

# **ONTARIO RISK SHARING POOL**

## **APRIL 2021 OPERATIONAL REPORT**

### **ACTUARIAL HIGHLIGHTS**

Related Bulletin: [F2021-034 ON RSP April 2021 Operational Report](#)

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Should you require any further information, please call Philippe Gosselin, VP Actuarial & COR at (416) 863-1750.

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**ACTUARIAL HIGHLIGHTS**

**RSP ONTARIO**

**OPERATIONAL REPORT**

**APRIL 2021**

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## 1 Summary

Note to members: we are currently reviewing our member reporting requirements and intend to provide the **Actuarial Highlights quarterly instead of the current monthly reporting**, starting with the May 2021 operational reporting and aligned with the valuation schedule; please contact us with any questions or concerns in regards to this matter.

### 1.1 Valuation Schedule (Fiscal Year 2021)

The April 2021 Operational Report leverages actuarial assumptions consistent with last month (that is, it does not reflect the results of an updated valuation). The following table summarizes the valuation implementations scheduled for fiscal year 2021.

ONTARIO RISK SHARING POOL FISCAL YEAR 2021 – SCHEDULE OF VALUATIONS			
Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep. 30, 2020 (completed)	0.26% mfad <sup>1</sup> 25 bp	Oct. 2020	update valuation (roll-forward): accident year 2020 loss ratio <u>decreased</u> 5.0 points to 90.4 %; discount rate <u>decreased</u> 3 basis points; no change to selected margins for adverse deviations
Dec. 31, 2020 (completed)	0.32% mfad 25 bp	Mar. 2021	update valuation: accident year 2020 loss ratio <u>decreased</u> 9.6 points to 80.8 % and accident year 2021 loss ratio <u>decreased</u> 4.8 points to 108.9 %; discount rate <u>increased</u> 6 basis points; no change to selected margins for adverse deviations
Mar. 31, 2021	% mfad -- bp	May 2021	update valuation (roll-forward):
Jun. 30, 2021	% mfad -- bp	Aug. 2021	update valuation:
Sep. 30, 2021	% mfad -- bp	Oct. 2021	update valuation (roll-forward):

Under the proposed schedule for fiscal year 2021, the off-half valuation quarters ending March 31, 2021 and September 30, 2021 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

The Annual General Meeting of the members of Facility Association (“FA”) appointed Mr. Cosimo

<sup>1</sup> The selected interest rate margin is limited to reducing the selected discount rate to 0%; the approach is that if the net impact is negative, the discount rate will be capped at 0%.

Pantaleo as the Appointed Actuary at its meeting on March 4, 2021.

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>2</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.

In **Tomec v Economical Mutual Insurance Company (2019 ONCA 882)**, the Ontario Court of Appeal set aside the Divisional Court judicial review and decision of the Licence and Appeal Tribunal to deny enhanced housekeeping and attendant care benefits. The unanimous panel concluded that the rule of discoverability applied to s. 281.1(1) of the Insurance Act and to s. 51(1) of the old Statutory Accident Benefits Schedule such that the two-year limitation period to dispute benefits could not run before an insured was determined to be catastrophically impaired (CAT). On June 4<sup>th</sup>, 2020, the Supreme Court of Canada dismissed the insurer's application to appeal the Ontario Court of Appeal's decision in this matter. At the current time, no adjustments have been made to our valuation estimates as a result of this decision, however, we will continue to monitor and reassess with the next valuation.

### **1.4 Current Provision Summary**

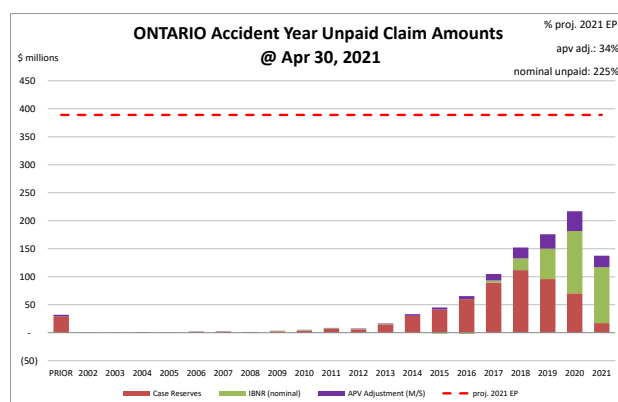
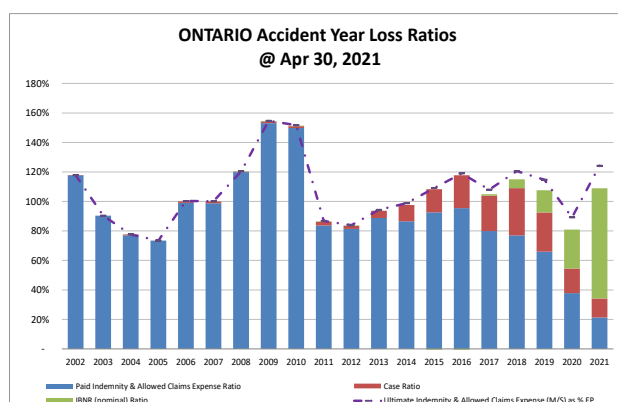
The following charts show the current levels of claim liabilities<sup>3</sup> booked by accident year<sup>4</sup>. The left chart displays life-to-date payments, case reserves, IBNR, and the total including actuarial present value adjustments against accident year earned premium. The right chart shows the associated dollar amounts for the components of the claim liabilities and the current projected amount of 2021 full year earned premium (the red hash-mark line) to provide some perspective.

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<sup>2</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>3</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>4</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".



*“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 (\$132.0 million – see the following table) represents 34.0% of the earned premium projected for the full year 2021 (see the upper right corner of the preceding chart on the right). 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	583,951	57.9%
ibnr	291,783	29.0%
M/S apv adjust.	132,016	13.1%
M/S total	1,007,750	100.0%

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 72% of the IBNR balance relates to accident years 2020 and 2021 (see Exhibit B).

Approximately 78% of the M/S total claim liabilities are related to accident years 2017-2021 inclusive (i.e. the most recent 5 accident years), and approximately 6% is related to accident years 2011 and prior (i.e. prior to the most recent 10 accident years).

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

premium liabilities (\$000s)

	amt	%
unearned prem	184,045	80.4%
prem def/(dpac)	18,296	8.0%
M/S apv adjust.	26,470	11.6%
M/S total	228,811	100.0%

policy liabilities (\$000s)

	amt	%
claim	875,734	70.8%
premium	202,341	16.4%
M/S apv adjust.	158,486	12.8%
M/S total	1,236,561	100.0%

## 2 Activity during the Month of April 2021

### 2.1 Recorded Premium and Claims Activity

The following table 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>5</sup>.

<sup>5</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	(31)	(31)	10,359	(679)	(8,631)	1,031	1,728	352
2019	(159)	(159)	3,093	484	187	(440)	3,280	44
2020	(959)	(959)	2,391	(565)	956	(1,164)	3,347	(1,729)
2021	32,608	(2,175)	9,740	694	2,882	(3,525)	12,621	(2,831)
TOTAL	31,460	(3,323)	25,583	(66)	(4,606)	(4,098)	20,977	(4,164)

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

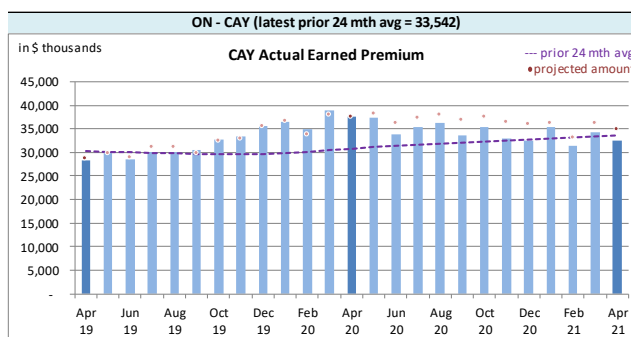
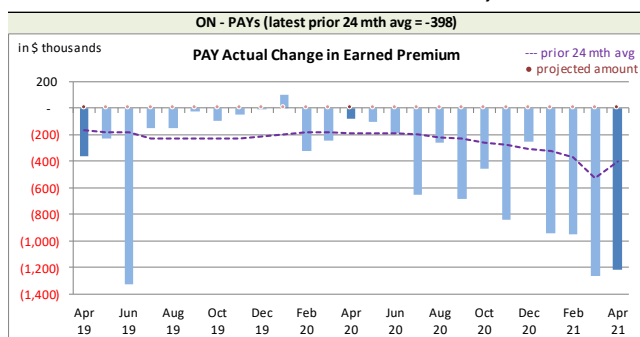
It is unusual to see large actual earned premium transactions affecting prior accident years beyond the first prior accident year. We have identified that the prior accident years changes in the month reflects system sweep activity undertaken by one member group in responding to audit findings.

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.

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

The following charts show actual **earned premium**<sup>6</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 preceding charts), although relatively high levels generally occur at the beginning of each year.

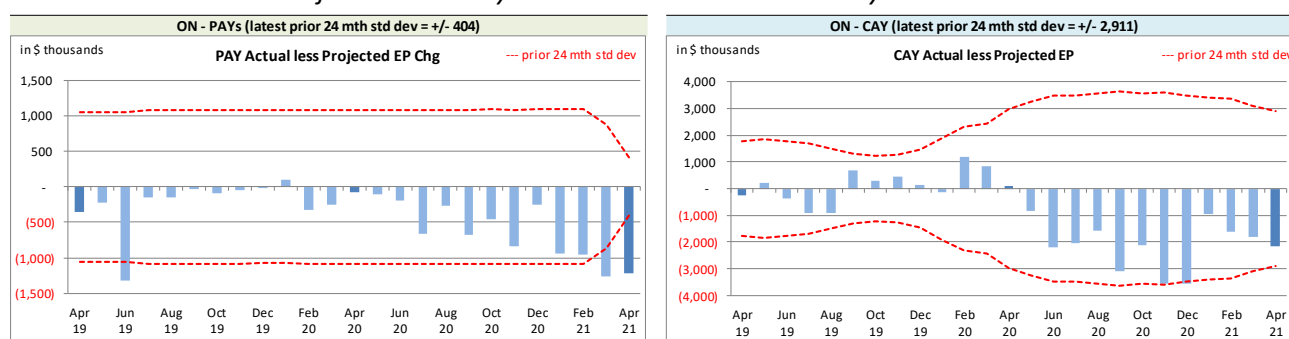
<sup>6</sup>Premium is earned on a daily basis based on the transaction term measured in days. As a result, months with 31 days earned relatively more than those with 30 days, and February earns the least.

On Latest \$ thousands		
Earned Premium	PAYs	CAY
Mthly Avg EP Chg (prior 24 mths)	(398)	33,542
std dev	404	2,911
A-P <> std dev	3	1
% <> std dev	12.0%	4.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	better

The associated variance between the actual changes and the projections from the previous month are shown in the charts below. **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 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



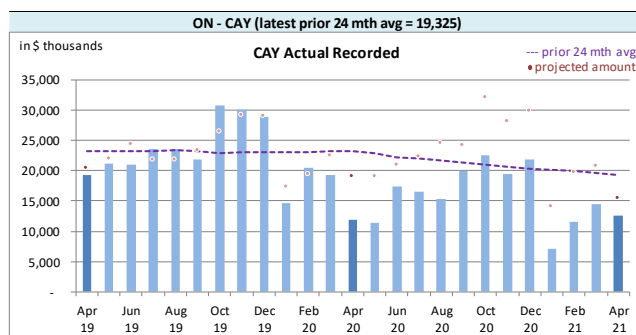
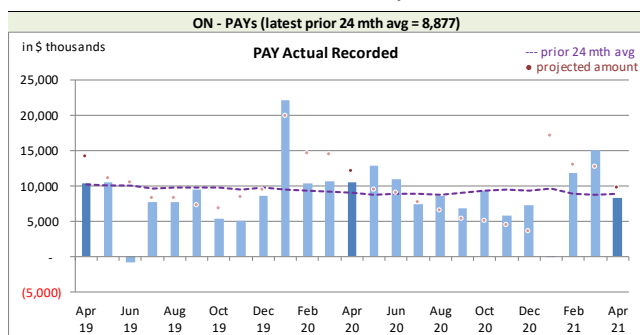
We project **earned premium** changes from known unearned premium balances and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years' (PAYs) bias<sup>7</sup>, with actuals generally lower than projected, although the magnitude is not high relative to monthly premium. 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 following charts 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.

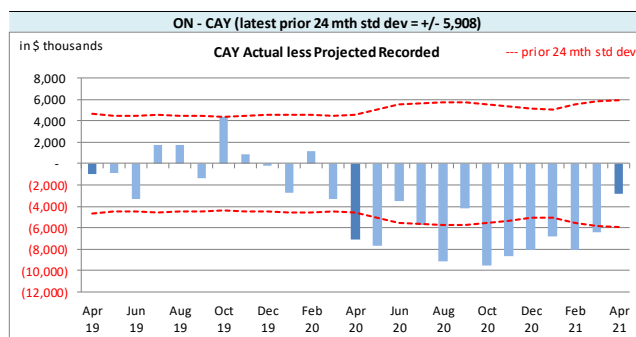
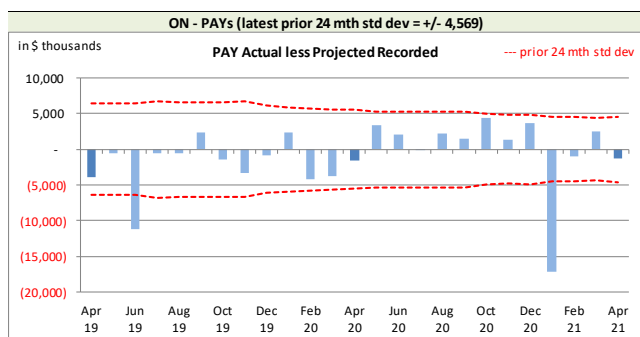
<sup>7</sup>The PAYs' variances will show bias as the projection upload forces all earned premium projections to be attributed to the CAY.

### Ontario RSP Actual **Recorded** by Calendar Month



**Recorded** activity variances from the previous month's projections are shown in the following charts, 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)		8,877	19,325
std dev		4,569	5,908
A-P <> std dev		2	10
% <> std dev		8.0%	40.0%
norm <> std dev		31.7%	31.7%
performance vs 24-mth avg:		better	worse

With respect to **recorded** 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 **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<sup>8</sup> has not been indicated at a 95% confidence level on a rolling 25-month basis (10 of 25 variances were positive).

The current accident year (CAY) **recorded** variances (preceding table on the left) fell outside of one standard deviation 40% of the time over the last 25 calendar months suggesting that the projection process has performed worse than simply projecting the prior 24-month average amount. Bias has been indicated at a 95% confidence level on a rolling 25-month basis (5 of 25 variances were positive).

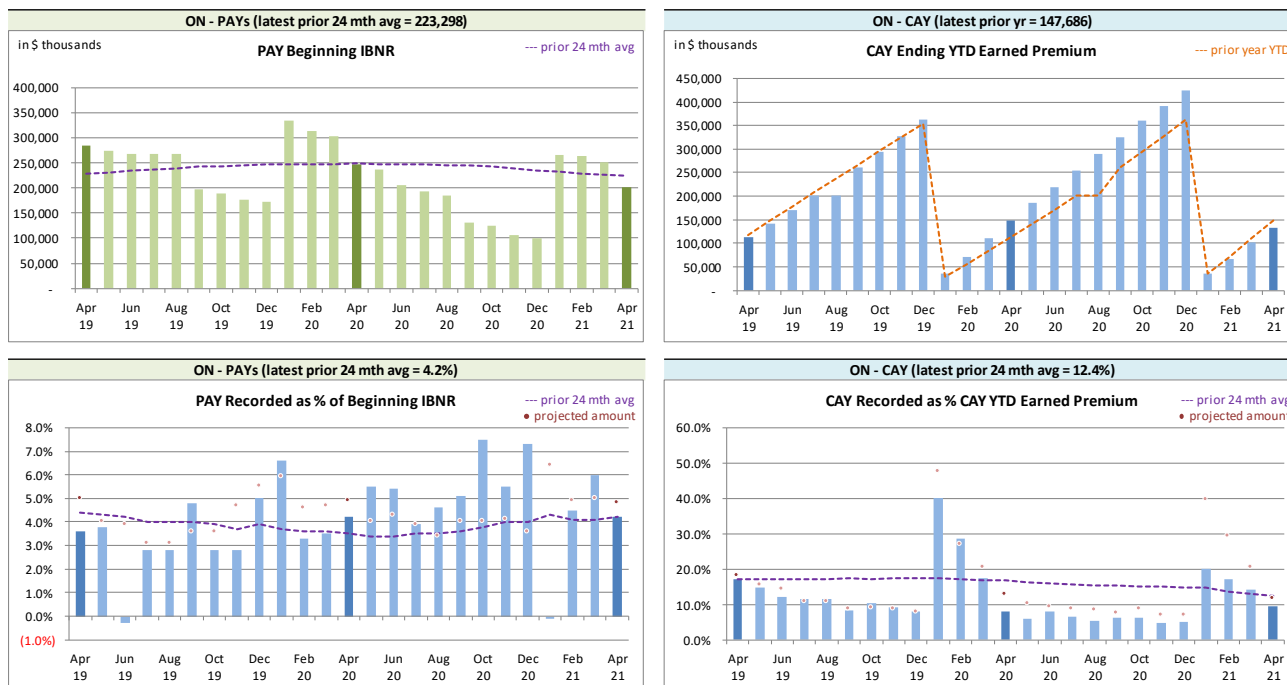
<sup>8</sup> For the binomial distribution with 25 trials and an assumed 50% success probability, the 95% confidence range is 8 to 17 successes. That is, favourable or unfavourable counts of 0 to 7 or 18 to 25 out of 25 outcomes would suggest bias.



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, the following additional charts 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>9</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 of the preceding group of charts) 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).

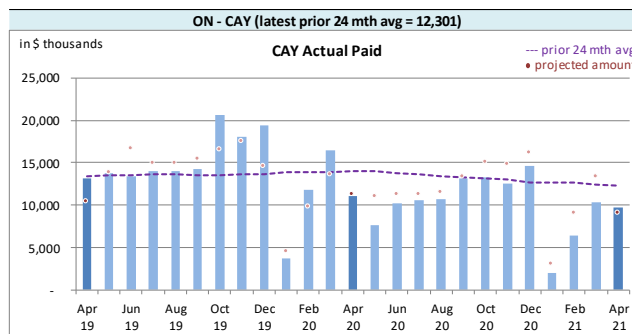
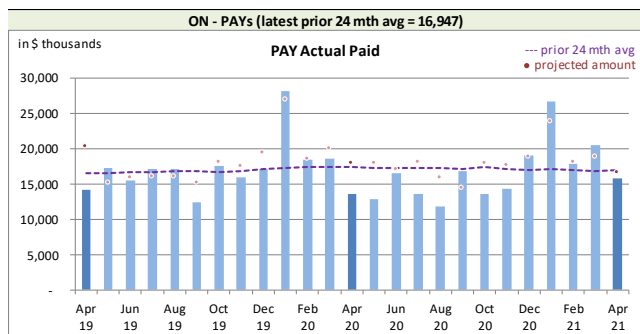
### 2.1.c AvsP: Paid Indemnity & Allowed Claims Expense

The following charts show actual **paid** activity in each of the most recent 25 calendar months, along

<sup>9</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.

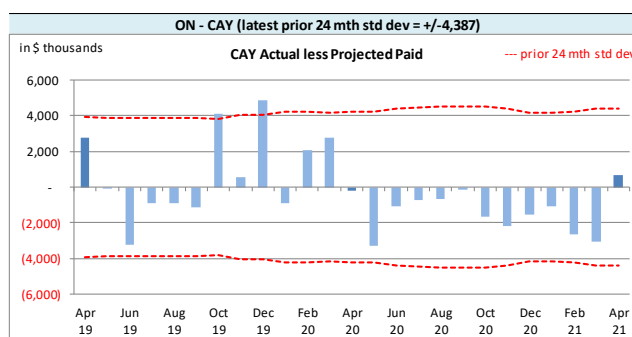
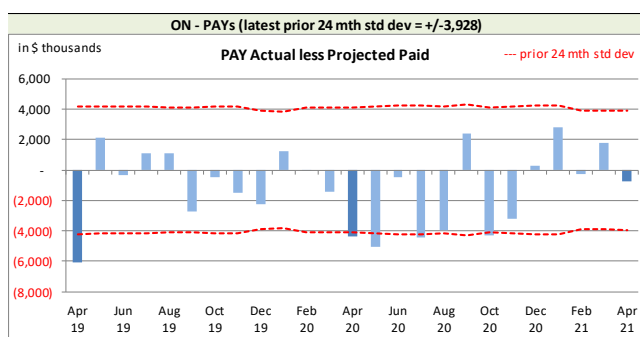
with a “prior 24-month average” to show how each month’s actual compares with the average amount of the preceding 24 calendar months.

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



**Paid** activity variances from the previous month’s projections are shown in the following charts, 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



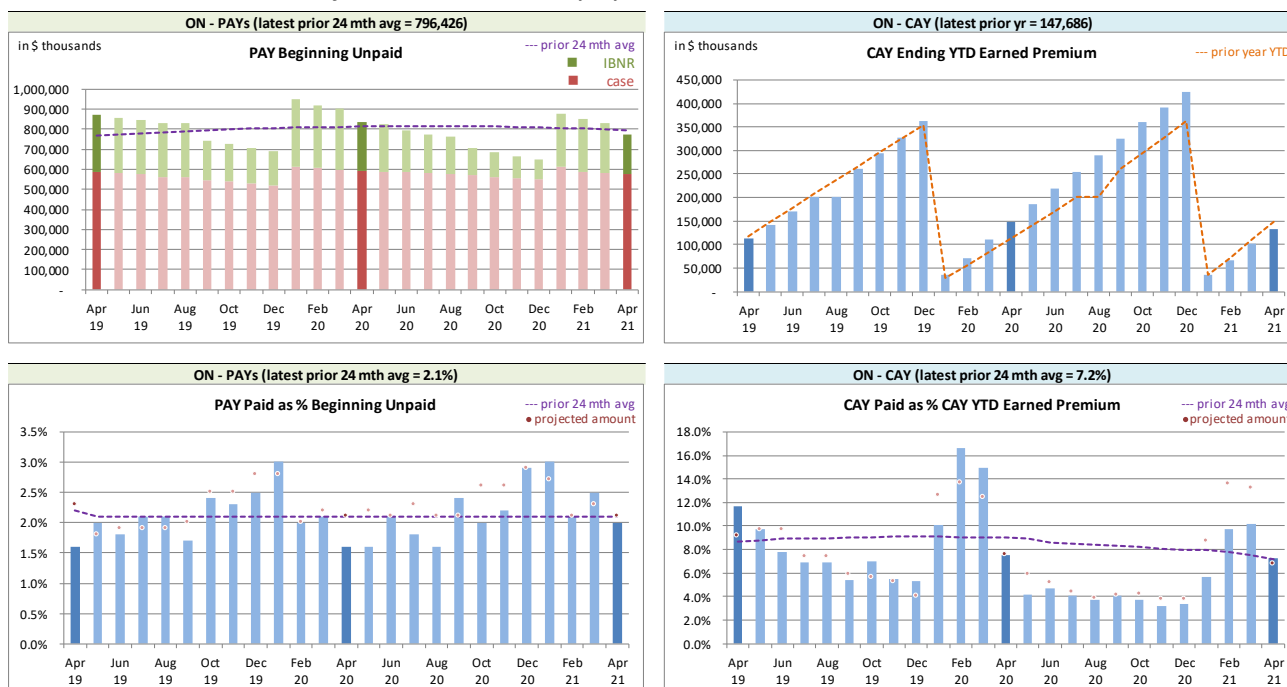
On Latest \$ thousands			
	<b>Paid</b>	PAYs	CAY
Mthly Avg Paid (prior 24 mths)		16,947	12,301
std dev		3,928	4,387
A-P <> std dev		5	2
% <> std dev		20.0%	8.0%
norm <> std dev		31.7%	31.7%
performance vs 24-mth avg:		better	better

With respect to **paid** indemnity & allowed claims expense, 20% 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 been indicated at a 95% confidence level on a rolling 25-month basis (8 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 (preceding table on the left), suggesting the projection process has performed better than simply projecting the prior 24-month average amount. Bias not has been indicated at a 95% confidence level on a rolling 25-month basis (7 of 25 variances are positive).

We have included, for reference, the following charts related to levels influencing **paid** activity.

### Ontario RSP Levels that influence<sup>10</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 of the preceding group of charts) 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>11</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.

<sup>10</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>11</sup>For ease of discussion, "IBNR" is used in place of "provisions for incurred but not recorded (IBNR) and development".

The following table summarizes variances in provisions included in this month's 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	26,307	(463)	(3,857)	-	54,269	74	76,719	(389)
2019	54,329	(215)	(1,201)	6	26,973	(117)	80,101	(326)
2020	111,233	953	(1,816)	2	37,225	(41)	146,642	914
2021	99,914	463	(1,054)	28	21,477	(561)	120,337	(70)
TOTAL	291,783	738	(7,928)	36	139,944	(645)	423,799	129

The IBNR provision is \$0.7 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 following table 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:	18,296	94	26,470	80	44,766	174
balance as % unearned premium:	9.9%	-	14.4%	-	24.3%	-
actual unearned premium:	184,045					
less projected:	526					

### 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>12</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 following table summarizes the calendar year-to-date results for indemnity & allowed claims expenses<sup>13</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 112.6% rather than 108.9% (the valuation ultimate ratio for accident year 2021), 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.)

<sup>12</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>13</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.

*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	(38,357)	(29.7%)	(17,289)	(13.4%)	(55,646)	(43.0%)	(3,482)	10.2%
CAY	145,625	112.6%	20,423	15.8%	166,048	128.4%	40,005	(0.3%)
TOTAL	107,267	82.9%	3,134	2.4%	110,401	85.3%	36,524	9.9%

(" % EP " based on 2021 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 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 Mar. 2021	Actual Apr. 2021	Projected May. 2021	Projected Jun. 2021	Projected Jul. 2021	Projected Aug. 2021	Projected Sep. 2021	Projected Dec. 2021
	prior	3,009	2,906	2,823	2,758	2,679	2,618	2,546	2,344
	2002	(50)	(50)	(48)	(46)	(45)	(43)	(43)	(39)
	2003	16	16	15	14	14	13	13	11
	2004	14	14	15	17	17	17	16	17
	2005	132	132	126	121	117	112	111	99
	2006	364	362	350	340	329	318	311	284
	2007	390	387	375	363	353	340	334	304
	2008	547	545	525	506	491	469	464	415
	2009	1,239	1,209	1,164	1,122	1,090	1,045	1,030	927
	2010	1,818	1,681	1,619	1,561	1,515	1,452	1,432	1,290
	2011	1,475	1,694	1,637	1,583	1,538	1,481	1,455	1,317
	2012	1,769	1,747	1,686	1,629	1,582	1,522	1,497	1,353
	2013	2,003	2,149	2,082	2,023	1,964	1,903	1,862	1,698
	2014	2,988	3,057	2,973	2,899	2,816	2,752	2,680	2,467
	2015	2,335	1,938	1,910	1,893	1,843	1,847	1,769	1,674
discount rate 0.31%	2016	2,580	3,315	3,255	3,213	3,127	3,111	2,994	2,811
	2017	16,339	15,282	14,774	14,251	13,758	13,369	13,035	11,549
	2018	42,838	40,335	39,015	37,776	36,754	36,037	34,698	30,432
interest rate margin 25 basis pts	2019	84,111	80,101	77,464	74,896	72,972	71,587	68,822	60,782
	2020	151,382	146,642	141,590	136,084	130,751	125,944	122,790	112,261
	2021	92,953	120,337	143,848	162,519	180,198	195,893	209,068	240,266
	<b>TOTAL</b>	<b>408,252</b>	<b>423,799</b>	<b>437,198</b>	<b>445,522</b>	<b>453,863</b>	<b>461,787</b>	<b>466,884</b>	<b>472,262</b>
	Change		15,547	13,399	8,324	8,341	7,924	5,097	

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



EXHIBIT B

IBNR

TABLE EXHIBIT B

	Amounts in \$000s								
Ultimate Loss Ratio	Accident Year	Actual Mar. 2021	Actual Apr. 2021	Projected May. 2021	Projected Jun. 2021	Projected Jul. 2021	Projected Aug. 2021	Projected Sep. 2021	Projected Dec. 2021
-	prior	126	30	28	28	27	24	23	18
117.8%	2002	(51)	(51)	(49)	(47)	(46)	(44)	(44)	(40)
90.4%	2003	14	14	13	12	12	11	11	9
77.5%	2004	(73)	(73)	(70)	(67)	(65)	(62)	(61)	(54)
73.5%	2005	116	116	111	107	104	99	98	87
100.2%	2006	181	180	173	166	161	153	151	135
100.0%	2007	178	176	169	162	157	149	148	133
120.4%	2008	441	441	423	406	394	375	371	331
154.6%	2009	924	896	860	826	801	763	755	674
151.5%	2010	1,373	1,238	1,188	1,140	1,106	1,053	1,042	931
86.5%	2011	724	949	911	875	849	808	800	714
83.7%	2012	1,000	1,080	1,037	996	966	920	911	813
93.8%	2013	552	711	683	656	636	605	599	535
97.7%	2014	38	127	122	117	113	108	107	96
107.6%	2015	(1,552)	(1,892)	(1,816)	(1,743)	(1,691)	(1,610)	(1,594)	(1,424)
116.9%	2016	(3,253)	(2,281)	(2,190)	(2,102)	(2,039)	(1,941)	(1,922)	(1,718)
104.9%	2017	4,566	3,797	3,645	3,499	3,394	3,326	3,293	2,823
115.0%	2018	22,842	20,849	20,015	19,214	18,638	18,265	17,352	14,877
107.6%	2019	57,780	54,329	52,156	50,070	48,568	47,597	45,217	38,768
80.8%	2020	115,356	111,233	106,784	101,765	96,982	92,715	90,026	81,235
108.9%	2021	77,024	99,914	118,353	132,820	145,829	156,921	165,762	184,228
	TOTAL	278,306	291,783	302,546	308,900	314,896	320,235	323,045	323,171
	Change		13,477	10,763	6,354	5,996	5,339	2,810	

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

EXHIBIT C

Premium Liabilities

TABLE EXHIBIT C

	Amounts in \$000s							
Premium Liabilities	Actual Mar. 2021	Actual Apr. 2021	Projected May. 2021	Projected Jun. 2021	Projected Jul. 2021	Projected Aug. 2021	Projected Sep. 2021	Projected Dec. 2021
(1) unearned premium (UP)	193,610	184,045	180,854	184,692	190,448	199,030	208,457	214,779
FOR MEMBER SHARING								
(2) expected future costs ratio {% of (1)}	123.9%	124.3%	125.0%	125.8%	126.9%	128.0%	129.1%	133.0%
(3) expected future costs {(1) x (2)}	239,853	228,811	226,035	232,402	241,657	254,758	269,214	285,650
(4) premium deficiency / (deferred policy acquisition cost)	46,243	44,766	45,181	47,710	51,209	55,728	60,757	70,871
Excluding Actuarial Present Value Adjustments								
(5) expected future costs ratio {% of (1)}	109.6%	109.9%	110.5%	111.3%	112.2%	113.2%	114.2%	117.6%
(6) expected future costs {(1) x (5)}	212,106	202,341	199,886	205,515	213,700	225,285	238,068	252,601
(7) premium deficiency / (deferred policy acquisition cost)	18,496	18,296	19,032	20,823	23,252	26,255	29,611	37,822

EXHIBIT D

Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2021, broken down by component.

Ontario	Projected Balances as at Dec. 31, 2021 (\$000s)									
ending 2021	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	23,542	18	23,560	(143)	121	2,363	(15)	2,348	2,326	25,886
2002	51	(40)	11	-	-	1	-	1	1	12
2003	8	9	17	-	-	2	-	2	2	19
2004	786	(54)	732	(8)	7	73	(1)	72	71	803
2005	40	87	127	(2)	1	13	-	13	12	139
2006	1,411	135	1,546	(23)	19	155	(2)	153	149	1,695
2007	1,663	133	1,796	(29)	23	180	(3)	177	171	1,967
2008	560	331	891	(15)	12	89	(2)	87	84	975
2009	2,015	674	2,689	(51)	40	269	(5)	264	253	2,942
2010	2,889	931	3,820	(80)	65	382	(8)	374	359	4,179
2011	5,713	714	6,427	(135)	109	643	(14)	629	603	7,030
2012	4,922	813	5,735	(109)	86	574	(11)	563	540	6,275
2013	11,646	535	12,181	(183)	146	1,218	(18)	1,200	1,163	13,344
2014	24,390	96	24,486	(294)	245	2,449	(29)	2,420	2,371	26,857
2015	33,332	(1,424)	31,908	(287)	223	3,191	(29)	3,162	3,098	35,006
2016	48,306	(1,718)	46,588	(373)	280	4,659	(37)	4,622	4,529	51,117
2017	68,049	2,823	70,872	(496)	425	8,859	(62)	8,797	8,726	79,598
2018	91,081	14,877	105,958	(848)	636	15,894	(127)	15,767	15,555	121,513
2019	89,516	38,768	128,284	(1,026)	770	22,450	(180)	22,270	22,014	150,298
2020	77,865	81,235	159,100	(1,591)	1,273	31,661	(317)	31,344	31,026	190,126
PAYs (sub-total):	487,785	138,943	626,728	(5,693)	4,481	95,125	(860)	94,265	93,053	719,781
CAY (2021)	137,100	184,228	321,328	(2,892)	2,249	57,196	(515)	56,681	56,038	377,366
claims liabilities:	624,885	323,171	948,056	(8,585)	6,730	152,321	(1,375)	150,946	149,091	1,097,147
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	214,779	37,822	252,601	(1,765)	1,513	33,536	(235)	33,301	33,049	285,650
*Total may not be sum of parts, as apvs apply to future costs within UPR										
policy liabilities:			1,200,657	(10,350)	8,243	185,857	(1,610)	184,247	182,140	1,382,797

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, 2021 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Selected Claims Development MfADs (Dec. 31, 2020)

Accident Year	Third Party Liability Margins	Accident Benefits Margins	Other Coverages Margins	Total Margins
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%	9.9%	10.0%	9.9%
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%	10.0%	10.0%
2015	10.0%	10.0%	9.9%	10.0%
2016	10.0%	10.0%	10.0%	10.0%
2017	12.5%	12.5%	12.5%	12.5%
2018	15.0%	15.0%	15.0%	15.0%
2019	17.4%	17.5%	16.7%	17.5%
2020	19.9%	20.0%	16.4%	19.9%
2021	17.3%	20.0%	6.0%	17.9%
prem liab	12.9%	20.0%	5.1%	13.3%

discount rate: 0.31%  
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, 2021 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2021, and are based on more up-to-date information). We have included the most recent valuation selection (0.31%), the prior valuation assumption (0.26%) and the prior fiscal year end valuation assumption (1.26%) for comparative purposes. A 25 basis point margin for investment return adverse deviation is used in all scenarios presented.

\$ Format: \$000s

Actuarial Present Value of Provisions at Various Discount Rates - Dec. 31, 2021 projected Unpaid								
AY	0.00%	0.00%	0.31%	0.81%	1.31%	1.81%	0.26%	0.26%
2003 & prior	25,288	25,288	25,246	24,995	24,751	24,507	25,271	25,271
2004	950	950	947	930	914	898	949	949
2005	77	77	76	75	73	72	77	77
2006	1,888	1,888	1,880	1,835	1,792	1,750	1,885	1,885
2007	2,311	2,311	2,301	2,240	2,182	2,127	2,307	2,307
2008	1,189	1,189	1,184	1,150	1,119	1,088	1,187	1,187
2009	3,602	3,602	3,583	3,472	3,366	3,265	3,595	3,595
2010	4,629	4,629	4,603	4,450	4,306	4,167	4,619	4,619
2011	6,369	6,369	6,333	6,123	5,924	5,734	6,356	6,356
2012	6,178	6,178	6,146	5,960	5,784	5,616	6,166	6,166
2013	13,103	13,103	13,051	12,747	12,460	12,187	13,084	13,084
2014	20,141	20,141	20,075	19,685	19,316	18,966	20,117	20,117
2015	28,552	28,552	28,482	28,067	27,671	27,294	28,525	28,525
2016	43,906	43,906	43,813	43,273	42,759	42,264	43,870	43,870
2017	85,971	85,971	85,798	84,827	83,892	82,994	85,899	85,899
2018	123,255	123,255	122,964	121,441	119,969	118,550	123,121	123,121
2019	153,852	153,852	153,453	151,367	149,391	147,441	153,663	153,663
2020	182,659	182,659	182,070	179,281	176,610	174,002	182,378	182,378
2021	279,244	279,244	278,435	274,296	270,332	266,510	278,848	278,848
Total	983,164	983,164	980,440	966,214	952,611	939,432	981,917	981,917
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

Dollar Impact Relative to Valuation Assumption								
AY	0.00%	0.00%	0.31%	0.81%	1.31%	1.81%	0.26%	0.26%
Total	2,724	2,724	-	(14,226)	(27,829)	(41,008)	1,477	1,477
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

Percentage Impact Relative to Valuation Assumption								
AY	0.00%	0.00%	0.31%	0.81%	1.31%	1.81%	0.26%	0.26%
2003 & prior	0.2%	0.2%	-	(1.0%)	(2.0%)	(2.9%)	0.1%	0.1%
2004	0.3%	0.3%	-	(1.8%)	(3.5%)	(5.2%)	0.2%	0.2%
2005	1.3%	1.3%	-	(1.3%)	(3.9%)	(5.3%)	1.3%	1.3%
2006	0.4%	0.4%	-	(2.4%)	(4.7%)	(6.9%)	0.3%	0.3%
2007	0.4%	0.4%	-	(2.7%)	(5.2%)	(7.6%)	0.3%	0.3%
2008	0.4%	0.4%	-	(2.9%)	(5.5%)	(8.1%)	0.3%	0.3%
2009	0.5%	0.5%	-	(3.1%)	(6.1%)	(8.9%)	0.3%	0.3%
2010	0.6%	0.6%	-	(3.3%)	(6.5%)	(9.5%)	0.3%	0.3%
2011	0.6%	0.6%	-	(3.3%)	(6.5%)	(9.5%)	0.4%	0.4%
2012	0.5%	0.5%	-	(3.0%)	(5.9%)	(8.6%)	0.3%	0.3%
2013	0.4%	0.4%	-	(2.3%)	(4.5%)	(6.6%)	0.3%	0.3%
2014	0.3%	0.3%	-	(1.9%)	(3.8%)	(5.5%)	0.2%	0.2%
2015	0.2%	0.2%	-	(1.5%)	(2.8%)	(4.2%)	0.2%	0.2%
2016	0.2%	0.2%	-	(1.2%)	(2.4%)	(3.5%)	0.1%	0.1%
2017	0.2%	0.2%	-	(1.1%)	(2.2%)	(3.3%)	0.1%	0.1%
2018	0.2%	0.2%	-	(1.2%)	(2.4%)	(3.6%)	0.1%	0.1%
2019	0.3%	0.3%	-	(1.4%)	(2.6%)	(3.9%)	0.1%	0.1%
2020	0.3%	0.3%	-	(1.5%)	(3.0%)	(4.4%)	0.2%	0.2%
2021	0.3%	0.3%	-	(1.5%)	(2.9%)	(4.3%)	0.1%	0.1%
Total	0.3%	0.3%	-	(1.5%)	(2.8%)	(4.2%)	0.2%	0.2%
	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	3,009	(69)	(34)	-	(103)	(3.4%)	2,906
2002	(50)	1	(1)	-	-	-	(50)
2003	16	-	-	-	-	-	16
2004	14	(1)	1	-	-	-	14
2005	132	(2)	2	-	-	-	132
2006	364	(5)	3	-	(2)	(0.5%)	362
2007	390	(6)	3	-	(3)	(0.8%)	387
2008	547	(7)	5	-	(2)	(0.4%)	545
2009	1,239	(15)	(15)	-	(30)	(2.4%)	1,209
2010	1,818	(24)	(113)	-	(137)	(7.5%)	1,681
2011	1,475	(23)	242	-	219	14.8%	1,694
2012	1,769	(27)	5	-	(22)	(1.2%)	1,747
2013	2,003	(37)	183	-	146	7.3%	2,149
2014	2,988	(65)	134	-	69	2.3%	3,057
2015	2,335	(70)	(327)	-	(397)	(17.0%)	1,938
2016	2,580	(96)	831	-	735	28.5%	3,315
2017	16,339	(630)	(427)	-	(1,057)	(6.5%)	15,282
2018	42,838	(1,622)	(881)	-	(2,503)	(5.8%)	40,335
2019	84,111	(3,684)	(326)	-	(4,010)	(4.8%)	80,101
2020	151,382	(5,654)	914	-	(4,740)	(3.1%)	146,642
2021	92,953	27,454	(70)	-	27,384	29.5%	120,337
<b>Grand Total</b>	<b>408,252</b>	<b>15,418</b>	<b>129</b>	<b>-</b>	<b>15,547</b>	<b>3.8%</b>	<b>423,799</b>

EXHIBIT G

Page 2 of 2

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

RSP Ontario  
AccountCode Desc IBNR - Undiscounted

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	126	(2)	(94)	-	(96)	(76.2%)	30
2002	(51)	1	(1)	-	-	-	(51)
2003	14	-	-	-	-	-	14
2004	(73)	1	(1)	-	-	-	(73)
2005	116	(1)	1	-	-	-	116
2006	181	(2)	1	-	(1)	(0.6%)	180
2007	178	(2)	-	-	(2)	(1.1%)	176
2008	441	(4)	4	-	-	-	441
2009	924	(9)	(19)	-	(28)	(3.0%)	896
2010	1,373	(14)	(121)	-	(135)	(9.8%)	1,238
2011	724	(7)	232	-	225	31.1%	949
2012	1,000	(10)	90	-	80	8.0%	1,080
2013	552	(6)	165	-	159	28.8%	711
2014	38	-	89	-	89	234.2%	127
2015	(1,552)	16	(356)	-	(340)	21.9%	(1,892)
2016	(3,253)	33	939	-	972	(29.9%)	(2,281)
2017	4,566	(228)	(541)	-	(769)	(16.8%)	3,797
2018	22,842	(1,142)	(851)	-	(1,993)	(8.7%)	20,849
2019	57,780	(3,236)	(215)	-	(3,451)	(6.0%)	54,329
2020	115,356	(5,076)	953	-	(4,123)	(3.6%)	111,233
2021	77,024	22,427	463	-	22,890	29.7%	99,914
<b>Grand Total</b>	<b>278,306</b>	<b>12,739</b>	<b>738</b>	<b>-</b>	<b>13,477</b>	<b>4.8%</b>	<b>291,783</b>