



**ONTARIO RISK SHARING POOL**

**JANUARY 2021 OPERATIONAL REPORT**

**ACTUARIAL HIGHLIGHTS**

Related Bulletin: [F2021-012\\_ON\\_RSP\\_January\\_2021\\_Operational\\_Report](#)

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**ACTUARIAL HIGHLIGHTS****RSP ONTARIO****OPERATIONAL REPORT****JANUARY 2021**

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**TABLE OF CONTENTS**

<b>1</b>	<b>Summary.....</b>	<b>2</b>
1.1	Valuation Schedule (Fiscal Year 2021) .....	2
1.2	Appointed Actuary and Hybrid Actuarial Services Model.....	2
1.3	Consideration of Recent Legal Decisions and Changes in Legislation / Regulation .....	3
1.4	Current Provision Summary .....	3
<b>2</b>	<b>Activity during the Month of January 2021 .....</b>	<b>4</b>
2.1	Recorded Premium and Claims Activity .....	4
2.1.a	Actual vs. Projected (AvsP): Earned Premium.....	5
2.1.b	AvsP: Recorded Indemnity & Allowed Claims Expense .....	6
2.1.c	AvsP: Paid Indemnity & Allowed Claims Expense .....	8
2.2	Actuarial Provisions.....	10
<b>3</b>	<b>Ultimate Loss Ratio Matching Method.....</b>	<b>12</b>
<b>4</b>	<b>Calendar Year-to-Date Results.....</b>	<b>12</b>
<b>5</b>	<b>Current Operational Report – Additional Exhibits .....</b>	<b>13</b>
<b>6</b>	<b>EXHIBITS .....</b>	<b>14</b>

## 1 Summary

### Key Points

- (a) The month's recorded activities were significantly lower than projected; the activity was reviewed and attributed to the reserving methodology change of one member company group.

### 1.1 Valuation Schedule (Fiscal Year 2021)

The January 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.

<b>ONTARIO RISK SHARING POOL          FISCAL YEAR 2021 – SCHEDULE OF VALUATIONS</b>			
<b>Valuation Date</b>	<b>Discount Rate (per annum)</b>	<b>Operational Report</b>	<b>Description of Changes</b>
Sep. 30, 2020 (completed)	0.26% mfad <sup>1</sup> 25 bp	Oct. 2020	update valuation (roll-forward): accident year 2020 loss ratio decreased 5.0 points to 90.4 %; discount rate decreased 3 basis points; no change to selected margins for adverse deviations
Dec. 31, 2020	% mfad -- bp	Mar. 2021	update valuation:
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 Pantaleo as the Appointed Actuary at its meeting on February 20, 2020.

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.

<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%.

### 1.3 Consideration of Recent Legal Decisions and Changes in Legislation / Regulation<sup>2</sup>

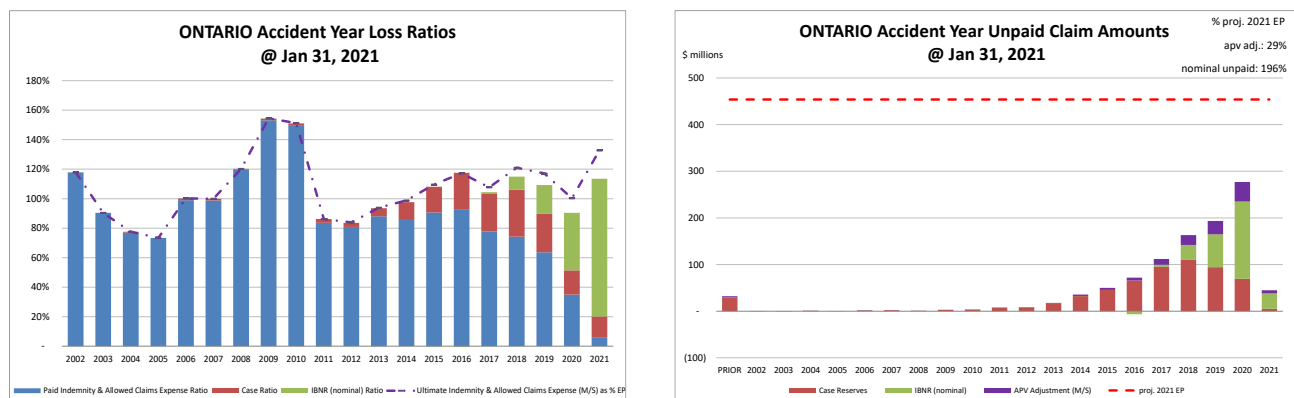
There have been no changes in these descriptions since last month's Highlights.

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.



*"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 (\$131.5 million – see the following table) represents 29% 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

<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".

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	590,747	57.9%
ibnr	297,540	29.2%
M/S apv adjust.	131,466	12.9%
M/S total	1,019,753	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 67% 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 5% 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	204,685	77.7%
prem def/(dpac)	28,099	10.7%
M/S apv adjust.	30,718	11.7%
M/S total	263,502	100.0%

policy liabilities (\$000s)

	amt	%
claim	888,287	69.2%
premium	232,784	18.1%
M/S apv adjust.	162,184	12.6%
M/S total	1,283,255	100.0%

## 2 Activity during the Month of January 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>.

*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	(47)	(47)	11,482	127	(13,182)	(3,851)	(1,700)	(3,724)
2019	(104)	(104)	2,701	(2,327)	(8,240)	(6,074)	(5,538)	(8,400)
2020	(684)	(684)	12,421	4,981	(5,328)	(10,013)	7,093	(5,032)
2021	35,276	(958)	2,011	(1,073)	5,118	(5,780)	7,129	(6,853)
TOTAL	34,440	(1,794)	28,616	1,709	(21,632)	(25,718)	6,984	(24,009)

(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 in responding to audit findings. The large variances in Case and Recorded are explained in more details under section 2.1.b.

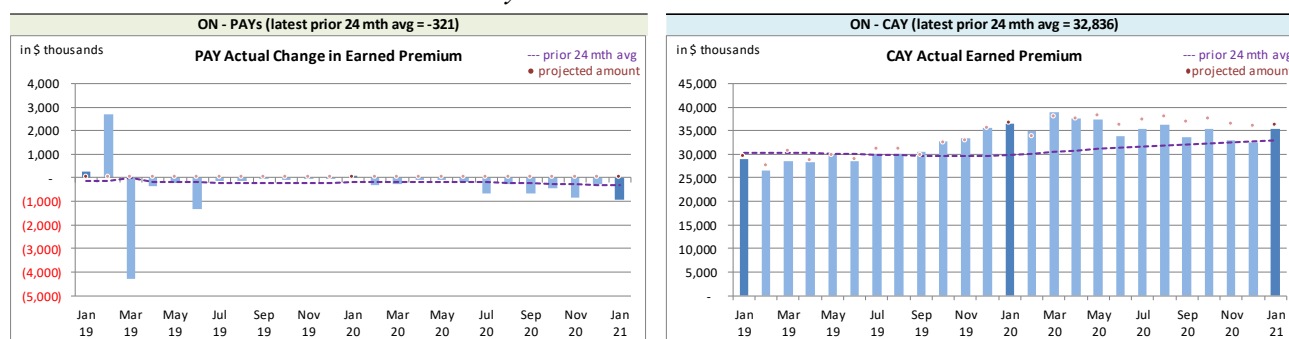
<sup>5</sup>There may be rounding differences in values in this document compared with the associated Bulletin and/or Operational Report.

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 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.

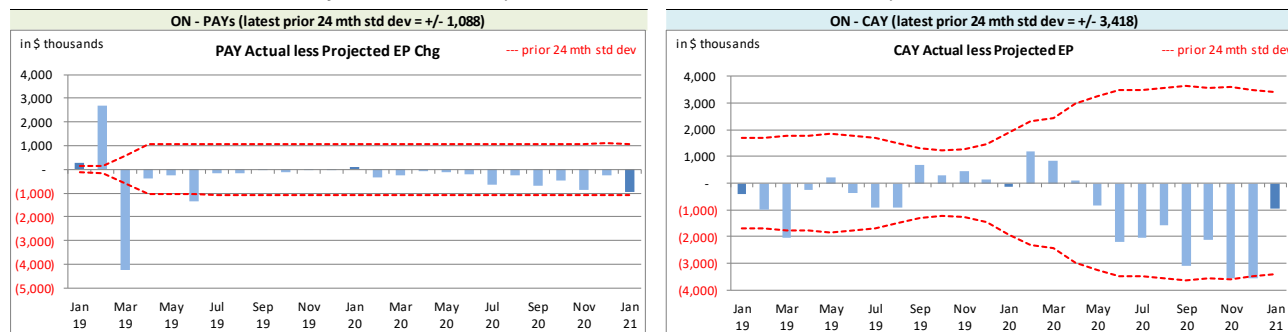
On Latest \$ thousands		
	Earned Premium	
Mthly Avg EP Chg (prior 24 mths)	(321)	32,836
std dev	1,088	3,418
A-P <> std dev	4	2
% <> std dev	16.0%	8.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	better

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.

<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.

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

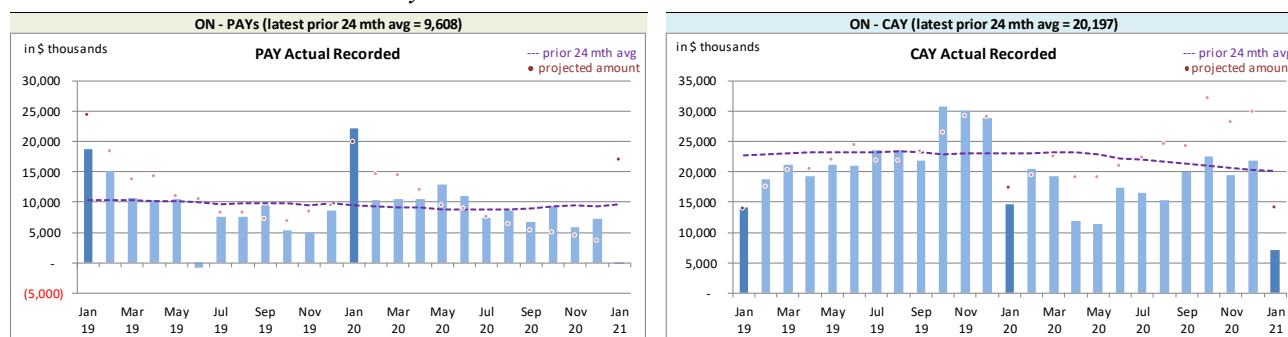


We project **earned premium** changes from known unearned premium balances and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years' (PAYs) bias<sup>7</sup>, with actuals generally lower than projected, although 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.

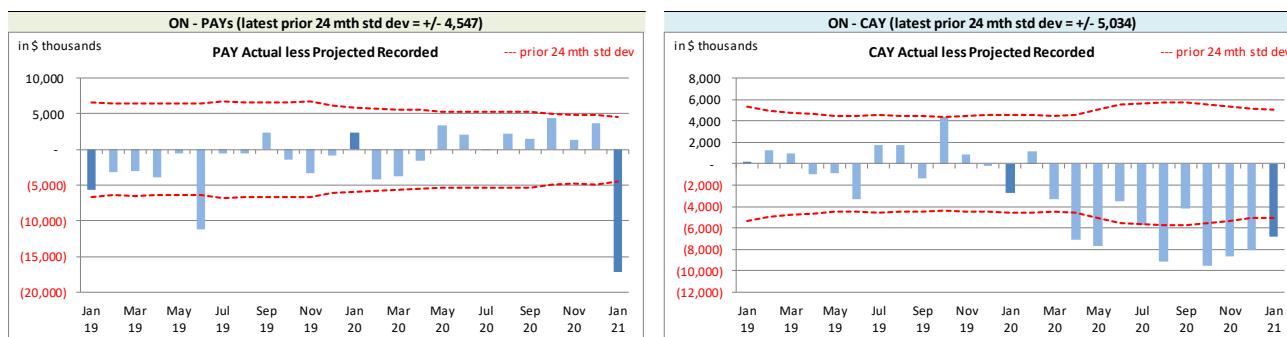
#### Ontario RSP Actual **Recorded** by Calendar Month



**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.

<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 vs Projected Summary: **Recorded** Variances by Calendar Month



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 (9 of 25 variances were positive).

The PAY **recorded** variance was outside of the one standard deviation band this month (see preceding chart on the left). The significantly lower than projected recorded activity was reviewed, and attributed to the reserving methodology change of one member company group.

The current accident year (CAY) **recorded** variances (preceding chart on the left) fell outside of one standard deviation 32% of the time over the last 25 calendar months suggesting that the projection process has performed no 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 (8 of 25 variances were positive).

On Latest \$ thousands		
	<b>Recorded</b>	
Mthly Avg Recorded (prior 24 mths)	PAYs 9,608	CAY 20,197
std dev	4,547	5,034
A-P <> std dev	2	8
% <> std dev	8.0%	32.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	no better

The CAY **recorded** variance was outside of the one standard deviation band this month (see preceding chart on the right). The lower than projected recorded activity was reviewed, and attributed to the reduction in transferred written premium and low levels of reported physical damage claims experience in the month.

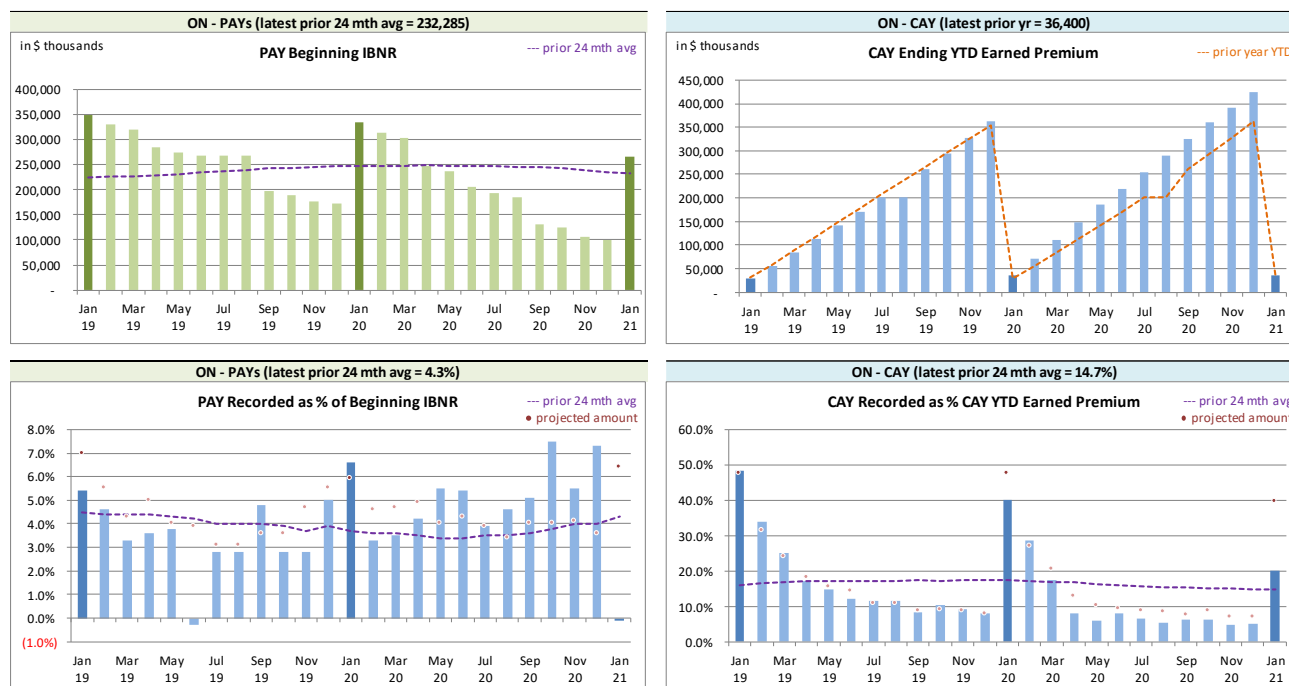
The method for establishing IBNR adjusts automatically for changes in **earned premium** and **recorded** claims activity level (see sections 2.2 and 3).

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).

<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.



## 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:

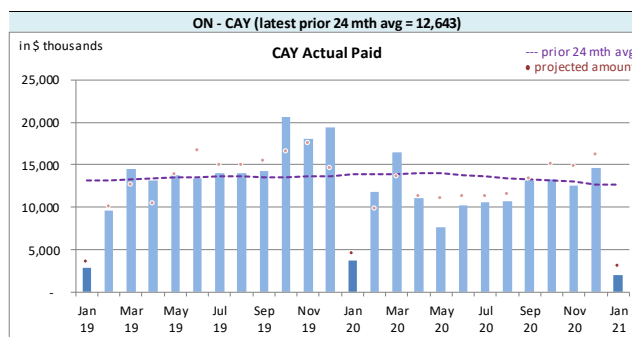
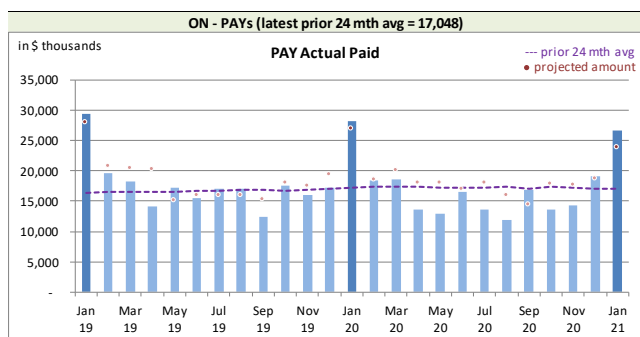
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs' ultimates (will show up as a beginning IBNR change one 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 with a "prior 24-month average" to show how each month's actual compares with the average amount of the preceding 24 calendar months.

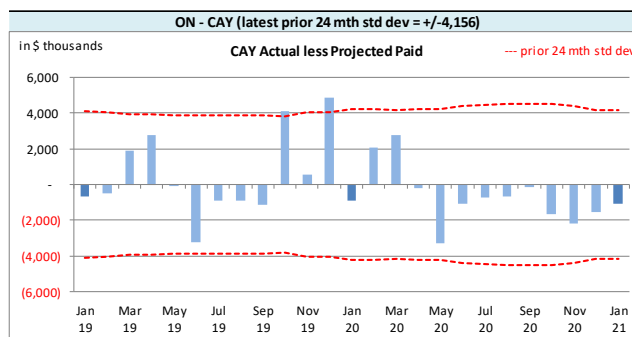
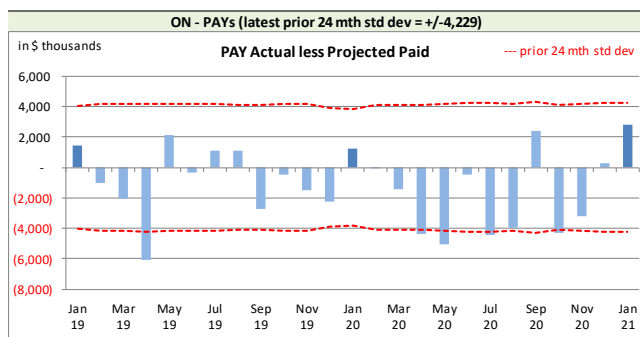
<sup>9</sup>Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR 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.

### 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)		17,048	12,643
std dev		4,229	4,156
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

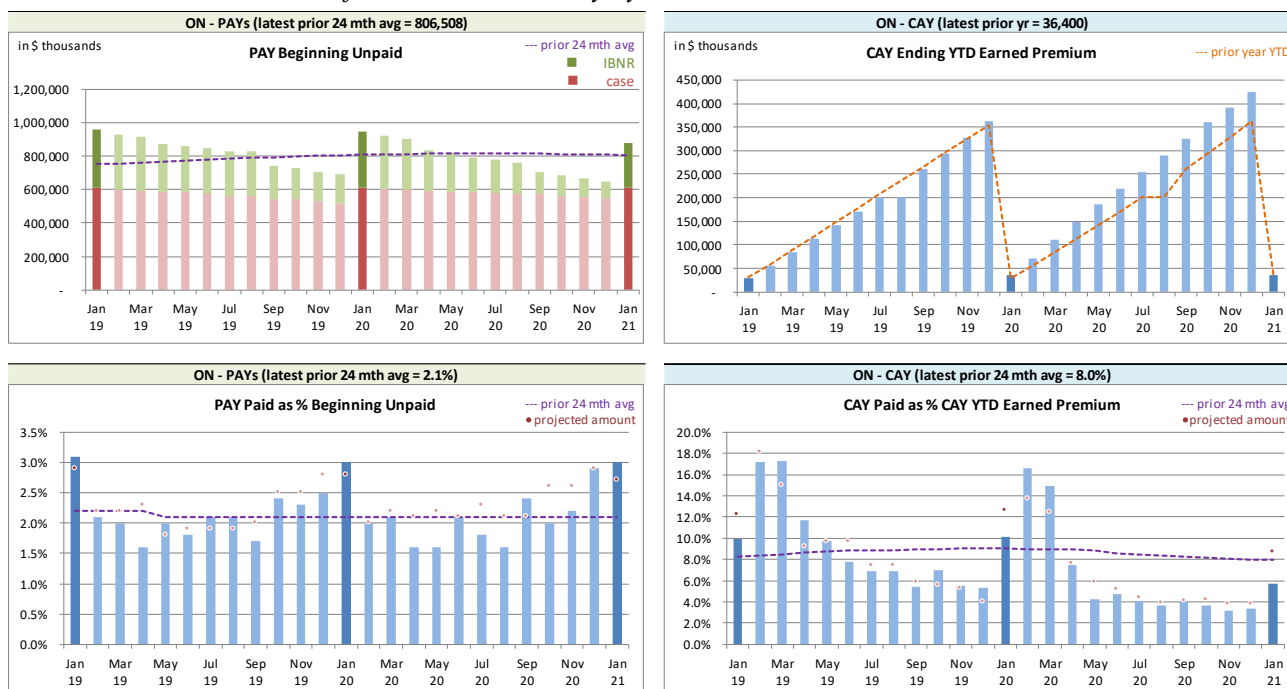
With respect to **paid** indemnity & allowed claims expense, 20% of the prior accident years' (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **paid** amounts (see table on left), suggesting the projection process has performed better than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

Bias has not 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 chart on the left), suggesting the projection process has performed better than simply projecting the prior 24-month average amount. Bias 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.

The following table summarizes variances in provisions included in this month's Operational Report

<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".

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	28,664	3,554	(3,288)	(5)	57,538	(63)	82,914	3,486
2019	70,465	8,287	(1,154)	(16)	29,628	398	98,939	8,669
2020	165,502	4,413	(1,880)	44	43,832	(1,044)	207,454	3,413
2021	32,909	5,766	(304)	-	7,094	(2)	39,699	5,764
TOTAL	297,540	22,020	(6,626)	23	138,092	(711)	429,006	21,332

The IBNR provision is \$22.0 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:	28,099	(1,498)	30,718	(1,627)	58,817	(3,125)
balance as % unearned premium:	13.7%	-	15.0%	-	28.7%	-
actual unearned premium:	204,685					
less projected:	(10,832)					

### 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:

- Earned premium to-date
- Ultimate loss<sup>12</sup> ratio per latest valuation
- Estimated ultimate incurred = (a) x (b)
- Recorded indemnity & allowed claims expense to-date
- 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 116.6% rather than 113.5% (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	
	Amount	% EP	Amount	% EP	Amount	% EP
PAYs	(902)	(2.6%)	(4,206)	(12.2%)	(5,108)	(14.9%)
CAY	40,038	116.6%	6,790	19.8%	46,828	136.4%
TOTAL	39,136	114.0%	2,584	7.5%	41,720	121.5%

(“% 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 Dec. 2020	Actual Jan. 2021	Projected Feb. 2021	Projected Mar. 2021	Projected Dec. 2021
	prior	3,053	3,032	2,956	2,868	2,257
	2002	(50)	(50)	(49)	(46)	(34)
	2003	16	16	16	15	11
	2004	20	19	17	19	19
	2005	(43)	(43)	(43)	(41)	(29)
	2006	197	196	191	185	145
	2007	205	203	198	192	151
	2008	73	72	71	69	55
	2009	739	738	727	694	524
	2010	606	604	593	569	434
	2011	(20)	(35)	(44)	(24)	15
	2012	962	1,138	1,116	1,075	829
	2013	684	1,219	1,185	1,159	930
	2014	3,597	3,280	3,202	3,108	2,444
	2015	4,159	4,068	3,965	3,860	3,062
discount rate 0.26%	2016	134	(669)	(744)	(554)	(92)
	2017	17,045	16,841	16,308	15,976	11,546
	2018	51,426	52,285	50,256	48,284	34,751
interest rate margin 25 basis pts	2019	93,972	98,939	95,751	91,716	66,257
	2020	217,495	207,454	198,130	189,452	139,208
	2021	-	39,699	62,699	89,044	290,988
	<b>TOTAL</b>	<b>394,270</b>	<b>429,006</b>	<b>436,501</b>	<b>447,620</b>	<b>553,471</b>
	Change		34,736	7,495	11,119	

*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 Dec. 2020	Actual Jan. 2021	Projected Feb. 2021	Projected Mar. 2021	Projected Dec. 2021
-	prior	129	108	106	99	76
117.8%	2002	(51)	(51)	(50)	(47)	(35)
90.4%	2003	14	14	14	13	9
77.5%	2004	(70)	(71)	(70)	(66)	(47)
73.4%	2005	(43)	(43)	(43)	(41)	(29)
100.1%	2006	20	20	20	19	13
99.9%	2007	-	(1)	(1)	(1)	(1)
120.2%	2008	4	4	4	4	4
154.4%	2009	450	447	443	419	307
151.1%	2010	253	252	249	235	172
86.0%	2011	(689)	(687)	(680)	(643)	(471)
83.6%	2012	157	337	334	316	231
93.4%	2013	(973)	(337)	(334)	(316)	(231)
97.6%	2014	349	63	62	59	44
107.9%	2015	(385)	(411)	(407)	(385)	(280)
115.0%	2016	(5,992)	(6,577)	(6,511)	(6,153)	(4,500)
104.4%	2017	4,111	4,483	4,259	4,216	2,977
114.9%	2018	29,850	31,114	29,465	27,992	18,975
109.2%	2019	65,040	70,465	67,646	64,061	43,107
90.4%	2020	173,214	165,502	157,227	149,366	104,610
113.5%	2021	-	32,909	50,825	72,094	221,884
	TOTAL	265,388	297,540	302,558	311,241	386,815
	Change		32,152	5,018	8,683	

*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 Dec. 2020	Actual Jan. 2021	Projected Feb. 2021	Projected Mar. 2021	Projected Dec. 2021
(1) unearned premium (UP)	211,314	204,685	209,739	217,577	257,329
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	128.7%	128.7%	128.8%	129.0%	132.6%
(3) expected future costs {(1) x (2)}	271,994	263,502	270,162	280,583	341,126
(4) premium deficiency / (deferred policy acquisition cost)	60,680	58,817	60,423	63,006	83,797
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	113.7%	113.7%	113.8%	113.9%	117.1%
(6) expected future costs {(1) x (5)}	240,286	232,784	238,668	247,875	301,357
(7) premium deficiency / (deferred policy acquisition cost)	28,972	28,099	28,929	30,298	44,028

## 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
prior	21,769	76	21,845	(108)	108	2,191	(10)	2,181	2,181
2002	46	(35)	11	-	-	1	-	1	1
2003	7	9	16	-	-	2	-	2	2
2004	721	(47)	674	(6)	6	67	(1)	66	66
2005	27	(29)	(2)	-	-	-	-	-	-
2006	1,315	13	1,328	(15)	15	133	(1)	132	132
2007	1,542	(1)	1,541	(20)	20	154	(2)	152	152
2008	513	4	517	(8)	8	52	(1)	51	51
2009	1,894	307	2,201	(33)	33	220	(3)	217	217
2010	2,531	172	2,703	(46)	43	270	(5)	265	262
2011	5,474	(471)	5,003	(90)	85	500	(9)	491	486
2012	5,836	231	6,067	(91)	91	607	(9)	598	598
2013	11,994	(231)	11,763	(153)	153	1,176	(15)	1,161	1,161
2014	24,228	44	24,272	(267)	267	2,427	(27)	2,400	2,400
2015	33,969	(280)	33,689	(270)	270	3,369	(27)	3,342	3,342
2016	48,849	(4,500)	44,349	(266)	266	4,435	(27)	4,408	4,408
2017	65,987	2,977	68,964	(414)	414	8,621	(52)	8,569	8,569
2018	86,834	18,975	105,809	(635)	635	15,871	(95)	15,776	15,776
2019	90,878	43,107	133,985	(938)	938	23,313	(163)	23,150	23,150
2020	89,153	104,610	193,763	(1,550)	1,550	34,877	(279)	34,598	34,598
PAYs (sub-total):	493,567	164,931	658,498	(4,910)	4,902	98,286	(726)	97,560	97,552
CAY (2021)	165,123	221,884	387,007	(3,096)	3,096	69,661	(557)	69,104	69,104
claims liabilities:	658,690	386,815	1,045,505	(8,006)	7,998	167,947	(1,283)	166,664	166,656
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs
premium liabilities:	257,329	44,028	301,357	(1,805)	1,805	40,009	(240)	39,769	39,769
*Total may not be sum of parts, as apvs apply to future costs within UPR									
policy liabilities:			1,346,862	(9,811)	9,803	207,956	(1,523)	206,433	206,425
									1,553,287

## 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, 2020 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Selected Claims Development MfADs (Sep. 30,  
2020)

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%	9.9%	10.0%
2015	10.0%	10.0%	9.8%	10.0%
2016	10.0%	10.0%	9.9%	10.0%
2017	12.5%	12.5%	12.5%	12.5%
2018	15.0%	15.0%	14.5%	15.0%
2019	17.4%	17.5%	14.4%	17.4%
2020	17.5%	20.0%	6.0%	18.0%
2021	12.7%	20.0%	5.2%	13.3%
prem liab	12.7%	20.0%	5.2%	13.3%

discount rate: 0.26%  
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, 2020 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 (0.26%), the prior valuation assumption (0.29%) and the prior fiscal year end valuation assumption (1.41%) 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, 2020 projected Unpaid							
	0.00%	0.00%	0.26%	0.76%	1.26%	1.76%	0.29%	1.41%
2002 & prior	30,475	30,475	30,451	30,080	29,717	29,364	30,428	29,609
2003	8	8	8	8	8	8	8	8
2004	1,042	1,042	1,041	1,021	1,002	983	1,040	996
2005	43	43	43	42	42	41	43	41
2006	1,960	1,960	1,957	1,908	1,861	1,815	1,954	1,847
2007	2,290	2,290	2,286	2,223	2,161	2,103	2,282	2,144
2009	3,210	3,210	3,204	3,101	3,002	2,909	3,197	2,974
2010	3,814	3,814	3,806	3,675	3,550	3,433	3,797	3,514
2011	7,377	7,377	7,364	7,148	6,944	6,753	7,350	6,885
2012	8,702	8,702	8,688	8,468	8,259	8,064	8,673	8,199
2013	17,592	17,592	17,569	17,213	16,873	16,555	17,546	16,775
2014	33,451	33,451	33,419	32,922	32,445	31,998	33,386	32,309
2015	48,918	48,918	48,883	48,303	47,748	47,225	48,844	47,589
2016	66,168	66,168	66,121	65,388	64,683	64,010	66,078	64,479
2017	118,570	118,570	118,471	117,076	115,732	114,441	118,377	115,344
2018	164,899	164,899	164,718	162,569	160,495	158,499	164,575	159,881
2019	196,066	196,066	195,793	192,888	190,025	187,326	195,602	189,204
2020	278,852	278,852	278,455	274,387	270,420	266,603	278,187	269,271
Total	984,276	984,276	983,114	969,233	955,756	942,897	982,202	951,851
	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							
	0.00%	0.00%	0.26%	0.76%	1.26%	1.76%	0.29%	1.41%
Total	1,162	1,162	-	(13,881)	(27,358)	(40,217)	(912)	(31,263)
	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							
	0.00%	0.00%	0.26%	0.76%	1.26%	1.76%	0.29%	1.41%
2002 & prior	0.1%	0.1%	-	(1.2%)	(2.4%)	(3.6%)	(0.1%)	(2.8%)
2003	-	-	-	-	-	-	-	-
2004	0.1%	0.1%	-	(1.9%)	(3.7%)	(5.6%)	(0.1%)	(4.3%)
2005	-	-	-	(2.3%)	(2.3%)	(4.7%)	-	(4.7%)
2006	0.2%	0.2%	-	(2.5%)	(4.9%)	(7.3%)	(0.2%)	(5.6%)
2007	0.2%	0.2%	-	(2.8%)	(5.5%)	(8.0%)	(0.2%)	(6.2%)
2009	0.2%	0.2%	-	(3.2%)	(6.3%)	(9.2%)	(0.2%)	(7.2%)
2010	0.2%	0.2%	-	(3.4%)	(6.7%)	(9.8%)	(0.2%)	(7.7%)
2011	0.2%	0.2%	-	(2.9%)	(5.7%)	(8.3%)	(0.2%)	(6.5%)
2012	0.2%	0.2%	-	(2.5%)	(4.9%)	(7.2%)	(0.2%)	(5.6%)
2013	0.1%	0.1%	-	(2.0%)	(4.0%)	(5.8%)	(0.1%)	(4.5%)
2014	0.1%	0.1%	-	(1.5%)	(2.9%)	(4.3%)	(0.1%)	(3.3%)
2015	0.1%	0.1%	-	(1.2%)	(2.3%)	(3.4%)	(0.1%)	(2.6%)
2016	0.1%	0.1%	-	(1.1%)	(2.2%)	(3.2%)	(0.1%)	(2.5%)
2017	0.1%	0.1%	-	(1.2%)	(2.3%)	(3.4%)	(0.1%)	(2.6%)
2018	0.1%	0.1%	-	(1.3%)	(2.6%)	(3.8%)	(0.1%)	(2.9%)
2019	0.1%	0.1%	-	(1.5%)	(2.9%)	(4.3%)	(0.1%)	(3.4%)
2020	0.1%	0.1%	-	(1.5%)	(2.9%)	(4.3%)	(0.1%)	(3.3%)
Total	0.1%	0.1%	-	(1.4%)	(2.8%)	(4.1%)	(0.1%)	(3.2%)
	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	3,053	(79)	58	-	(21)	(0.7%)	3,032
2002	(50)	2	(2)	-	-	-	(50)
2003	16	(1)	1	-	-	-	16
2004	20	-	(1)	-	(1)	(5.0%)	19
2005	(43)	2	(2)	-	-	-	(43)
2006	197	(6)	5	-	(1)	(0.5%)	196
2007	205	(6)	4	-	(2)	(1.0%)	203
2008	73	(2)	1	-	(1)	(1.4%)	72
2009	739	(23)	22	-	(1)	(0.1%)	738
2010	606	(20)	18	-	(2)	(0.3%)	604
2011	(20)	2	(17)	-	(15)	75.0%	(35)
2012	962	(29)	205	-	176	18.3%	1,138
2013	684	(5)	540	-	535	78.2%	1,219
2014	3,597	(110)	(207)	-	(317)	(8.8%)	3,280
2015	4,159	(112)	21	-	(91)	(2.2%)	4,068
2016	134	92	(895)	-	(803)	(599.3%)	(669)
2017	17,045	(580)	376	-	(204)	(1.2%)	16,841
2018	51,426	(2,500)	3,359	-	859	1.7%	52,285
2019	93,972	(3,702)	8,669	-	4,967	5.3%	98,939
2020	217,495	(13,454)	3,413	-	(10,041)	(4.6%)	207,454
2021	-	33,935	5,764	-	39,699	100.0%	39,699
<b>Grand Total</b>	<b>394,270</b>	<b>13,404</b>	<b>21,332</b>	<b>-</b>	<b>34,736</b>	<b>8.8%</b>	<b>429,006</b>

EXHIBIT G

Page 2 of 2

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

RSP **Ontario**  
AccountCode Desc **IBNR - Undiscounted**

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	129	(7)	(14)	-	(21)	(16.3%)	108
2002	(51)	2	(2)	-	-	-	(51)
2003	14	(1)	1	-	-	-	14
2004	(70)	3	(4)	-	(1)	1.4%	(71)
2005	(43)	2	(2)	-	-	-	(43)
2006	20	(1)	1	-	-	-	20
2007	-	-	(1)	-	(1)	100.0%	(1)
2008	4	-	-	-	-	-	4
2009	450	(19)	16	-	(3)	(0.7%)	447
2010	253	(11)	10	-	(1)	(0.4%)	252
2011	(689)	29	(27)	-	2	(0.3%)	(687)
2012	157	(7)	187	-	180	114.6%	337
2013	(973)	41	595	-	636	(65.4%)	(337)
2014	349	(15)	(271)	-	(286)	(81.9%)	63
2015	(385)	16	(42)	-	(26)	6.8%	(411)
2016	(5,992)	252	(837)	-	(585)	9.8%	(6,577)
2017	4,111	(218)	590	-	372	9.0%	4,483
2018	29,850	(2,090)	3,354	-	1,264	4.2%	31,114
2019	65,040	(2,862)	8,287	-	5,425	8.3%	70,465
2020	173,214	(12,125)	4,413	-	(7,712)	(4.5%)	165,502
2021	-	27,143	5,766	-	32,909	100.0%	32,909
<b>Grand Total</b>	<b>265,388</b>	<b>10,132</b>	<b>22,020</b>	<b>-</b>	<b>32,152</b>	<b>12.1%</b>	<b>297,540</b>