earned.

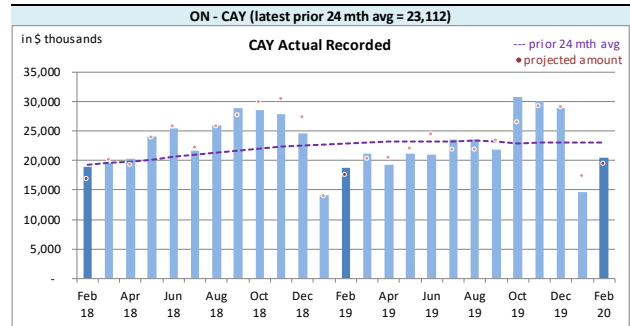
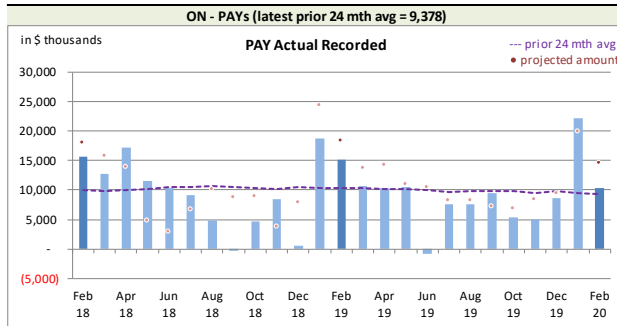
**2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense**

The charts at the top of the next page show actual **recorded** activity (**paid** and **case reserve** changes), in each of the most recent 25 calendar months, along with a “prior 24-month average” to show how each month’s actual compares with the average amount of the preceding 24 calendar months.

<sup>6</sup>The PAYS’ variances will show bias as the projection upload forces all earned premium projections to be attributed to the CAY.

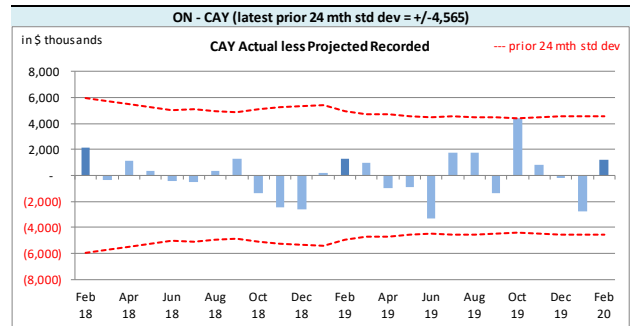
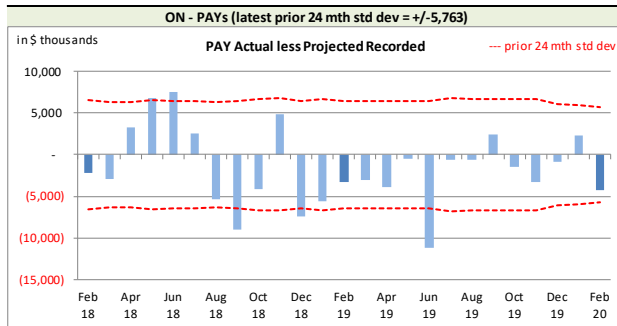
<sup>7</sup>We measure bias based on a 95% confidence range for a binominal distribution with trials based on the range being considered (25 in this case) and 50% probability of success. The rolling 25-month CAY variances at February 2020 has only 6 months where the actuals were higher than projected, and as the 95% confidence range is 8 to 17, bias continues to be indicated.

Ontario RSP Actual **Recorded** by Calendar Month



**Recorded** activity variances from the previous month’s projections are shown in the charts below, including the “prior 24-month standard deviation” levels to show how the variances from projection compare with historical standard deviations.

Ontario RSP Actual vs Projected Summary: **Recorded** Variances by Calendar Month



On Latest \$ thousands			
	<b>Recorded</b>	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	9,378	23,112	
std dev	5,763	4,565	
A-P <> std dev	5	-	
% <> std dev	20.0%	0.0%	
norm <> std dev	31.7%	31.7%	
performance vs 24-mth avg:	better	better	

With respect to **recorded** indemnity & allowed claims expense, 20% of the prior accident years’ (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **recorded** amounts (see table on left), suggesting the projection process has performed better than simply projecting the prior 24-month average amount (assuming it follows a normal

distribution). Bias has been indicated at a 95% confidence level on a rolling 25-month basis (7 of 25 variances were positive), an on a lagging 12-month basis, bias is indicated (2 of latest 12 variances have been positive; we have made some adjustments to address this, but so far without success).

The current accident year (CAY) **recorded** variances (right chart above) fell outside of one standard deviation 0% of the time over the last 25 calendar months suggesting that the projection process has performed better than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (13 of 25 variances were positive).

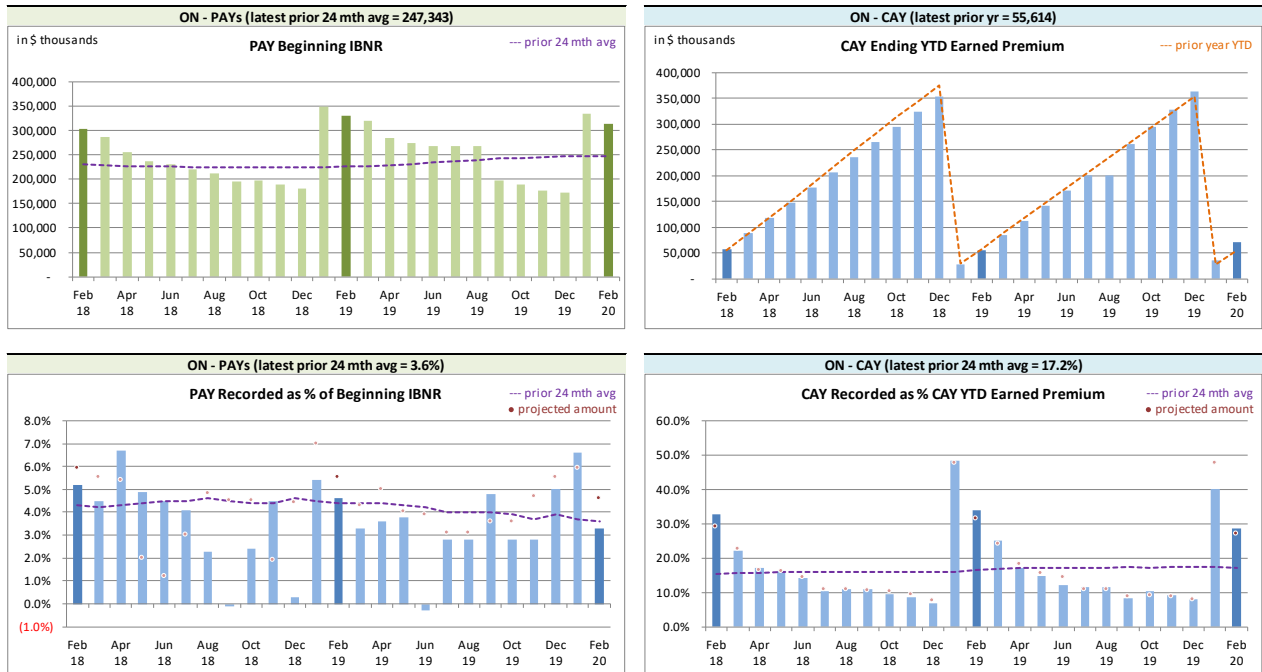
The method for establishing IBNR adjusts automatically for changes in **earned premium** and **recorded** claims activity level (see sections 2.2 and 3).

We have included, for reference, additional charts at the top of the next page related to levels influencing **recorded** activity. Note in particular the reduction in the level of PAY beginning IBNR



over the months, as a response to valuations and showing up as a beginning IBNR change one month after a valuation is implemented (i.e. April, June, September, and November).

*Ontario RSP Levels that influence<sup>8</sup> Recorded activity by Calendar Month*



We track PAY beginning IBNR as **recorded** activity comes out of IBNR. Changes in the PAY beginning IBNR (see upper left chart above) occur for several possible reasons:

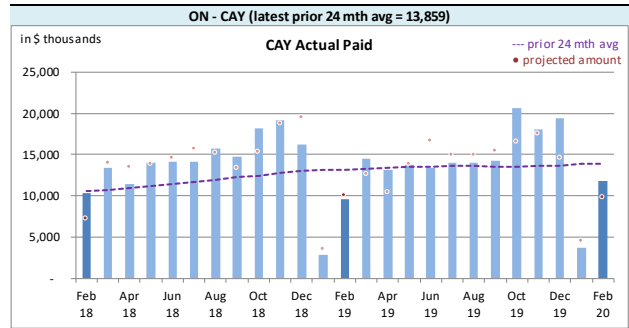
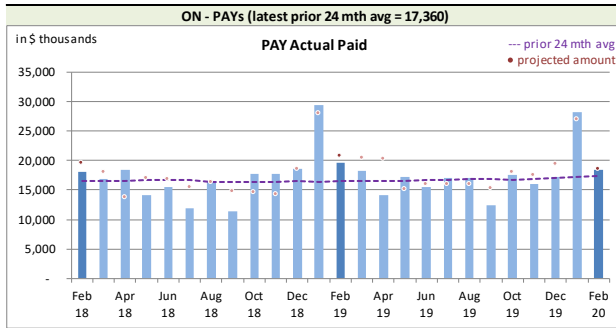
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs’ ultimates (will show up as a beginning IBNR change one month after the valuation is implemented, i.e. the change will generally show in April, June, September, and November).

**2.1.c AvsP: Paid Indemnity & Allowed Claims Expense**

The charts at the top of the next page show actual **paid** activity in each of the most recent 25 calendar months, along with a “prior 24-month average” to show how each month’s actual compares with the average amount of the preceding 24 calendar months.

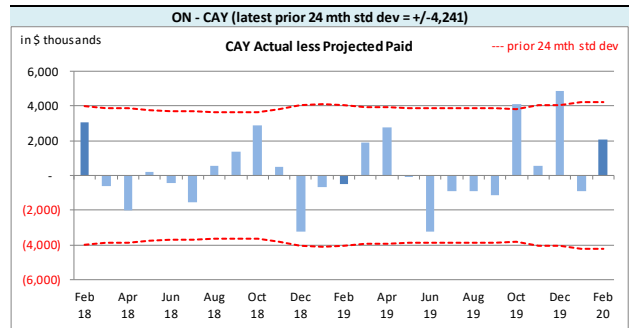
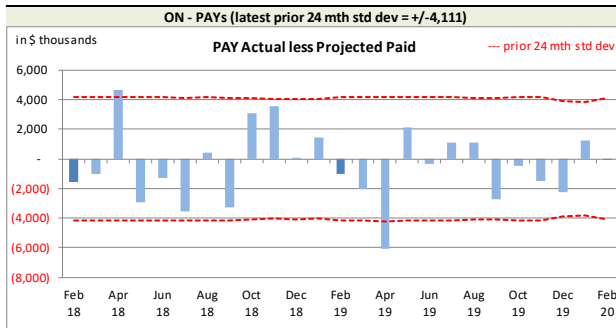
<sup>8</sup>Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned premium), deriving year-to-date recorded as selected ultimate less IBNR. In both cases, the ratio selection is based on our review of the more recent recorded activity and recent AvsP analyses.

Ontario RSP Actual **Paid** activity by Calendar Month



**Paid** activity variances from the previous month’s projections are shown in the charts below, including the “prior 24-month standard deviation” levels to show how the variances from projection compare with historical standard deviations.

Ontario RSP Actual vs Projected Summary: **Paid** Variances by Calendar Month



On Latest \$ thousands			
	<b>Paid</b>	PAYs	CAY
Mthly Avg Paid (prior 24 mths)		17,360	13,859
std dev		4,111	4,241
A-P <> std dev		2	2
% <> std dev		8.0%	8.0%
norm <> std dev		31.7%	31.7%
performance vs 24-mth avg:		better	better

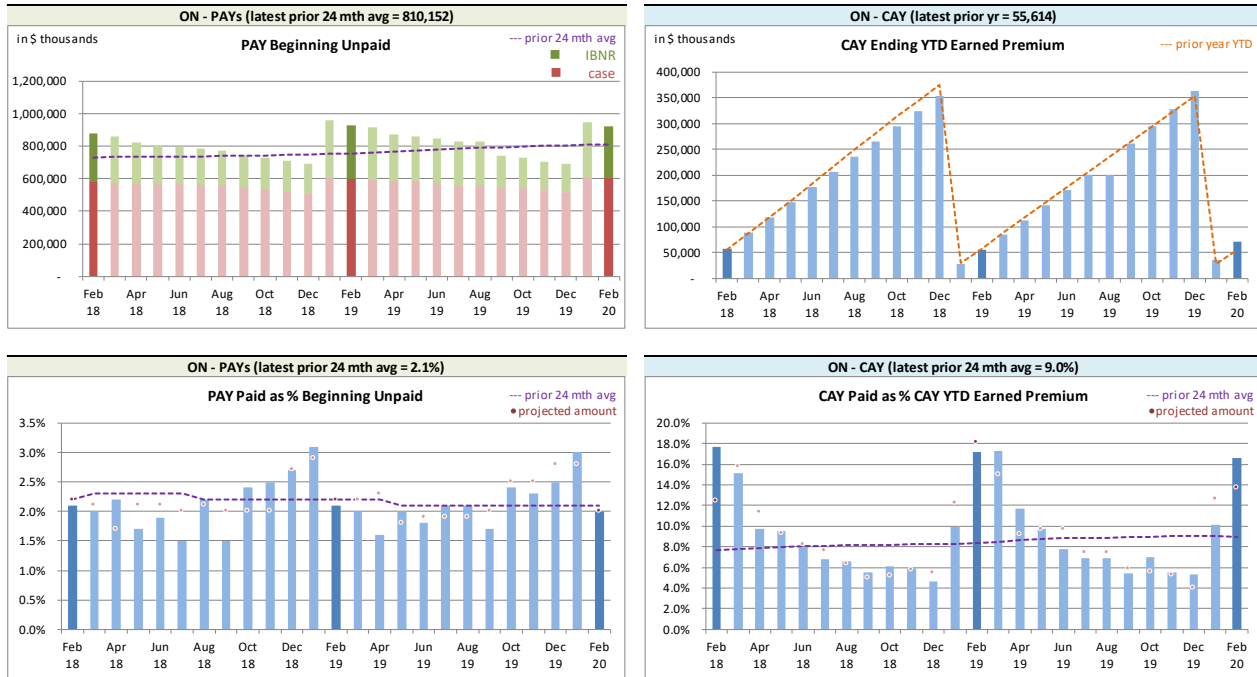
With respect to **paid** indemnity & allowed claims expense, 8% of the prior accident years’ (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **paid** amounts (see table on left), suggesting the projection process has performed better than simply projecting the prior 24-month average amount (assuming it follows a normal

distribution). Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (10 of 25 variances are positive).

The current accident year (CAY) **paid** variances fell outside of one standard deviation 8% of the time over the last 25 calendar months (see table above), suggesting the projection process has performed better than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (12 of 25 variances are positive).

We have included, for reference, additional charts at the top of the next page related to levels influencing **paid** activity.

### Ontario RSP Levels that influence<sup>9</sup> Paid activity by Calendar Month



We track the PAY beginning unpaid balance (case and IBNR) as **paid** activity comes out of the unpaid balance. Changes in the PAY beginning unpaid balance (see upper left chart above) occur for several possible reasons:

- to offset actual **paid** activity (may reduce case or IBNR or both);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs' ultimates (will show up as a beginning unpaid balance change one month after the valuation is implemented, i.e. the change will generally show in April, June, September, and November).

## 2.2 Actuarial Provisions

An ultimate loss ratio matching method (described in section 3) is used to determine the month's IBNR<sup>10</sup>, and factors are applied to the nominal unpaid claims liability (case plus IBNR) to determine the discount amount (shown as a negative value to indicate its impact of reducing the liability) and the Provisions for Adverse Deviations. The loss ratios and the factors used to determine the projections and actuals were based on the applicable valuation.

The table at the top of the next page summarizes variances in provisions included in this month's

<sup>9</sup>Our paid projections for the prior accident years are based on selected ratios of paid to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date paid to year-to-date selected ultimate indemnity (i.e. selected LR x earned premium). In both cases, the ratio selection is based on our review of the more recent recorded activity and recent AvsP analyses.

<sup>10</sup>For ease of discussion, "IBNR" is used in place of "provisions for incurred but not recorded (IBNR) and development".

Operational Report and the associated one-month projections from last month’s Report.

*Ontario RSP Actual vs Projected Summary: IBNR and APV Amounts (\$ thousands)*

Table 02

Accident Year	IBNR		actuarial present value adjustments				IBNR + actuarial present value adjustments	
			Discount Amount		Provisions for Adverse Deviations			
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	67,810	1,029	(18,877)	(124)	56,872	338	105,805	1,243
2018	85,471	1,739	(6,956)	(21)	33,569	101	112,084	1,819
2019	148,974	1,058	(10,148)	157	45,409	(702)	184,235	513
2020	54,267	296	(3,176)	25	13,598	(108)	64,689	213
TOTAL	356,522	4,122	(39,157)	37	149,448	(371)	466,813	3,788

The IBNR provision is \$4.1 million higher than projected from last month, counterbalancing the recorded claims activity and adjusting for the earned premium variance impacts indicated in section 2.1.

Exhibit G shows the accident year IBNR amount change from last month to this month broken down into:

- (i) the change projected last month;
- (ii) the additional change due to variances in earned premium (because we apply a loss ratio to earned premium in determining ultimate level) and/or recorded claims (as IBNR is calculated as ultimate less recorded) differences; and
- (iii) the additional change due to valuation implementation impacts (as applicable)

The variances associated with (ii) above are discussed in sections 2.1.a and 2.1.b.

The table below summarizes the variances in the provisions for premium deficiency liability / (deferred policy acquisition cost asset) included in this month’s Operational Report and the one-month projections from last month’s Report. This RSP is in a premium deficiency position (shown as a positive amount) prior to and after actuarial present value adjustments. Actuarial present value adjustments increase the liability value as the adjustments increase the expected future policy obligations (costs) associated with the unearned premium. The variances noted are mainly driven by the unearned premium variance.

*Ontario RSP Actual vs Projected Summary: Premium Deficiency / (DPAC) Amounts (\$ thousands)*

Table 03

	Premium Deficiency / (Deferred Policy Acquisition Costs)		actuarial present value adjustments		Premium Deficiency / (DPAC) including actuarial present value adjustments	
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
balance:	57,903	3,671	29,483	1,844	87,386	5,515
balance as % unearned premium:	25.5%	0.1%	13.0%	(0.1%)	38.4%	-
actual unearned premium:	227,296					
less projected:	14,176					

### 3 Ultimate Loss Ratio Matching Method

An “ultimate loss ratio matching method” continues to be applied to the current month and two projected months shown in the Operational Reports, with IBNR determined by accident year as follows:

- (a) Earned premium to-date
- (b) Ultimate loss<sup>11</sup> ratio per latest valuation
- (c) Estimated ultimate incurred = (a) x (b)
- (d) Recorded indemnity & allowed claims expense to-date
- (e) IBNR = (c) – (d)

### 4 Calendar Year-to-Date Results

The table below summarizes the calendar year-to-date results for indemnity & allowed claims expenses<sup>12</sup>, including IBNR.

In calculating the amounts as percentages of earned premium, the calendar year-to-date earned premium has been used, which includes earned premium associated with the current accident year but also earned premium adjustments related to prior accident years. Specifically, the current accident year (CAY) ratio in the table is 125.6% rather than 125.2% (the valuation ultimate ratio for accident year 2020), as the calendar year-to-date earned premium includes prior accident year earned premium adjustments. (Note that the ratios in this table may differ slightly from those shown in the Ontario RSP Summary of Operations due to rounding.)

*Ontario RSP Calendar Year-to-Date Indemnity & Allowed Claims Expense Summary (\$ thousands)*

Table 04	YTD Nominal Values		YTD actuarial present value adjustment		YTD Total		Change from Prior Month YTD	
	Amount	% EP	Amount	% EP	Amount	% EP	Amount	LR pts
PAYs	(281)	(0.4%)	(5,082)	(7.1%)	(5,363)	(7.5%)	(2,591)	0.1%
CAY	89,381	125.6%	10,422	14.6%	99,803	140.2%	48,320	(0.8%)
TOTAL	89,101	125.2%	5,340	7.5%	94,441	132.7%	45,729	(0.8%)

(“% EP” based on 2020 calendar year-to-date earned premium; ratios may not total due to rounding)

In general, prior accident years (PAYs) changes from last month are due to the release of the actuarial present value adjustments with claims payments, except when valuations are implemented. The loss ratio change year-to-date in Table 04 reflects not only changes in the prior accident year levels, but also the increase in the calendar year-to-date earned premium with an additional month’s earned premium.

For the current accident year (CAY), changes in the year-to-date total reflects the additional month’s exposure and regular changes to actuarial present value adjustments as the year ages.

### 5 Current Operational Report – Additional Exhibits

Section 6 provides exhibits pertaining to the actuarial provisions reflected in the current month’s

<sup>11</sup>“Loss” here refers to indemnity and allowed claims expenses, but does not include the claims expense allowance included in member company overall expense allowances (“Expense Allowance” in the Operational Report).

<sup>12</sup>Allowed claims expenses are first party legal and other expenses as listed in the RSP Claims Guide. Claims expenses paid through the member company expense allowance are NOT included in this analysis.

Operational Report.

IBNR (including actuarial present value adjustments) presented in section 6, Exhibit A, were derived on a discounted basis, and therefore reflect the time value of money and include an explicit provision for adverse deviations in accordance with accepted actuarial practice in Canada.

IBNR presented in section 6, Exhibit B, does NOT include any actuarial present value adjustments. The “Total IBNR” from this exhibit is shown in the Operational Report as “Undiscounted IBNR”.

The ultimate loss ratios presented in section 6, Exhibit B, refer to the estimates derived on the basis of various actuarial methodologies applied to the experience of the Ontario Risk Sharing Pool for the purposes of the most recent quarterly valuation. As discussed in section 3, IBNR in the current month’s Operational Report was derived as the difference between the estimated ultimate for the claims amount (i.e. earned premium x ultimate loss ratio) and the associated current recorded amounts (life-to-date payments plus current case reserves).

## **6 EXHIBITS**

The exhibits listed below are provided on the pages that follow:

- EXHIBIT A IBNR for Member Sharing – includes Actuarial Present Value Adjustments
- EXHIBIT B IBNR
- EXHIBIT C Premium Liabilities
- EXHIBIT D Projected Year-end Policy Liabilities
- EXHIBIT E Discount Rate & Margins for Adverse Deviations
- EXHIBIT F Interest Rate Sensitivity
- EXHIBIT G Components of IBNR Change During Month

EXHIBIT A

IBNR for Member Sharing – includes Actuarial Present Value Adjustments

TABLE EXHIBIT A

		Amounts in \$000s					
IBNR + M/S actuarial present value adjustments		Accident Year	Actual Jan. 2020	Actual Feb. 2020	Projected Mar. 2020	Projected Apr. 2020	Projected Dec. 2020
		prior	1,933	1,878	1,821	1,776	1,436
		2001	52	51	51	50	41
		2002	70	70	69	67	54
		2003	467	467	462	449	368
		2004	289	289	285	278	227
		2005	290	290	286	277	227
		2006	620	614	607	591	483
		2007	495	494	488	475	388
		2008	1,346	1,284	1,272	1,235	1,014
		2009	2,743	2,836	2,805	2,724	2,237
		2010	2,388	2,378	2,353	2,285	1,876
		2011	1,260	1,324	1,307	1,270	1,042
		2012	(246)	238	226	222	178
		2013	3,921	4,518	4,452	4,329	3,546
		2014	4,949	5,097	4,996	4,863	3,973
discount rate		2015	7,498	7,159	7,003	6,822	5,564
1.41%		2016	14,096	13,525	13,076	12,555	9,483
		2017	65,846	63,293	60,599	58,011	42,928
interest rate margin		2018	114,772	112,084	107,443	102,447	76,653
25 basis pts		2019	192,237	184,235	176,116	169,336	132,123
		2020	36,856	64,689	94,469	121,615	256,400
		2021	-	-	-	-	-
		<b>TOTAL</b>	<b>451,882</b>	<b>466,813</b>	<b>480,186</b>	<b>491,677</b>	<b>540,241</b>
		Change		14,931	13,373	11,491	

Please see Exhibit G, page 1 for Components of Change during Current Month

EXHIBIT B

IBNR

TABLE EXHIBIT B

Amounts in \$000s

IBNR	Ultimate Loss Ratio	Accident Year	Actual Jan. 2020	Actual Feb. 2020	Projected Mar. 2020	Projected Apr. 2020	Projected Dec. 2020
	-	prior	(98)	(148)	(147)	(143)	(122)
	125.8%	2001	9	9	9	9	8
	117.9%	2002	63	63	62	60	48
	90.7%	2003	442	442	438	425	349
	77.7%	2004	227	227	225	218	178
	73.6%	2005	275	275	272	264	217
	100.4%	2006	533	528	523	508	417
	99.9%	2007	429	428	424	412	338
	120.7%	2008	1,297	1,236	1,224	1,189	977
	155.6%	2009	2,627	2,720	2,693	2,615	2,148
	152.0%	2010	2,254	2,245	2,223	2,159	1,774
	86.3%	2011	1,028	1,100	1,089	1,057	869
	84.1%	2012	(718)	(224)	(222)	(216)	(176)
	94.5%	2013	2,842	3,461	3,426	3,327	2,733
	100.5%	2014	2,303	2,502	2,477	2,405	1,977
	109.7%	2015	2,948	2,691	2,664	2,587	2,126
	116.7%	2016	5,503	5,097	4,842	4,600	3,420
	108.7%	2017	47,422	45,158	42,900	40,755	29,081
	121.2%	2018	87,862	85,471	81,283	76,731	54,754
	122.3%	2019	155,701	148,974	141,525	135,298	102,146
	125.2%	2020	30,945	54,267	79,267	101,581	208,423
	128.7%	2021	-	-	-	-	-
		<b>TOTAL</b>	<b>343,894</b>	<b>356,522</b>	<b>367,197</b>	<b>375,841</b>	<b>411,685</b>
		Change		12,628	10,675	8,644	

Please see Exhibit G, page 2 for Components of Change during Current Month



**EXHIBIT C**
**Premium Liabilities**

TABLE EXHIBIT C

	Amounts in \$000s				
	Actual Jan. 2020	Actual Feb. 2020	Projected Mar. 2020	Projected Apr. 2020	Projected Dec. 2020
Premium Liabilities					
(1) unearned premium (UP)	228,219	227,296	220,500	214,328	220,273
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	138.4%	138.4%	138.6%	138.7%	142.2%
(3) expected future costs {(1) x (2)}	315,818	314,682	305,508	297,280	313,287
(4) premium deficiency / (deferred policy acquisition cost)	87,599	87,386	85,008	82,952	93,014
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	125.4%	125.5%	125.6%	125.7%	128.9%
(6) expected future costs {(1) x (5)}	286,229	285,199	276,882	269,427	283,933
(7) premium deficiency / (deferred policy acquisition cost)	58,010	57,903	56,382	55,099	63,660

**EXHIBIT D**
**Projected Year-end Policy Liabilities**

The table below presents the projected policy liabilities as at December 31, 2020, broken down by component.

Ontario		Projected Balances as at Dec. 31, 2020 (\$000s)									
ending 2020		nominal values			actuarial present value adjustments (apvs)						
Acc Yr	Case	IBNR	Total Unpaid	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL	
prior	22,147	(122)	22,025	(705)	118	2,216	(71)	2,145	1,558	23,583	
2001	504	8	512	(19)	3	51	(2)	49	33	545	
2002	46	48	94	(4)	1	9	-	9	6	100	
2003	(4)	349	345	(17)	3	35	(2)	33	19	364	
2004	791	178	969	(52)	9	97	(5)	92	49	1,018	
2005	38	217	255	(16)	3	25	(2)	23	10	265	
2006	1,425	417	1,842	(125)	20	184	(13)	171	66	1,908	
2007	1,384	338	1,722	(131)	22	172	(13)	159	50	1,772	
2008	582	977	1,559	(128)	22	156	(13)	143	37	1,596	
2009	2,442	2,148	4,590	(399)	69	459	(40)	419	89	4,679	
2010	3,852	1,774	5,626	(495)	84	563	(50)	513	102	5,728	
2011	6,071	869	6,940	(562)	97	694	(56)	638	173	7,113	
2012	9,716	(176)	9,540	(649)	114	954	(65)	889	354	9,894	
2013	15,785	2,733	18,518	(1,130)	204	1,852	(113)	1,739	813	19,331	
2014	36,541	1,977	38,518	(2,003)	347	3,852	(200)	3,652	1,996	40,514	
2015	52,342	2,126	54,468	(2,124)	327	5,447	(212)	5,235	3,438	57,906	
2016	60,398	3,420	63,818	(2,042)	383	7,977	(255)	7,722	6,063	69,881	
2017	88,060	29,081	117,141	(3,748)	586	17,571	(562)	17,009	13,847	130,988	
2018	104,238	54,754	158,992	(5,724)	954	27,665	(996)	26,669	21,899	180,891	
2019	108,285	102,146	210,431	(8,628)	1,473	38,719	(1,587)	37,132	29,977	240,408	
PAYs (sub-total):	514,643	203,262	717,905	(28,701)	4,839	108,698	(4,257)	104,441	80,579	798,484	
CAY (2020)	131,636	208,423	340,059	(14,623)	2,720	62,571	(2,691)	59,880	47,977	388,036	
<b>claims liabilities:</b>	646,279	411,685	1,057,964	(43,324)	7,559	171,269	(6,948)	164,321	128,556	1,186,520	
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*	
<b>premium liabilities:</b>	220,273	63,660	283,933	(9,355)	1,701	38,271	(1,263)	37,008	29,354	313,287	
*Total may not be sum of parts, as apvs apply to future costs within UPR											
<b>policy liabilities:</b>			<b>1,341,897</b>	<b>(52,679)</b>	<b>9,260</b>	<b>209,540</b>	<b>(8,211)</b>	<b>201,329</b>	<b>157,910</b>	<b>1,499,807</b>	

EXHIBIT E

Discount Rate & Margins for Adverse Deviations

The tables below present selected margins for adverse development by coverage (the total is a weighted average, based on the unpaid claims projection for December 31, 2019 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Selected Claims Development MfADs (Sep. 30, 2019)

Accident Year	Third Party Liability Margins	Accident Benefits Margins	Other Coverages Margins	Total Margins
1993	10.0%	10.0%	10.0%	10.0%
1994	10.0%	10.0%	10.0%	10.0%
1995	10.0%	10.0%	10.0%	10.0%
1996	10.0%	10.0%	10.0%	10.0%
1997	10.0%	10.0%	10.0%	10.0%
1998	10.0%	10.0%	10.0%	10.0%
1999	10.0%	10.0%	10.0%	10.0%
2000	10.0%	10.0%	10.0%	10.0%
2001	10.0%	10.0%	10.0%	10.0%
2002	10.0%	10.0%	10.0%	10.0%
2003	10.0%	10.0%	10.0%	10.0%
2004	10.0%	10.0%	10.0%	10.0%
2005	10.0%	10.0%	10.0%	10.0%
2006	10.0%	10.0%	10.0%	10.0%
2007	10.0%	10.0%	10.0%	10.0%
2008	10.0%	10.0%	10.0%	10.0%
2009	10.0%	10.0%	10.0%	10.0%
2010	10.0%	10.0%	10.0%	10.0%
2011	10.0%	10.0%	10.0%	10.0%
2012	10.0%	10.0%	10.0%	10.0%
2013	10.0%	10.0%	10.0%	10.0%
2014	10.0%	10.0%	9.7%	10.0%
2015	10.0%	10.0%	9.9%	10.0%
2016	12.5%	12.5%	11.9%	12.5%
2017	15.0%	15.0%	15.0%	15.0%
2018	17.4%	17.5%	15.1%	17.4%
2019	18.1%	20.0%	6.0%	18.4%
2020	12.9%	20.0%	5.2%	13.5%
prem liab	12.9%	20.0%	5.2%	13.5%

discount rate: 1.41%  
margin (basis points): 25

EXHIBIT F

Interest Rate Sensitivity

The tables below present sensitivity to the member statement claims liability as projected to Dec. 31, 2019 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2020, and are based on more up-to-date information). We have included the most recent valuation selection (1.41%), the prior valuation assumption (1.40%) and the prior fiscal year end valuation assumption (2.22%) for comparative purposes. A 25 basis point margin for investment return adverse deviation is used in all scenarios presented.

\$ Format: \$000s

AY	Actuarial Present Value of Provisions at Various Discount Rates - Dec. 31, 2019 projected Unpaid							
	0.41%	0.91%	1.41%	1.91%	2.41%	2.91%	1.40%	2.22%
2002 & prior	31,554	31,099	30,655	30,226	29,803	29,394	30,665	29,964
2003	411	402	395	387	380	373	395	382
2004	1,285	1,256	1,229	1,203	1,177	1,152	1,230	1,187
2005	317	309	301	294	287	280	302	290
2006	2,508	2,438	2,372	2,309	2,247	2,188	2,374	2,270
2007	2,481	2,407	2,335	2,268	2,202	2,141	2,337	2,227
2008	2,292	2,219	2,149	2,083	2,020	1,960	2,151	2,044
2009	7,120	6,889	6,670	6,464	6,265	6,079	6,675	6,340
2010	8,342	8,094	7,859	7,638	7,425	7,226	7,865	7,505
2011	9,568	9,329	9,104	8,892	8,690	8,498	9,110	8,765
2012	14,768	14,439	14,127	13,834	13,553	13,288	14,135	13,658
2013	26,901	26,390	25,905	25,449	25,008	24,594	25,918	25,173
2014	51,022	50,284	49,585	48,919	48,278	47,671	49,600	48,516
2015	77,322	76,434	75,583	74,772	73,982	73,234	75,608	74,280
2016	105,083	103,866	102,692	101,558	100,459	99,403	102,717	100,875
2017	179,004	176,706	174,460	172,331	170,217	168,204	174,530	171,023
2018	232,978	229,473	226,114	222,859	219,695	216,647	226,182	220,888
2019	315,108	310,234	305,517	300,998	296,608	292,333	305,661	298,263
<b>Total</b>	<b>1,068,064</b>	<b>1,052,268</b>	<b>1,037,052</b>	<b>1,022,484</b>	<b>1,008,296</b>	<b>994,665</b>	<b>1,037,455</b>	<b>1,013,650</b>
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

AY	Dollar Impact Relative to Valuation Assumption							
	0.41%	0.91%	1.41%	1.91%	2.41%	2.91%	1.40%	2.22%
<b>Total</b>	<b>31,012</b>	<b>15,216</b>	<b>-</b>	<b>(14,568)</b>	<b>(28,756)</b>	<b>(42,387)</b>	<b>403</b>	<b>(23,402)</b>
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

AY	Percentage Impact Relative to Valuation Assumption							
	0.41%	0.91%	1.41%	1.91%	2.41%	2.91%	1.40%	2.22%
2002 & prior	2.9%	1.4%	-	(1.4%)	(2.8%)	(4.1%)	0.0%	(2.3%)
2003	4.1%	1.8%	-	(2.0%)	(3.8%)	(5.6%)	-	(3.3%)
2004	4.6%	2.2%	-	(2.1%)	(4.2%)	(6.3%)	0.1%	(3.4%)
2005	5.3%	2.7%	-	(2.3%)	(4.7%)	(7.0%)	0.3%	(3.7%)
2006	5.7%	2.8%	-	(2.7%)	(5.3%)	(7.8%)	0.1%	(4.3%)
2007	6.3%	3.1%	-	(2.9%)	(5.7%)	(8.3%)	0.1%	(4.6%)
2008	6.7%	3.3%	-	(3.1%)	(6.0%)	(8.8%)	0.1%	(4.9%)
2009	6.7%	3.3%	-	(3.1%)	(6.1%)	(8.9%)	0.1%	(4.9%)
2010	6.1%	3.0%	-	(2.8%)	(5.5%)	(8.1%)	0.1%	(4.5%)
2011	5.1%	2.5%	-	(2.3%)	(4.5%)	(6.7%)	0.1%	(3.7%)
2012	4.5%	2.2%	-	(2.1%)	(4.1%)	(5.9%)	0.1%	(3.3%)
2013	3.8%	1.9%	-	(1.8%)	(3.5%)	(5.1%)	0.1%	(2.8%)
2014	2.9%	1.4%	-	(1.3%)	(2.6%)	(3.9%)	0.0%	(2.2%)
2015	2.3%	1.1%	-	(1.1%)	(2.1%)	(3.1%)	0.0%	(1.7%)
2016	2.3%	1.1%	-	(1.1%)	(2.2%)	(3.2%)	0.0%	(1.8%)
2017	2.6%	1.3%	-	(1.2%)	(2.4%)	(3.6%)	0.0%	(2.0%)
2018	3.0%	1.5%	-	(1.4%)	(2.8%)	(4.2%)	0.0%	(2.3%)
2019	3.1%	1.5%	-	(1.5%)	(2.9%)	(4.3%)	0.0%	(2.4%)
<b>Total</b>	<b>3.0%</b>	<b>1.5%</b>	<b>-</b>	<b>(1.4%)</b>	<b>(2.8%)</b>	<b>(4.1%)</b>	<b>0.0%</b>	<b>(2.3%)</b>
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

EXHIBIT G

Page 1 of 2

Components of Member Statement IBNR (i.e. “Discounted”) Change During Month

RSP **Ontario**  
AccountCode Desc **IBNR - Discounted**

M/S IBNR - in \$000s

AccYear	Values				Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation			
prior	1,933	(46)	(9)	-	(55)	(2.8%)	1,878
2001	52	(1)	-	-	(1)	(1.9%)	51
2002	70	(2)	2	-	-	-	70
2003	467	(14)	14	-	-	-	467
2004	289	(8)	8	-	-	-	289
2005	290	(10)	10	-	-	-	290
2006	620	(18)	12	-	(6)	(1.0%)	614
2007	495	(17)	16	-	(1)	(0.2%)	494
2008	1,346	(43)	(19)	-	(62)	(4.6%)	1,284
2009	2,743	(87)	180	-	93	3.4%	2,836
2010	2,388	(77)	67	-	(10)	(0.4%)	2,378
2011	1,260	(39)	103	-	64	5.1%	1,324
2012	(246)	12	472	-	484	(196.7%)	238
2013	3,921	(116)	713	-	597	15.2%	4,518
2014	4,949	(136)	284	-	148	3.0%	5,097
2015	7,498	(203)	(136)	-	(339)	(4.5%)	7,159
2016	14,096	(498)	(73)	-	(571)	(4.1%)	13,525
2017	65,846	(2,152)	(401)	-	(2,553)	(3.9%)	63,293
2018	114,772	(4,507)	1,819	-	(2,688)	(2.3%)	112,084
2019	192,237	(8,515)	513	-	(8,002)	(4.2%)	184,235
2020	36,856	27,620	213	-	27,833	75.5%	64,689
<b>Grand Total</b>	<b>451,882</b>	<b>11,143</b>	<b>3,788</b>	<b>-</b>	<b>14,931</b>	<b>3.3%</b>	<b>466,813</b>

EXHIBIT G

Components of IBNR (i.e. “Undiscounted”) Change During Month

RSP		Ontario						IBNR - in \$000s
AccountCode Desc		IBNR - Undiscounted						
AccYear	Values							Sum of Current Month Final Amount
	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation	Sum of Total Change	Sum of % Total Change		
prior	(98)	2	(52)	-	(50)	51.0%	(148)	
2001	9	-	-	-	-	-	9	
2002	63	(2)	2	-	-	-	63	
2003	442	(14)	14	-	-	-	442	
2004	227	(7)	7	-	-	-	227	
2005	275	(9)	9	-	-	-	275	
2006	533	(17)	12	-	(5)	(0.9%)	528	
2007	429	(14)	13	-	(1)	(0.2%)	428	
2008	1,297	(42)	(19)	-	(61)	(4.7%)	1,236	
2009	2,627	(84)	177	-	93	3.5%	2,720	
2010	2,254	(72)	63	-	(9)	(0.4%)	2,245	
2011	1,028	(33)	105	-	72	7.0%	1,100	
2012	(718)	23	471	-	494	(68.8%)	(224)	
2013	2,842	(91)	710	-	619	21.8%	3,461	
2014	2,303	(74)	273	-	199	8.6%	2,502	
2015	2,948	(94)	(163)	-	(257)	(8.7%)	2,691	
2016	5,503	(275)	(131)	-	(406)	(7.4%)	5,097	
2017	47,422	(1,802)	(462)	-	(2,264)	(4.8%)	45,158	
2018	87,862	(4,130)	1,739	-	(2,391)	(2.7%)	85,471	
2019	155,701	(7,785)	1,058	-	(6,727)	(4.3%)	148,974	
2020	30,945	23,026	296	-	23,322	75.4%	54,267	
<b>Grand Total</b>	<b>343,894</b>	<b>8,506</b>	<b>4,122</b>	<b>-</b>	<b>12,628</b>	<b>3.7%</b>	<b>356,522</b>	