



ONTARIO RISK SHARING POOL

NOVEMBER 2020 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

Related Bulletin: [F2020-094 Ontario RSP November 2020 Operational Report](#)

For your convenience, bookmarks have been added to this document. To view them, please click on the BOOKMARK tab at the left.

Should you require any further information, please call Aidan Chen, AVP Data & Analytics at (416) 863-1750 x 4804.

ACTUARIAL HIGHLIGHTS

RSP ONTARIO

OPERATIONAL REPORT

NOVEMBER 2020

TABLE OF CONTENTS

1	Summary	2
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
2	Activity during the Month of November 2020	4
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	9
2.2	Actuarial Provisions.....	10
3	Ultimate Loss Ratio Matching Method	12
4	Calendar Year-to-Date Results	12
5	Current Operational Report – Additional Exhibits	13
6	EXHIBITS	14

1 Summary

Key Points

- (a) The loss ratios currently being used include a review and assessment of the incurred impacts associated with the COVID-19 pandemic.

1.1 Valuation Schedule (Fiscal Year 2021)

The November 2020 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 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

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 / Regulation¹

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, 2020), consideration of the 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, 2019).

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 4th, 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.

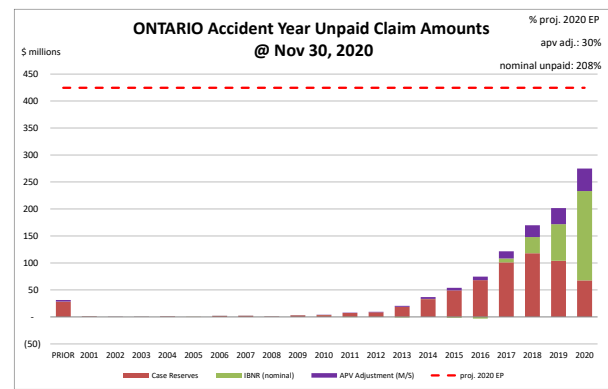
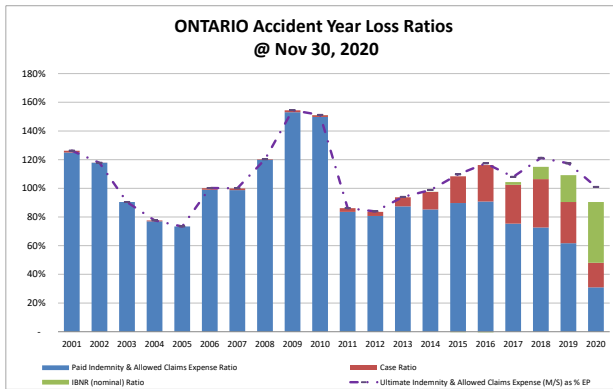
1.4 Current Provision Summary

The following charts show the current levels of claim liabilities² booked by accident year³. 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 2020 full year earned premium (the red hash-mark line) to provide some perspective.

¹This 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>.

²Claim 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.

³The 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 (\$128.7 million – see the following table) represents 30% of the earned premium projected for the full year 2020 (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	616,943	61.0%
ibnr	265,438	26.3%
M/S apv adjust.	128,741	12.7%
M/S total	1,011,122	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 88% of the IBNR balance relates to accident years 2019 and 2020 (see Exhibit B). Approximately 83% 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 following tables summarize the premium liabilities and the total policy liabilities.

premium liabilities (\$000s)

	amt	%
unearned prem	221,356	80.2%
prem def/(dpac)	22,334	8.1%
M/S apv adjust.	32,155	11.7%
M/S total	275,845	100.0%

policy liabilities (\$000s)

	amt	%
claim	882,381	68.6%
premium	243,690	18.9%
M/S apv adjust.	160,896	12.5%
M/S total	1,286,967	100.0%

2 Activity during the Month of November 2020

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 Report⁴.

⁴There 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	(315)	(315)	9,739	(1,247)	(7,193)	3,494	2,546	2,247
2018	(392)	(392)	2,435	(1,032)	(1,248)	639	1,186	(394)
2019	(138)	(138)	2,205	(932)	(109)	499	2,096	(433)
2020	32,834	(3,574)	12,569	(2,195)	6,796	(6,475)	19,365	(8,669)
TOTAL	31,990	(4,418)	26,948	(5,405)	(1,754)	(1,843)	25,194	(7,248)

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

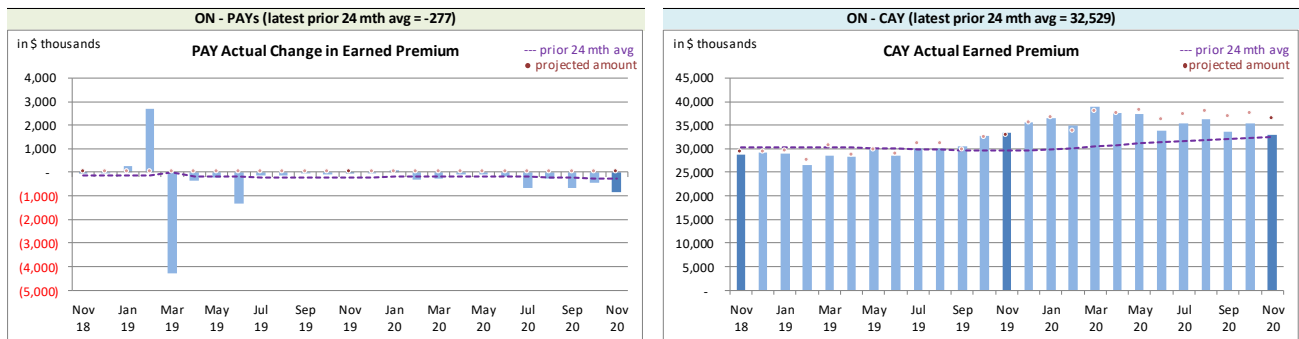
It is unusual to see actual earned premium transactions affecting prior accident years beyond the first prior at this time in the calendar year. We have identified that the prior accident years changes in the month reflects system sweep activity undertaken by two members in responding to audit findings.

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

The following charts show actual **earned premium**⁵ 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.

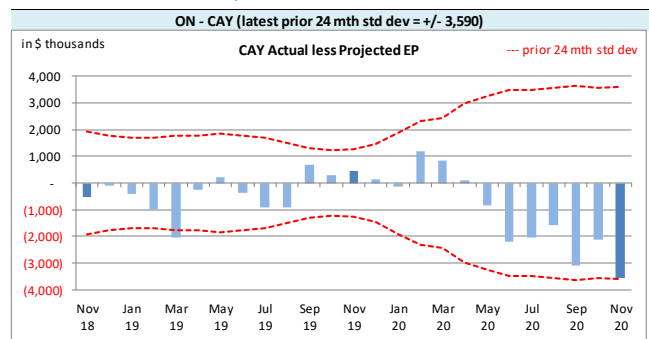
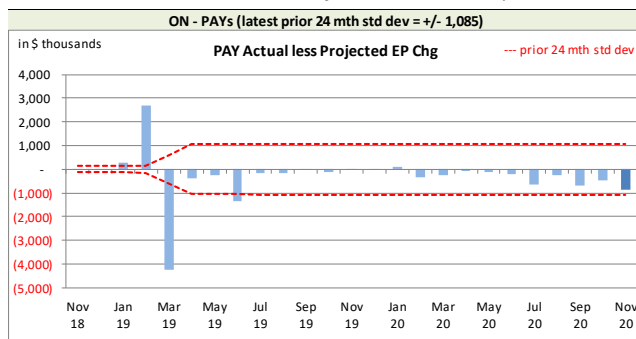
⁵Premium is earned on a daily basis based on the transaction term measured in days. As a result, months with 31 days earned relatively more than those with 30 days, and February earns the least.

On Latest \$ thousands		
Earned Premium	PAYs	CAY
Mthly Avg EP Chg (prior 24 mths)	(277)	32,529
std dev	1,085	3,590
A-P <> std dev	4	1
% <> std dev	16.0%	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



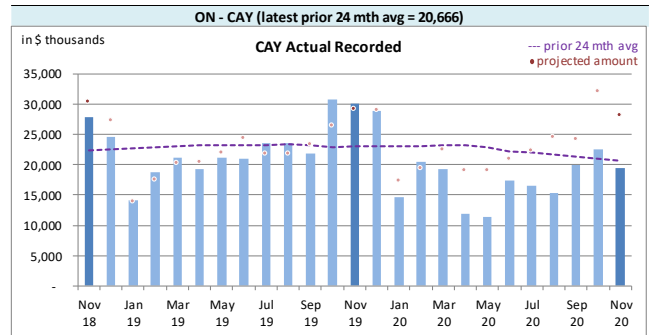
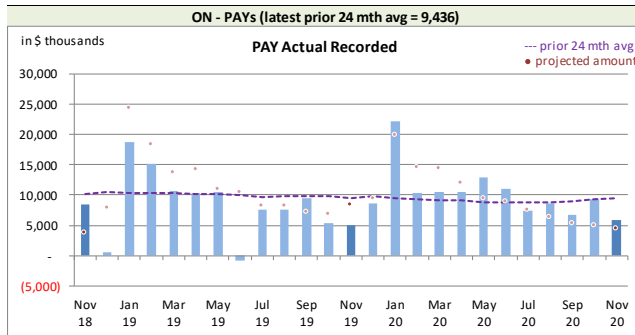
We project **earned premium** changes from known unearned premium balances and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years’ (PAYs) bias⁶, with actuals generally lower than projected, although the magnitude 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.

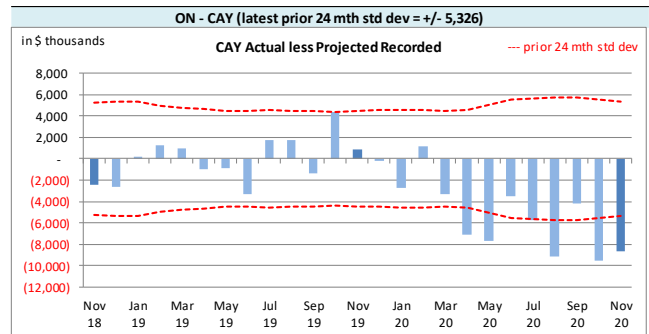
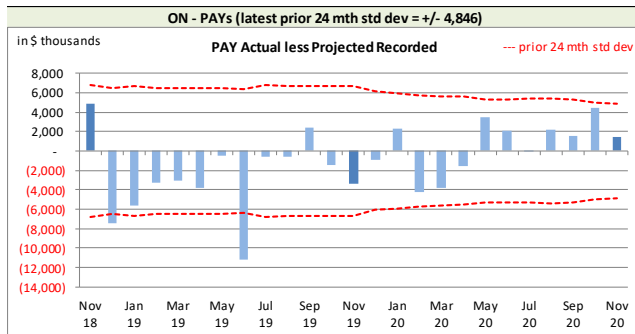
⁶The PAYs’ variances will show bias as the projection upload forces all earned premium projections to be attributed to the CAY.

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		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	9,436	20,666
std dev	4,846	5,326
A-P <> std dev	2	6
% <> std dev	8.0%	24.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	better

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). Bias⁷ has not been indicated at a 95% confidence level on a rolling 25-month basis (9 of 25 variances were positive).

The current accident year (CAY) recorded variances (preceding chart on the left) fell outside of one standard deviation 24% 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 (8 of 25 variances were positive). Through 2020, our CAY recorded projections have been consistently higher than actual activity; 2020 has been a challenging year to project loss estimates, particularly with changes in RSP volumes and portfolio mix driven by Member transfer activity. We are working with our Appointed Actuary to

⁷ 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.

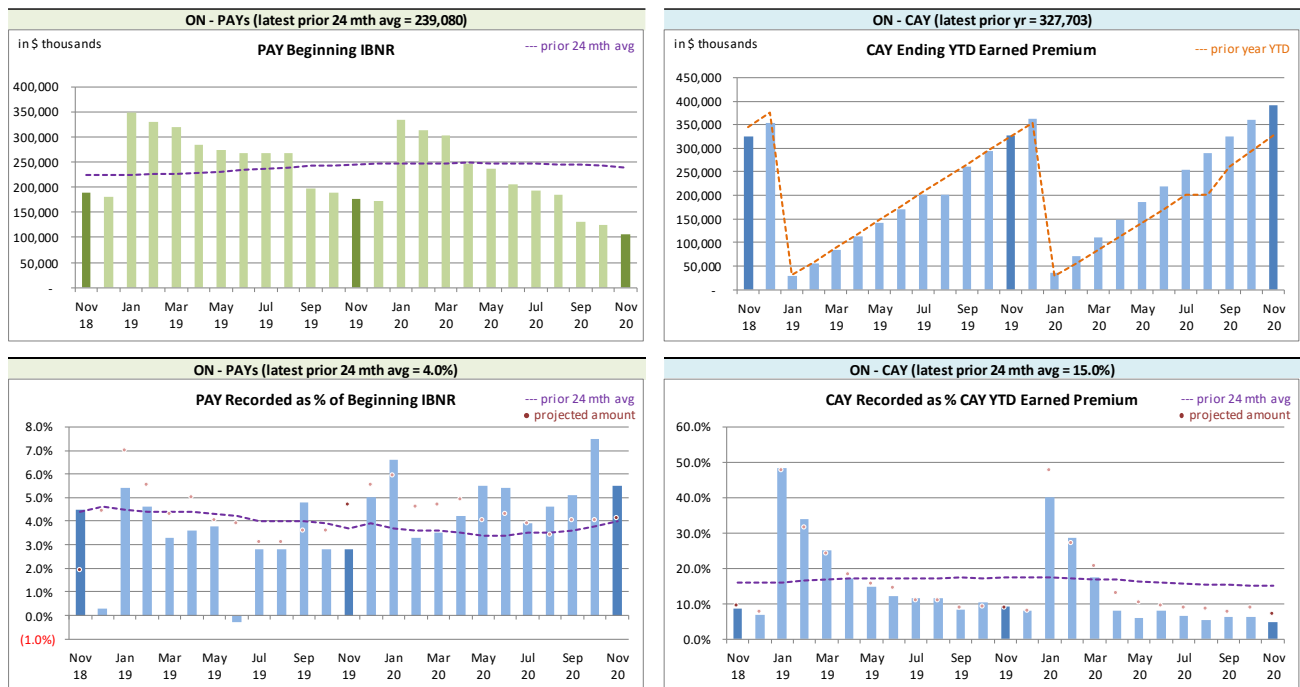
adjust and refine our 2020 and 2021 accident year estimates to reflect the impact of COVID-19 and Member transfer activity.

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 and accident benefits 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).

Ontario RSP Levels that influence⁸ 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

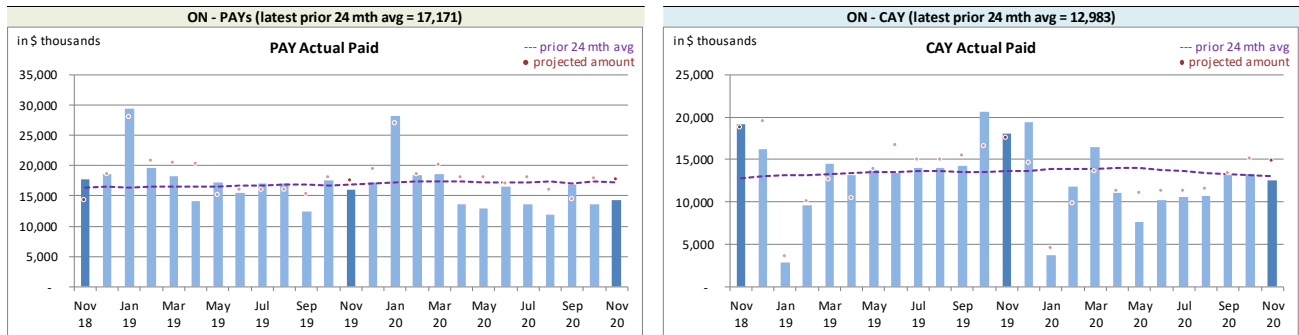
⁸Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned 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.

- 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

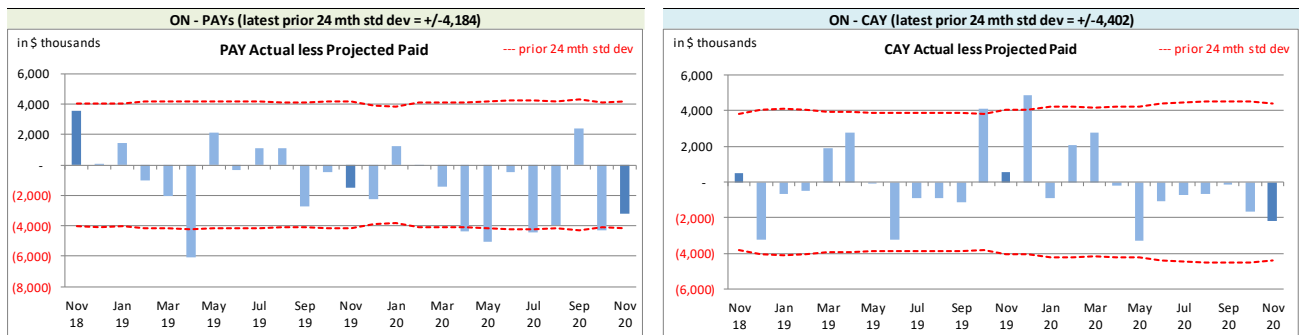
The following charts show actual **paid** activity in each of the most recent 25 calendar months, along with a “prior 24-month average” to show how each month’s actual compares with the average amount of the preceding 24 calendar months.

*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		
Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)	17,171	12,983
std dev	4,184	4,402
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).

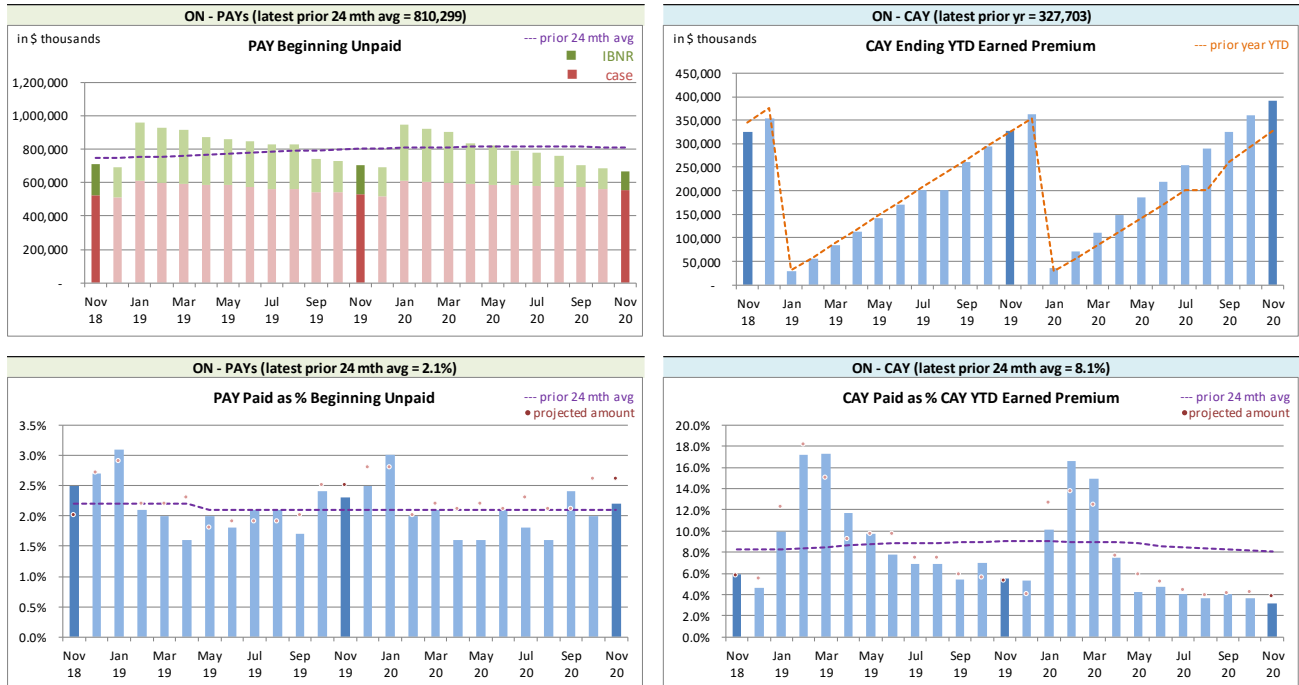
Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (8 of 25 variances are positive).

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 not been indicated at a 95% confidence level on a rolling 25-month basis (8 of 25 variances are positive).

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

Ontario RSP Levels that influence⁹ 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 IBNR¹⁰, and factors are applied to the nominal unpaid claims liability (case plus IBNR) to determine

⁹Our 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.

¹⁰For ease of discussion, “IBNR” is used in place of “provisions for incurred but not recorded (IBNR) and development”.

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

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

Table 02		actuarial present value adjustments						
		IBNR		Discount Amount		Provisions for Adverse Deviations		IBNR + actuarial present value adjustments
Accident Year	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	1,761	(2,582)	(2,380)	(6)	37,771	143	37,152	(2,445)
2018	29,963	(56)	(1,035)	(4)	23,059	92	51,987	32
2019	68,007	282	(1,375)	(6)	31,046	141	97,678	417
2020	165,707	5,439	(1,866)	9	43,521	(195)	207,362	5,253
TOTAL	265,438	3,083	(6,656)	(7)	135,397	181	394,179	3,257

The IBNR provision is \$3.1 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 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:	22,334	(2,181)	32,155	(2,921)	54,489	(5,102)
balance as % unearned premium:	10.1%	(0.1%)	14.5%	-	24.6%	(0.1%)
actual unearned premium:	221,356					
less projected:	(19,929)					

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 loss¹¹ 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 expenses¹², 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 91.3% rather than 90.4% (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.)

¹¹“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).

¹²Allowed 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	(119,928)	(30.9%)	(17,865)	(4.6%)	(137,793)	(35.5%)	(2,835)	2.4%
CAY	354,511	91.3%	41,655	10.7%	396,166	102.0%	32,737	-
TOTAL	234,583	60.4%	23,790	6.1%	258,373	66.5%	29,902	2.4%

(“% 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 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 Oct. 2020	Actual Nov. 2020	Projected Dec. 2020	Projected Jan. 2021	Projected Dec. 2021	
prior			2,939	2,985	2,883	2,813	2,082	
2001			124	124	120	118	85	
2002			(50)	(50)	(47)	(45)	(27)	
2003			16	16	15	14	10	
2004			22	22	22	23	25	
2005			(43)	(43)	(41)	(39)	(25)	
2006			207	208	201	196	144	
2007			208	207	200	195	146	
2008			78	81	77	76	56	
2009			384	382	367	360	256	
2010			508	578	556	538	374	
2011			433	245	244	235	229	
2012			167	794	769	749	566	
2013			987	747	742	734	671	
2014			3,908	3,663	3,540	3,433	2,516	
discount rate			2015	4,393	3,293	3,214	3,144	2,518
0.26%			2016	4,049	3,446	3,326	3,286	2,816
2017			22,768	20,454	19,672	18,956	12,998	
interest rate margin			2018	54,052	51,987	49,850	47,450	30,280
25 basis pts			2019	100,331	97,678	95,141	91,391	61,547
			2020	193,990	207,362	212,950	199,827	134,979
			2021	-	-	-	34,702	270,015
TOTAL			389,471	394,179	393,801	408,156	522,261	
Change				4,708	(378)	14,355		

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 Oct. 2020	Actual Nov. 2020	Projected Dec. 2020	Projected Jan. 2021	Projected Dec. 2021
	-	prior	92	146	138	131	82
	126.2%	2001	28	28	27	26	17
	117.8%	2002	(51)	(51)	(48)	(46)	(28)
	90.4%	2003	14	14	13	12	8
	77.5%	2004	(68)	(68)	(65)	(62)	(38)
	73.4%	2005	(43)	(43)	(41)	(39)	(25)
	100.1%	2006	26	28	27	26	17
	99.9%	2007	2	1	1	1	1
	120.2%	2008	7	11	10	10	7
	154.4%	2009	93	93	88	84	50
	151.1%	2010	150	224	213	204	124
	86.0%	2011	(263)	(428)	(407)	(390)	(238)
	83.6%	2012	(689)	(58)	(55)	(53)	(32)
	93.4%	2013	(813)	(1,014)	(963)	(923)	(565)
	97.6%	2014	482	349	332	318	195
	107.9%	2015	(653)	(1,453)	(1,380)	(1,322)	(810)
	115.0%	2016	(2,651)	(3,030)	(2,878)	(2,757)	(1,688)
	104.4%	2017	8,979	7,012	6,661	6,308	4,192
	114.9%	2018	31,599	29,963	28,465	26,472	14,647
	109.2%	2019	70,254	68,007	66,035	63,129	38,618
	90.4%	2020	155,390	165,707	168,372	156,586	99,282
	113.5%	2021	-	-	-	27,785	208,339
		TOTAL	261,885	265,438	264,545	275,500	362,155
		Change		3,553	(893)	10,955	

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 Oct. 2020	Actual Nov. 2020	Projected Dec. 2020	Projected Jan. 2021	Projected Dec. 2021
(1) unearned premium (UP)	225,667	221,356	217,093	223,879	252,238
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	120.9%	124.6%	128.7%	128.7%	132.6%
(3) expected future costs {(1) x (2)}	272,941	275,845	279,408	288,227	334,378
(4) premium deficiency / (deferred policy acquisition cost)	47,274	54,489	62,315	64,348	82,140
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	106.9%	110.1%	113.7%	113.7%	117.1%
(6) expected future costs {(1) x (5)}	241,125	243,690	246,834	254,626	295,396
(7) premium deficiency / (deferred policy acquisition cost)	15,458	22,334	29,741	30,747	43,158

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	27,417	138	27,555	(175)	175	2,762	(17)	2,745	2,745	30,300
2001	916	27	943	(7)	7	94	(1)	93	93	1,036
2002	59	(48)	11	-	-	1	-	1	1	12
2003	7	13	20	-	-	2	-	2	2	22
2004	946	(65)	881	(9)	9	88	(1)	87	87	968
2005	39	(41)	(2)	-	-	-	-	-	-	(2)
2006	1,738	27	1,765	(23)	23	176	(2)	174	174	1,939
2007	2,017	1	2,018	(30)	30	202	(3)	199	199	2,217
2008	675	10	685	(10)	10	68	(1)	67	67	752
2009	2,784	88	2,872	(49)	46	287	(5)	282	279	3,151
2010	3,306	213	3,519	(63)	60	352	(6)	346	343	3,862
2011	7,014	(407)	6,607	(99)	99	661	(10)	651	651	7,258
2012	8,409	(55)	8,354	(109)	109	835	(11)	824	824	9,178
2013	18,202	(963)	17,239	(190)	190	1,724	(19)	1,705	1,705	18,944
2014	32,005	332	32,337	(259)	259	3,234	(26)	3,208	3,208	35,545
2015	47,597	(1,380)	46,217	(277)	277	4,622	(28)	4,594	4,594	50,811
2016	65,288	(2,878)	62,410	(374)	374	6,241	(37)	6,204	6,204	68,614
2017	98,061	6,661	104,722	(628)	628	13,090	(79)	13,011	13,011	117,733
2018	115,105	28,465	143,570	(1,005)	1,005	21,536	(151)	21,385	21,385	164,955
2019	102,593	66,035	168,628	(1,349)	1,349	29,341	(235)	29,106	29,106	197,734
PAYs (sub-total):	534,178	96,173	630,351	(4,656)	4,650	85,316	(632)	84,684	84,678	715,029
CAY (2020)	81,283	168,372	249,655	(1,997)	1,997	44,938	(360)	44,578	44,578	294,233
claims liabilities:	615,461	264,545	880,006	(6,653)	6,647	130,254	(992)	129,262	129,256	1,009,262
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	217,093	29,741	246,834	(1,478)	1,478	32,771	(197)	32,574	32,574	279,408
policy liabilities:			1,126,840	(8,131)	8,125	163,025	(1,189)	161,836	161,830	1,288,670

*Total may not be sum of parts, as apvs apply to future costs within UPR

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

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	2,939	(76)	122	-	46	1.6%	2,985
2001	124	(2)	2	-	-	-	124
2002	(50)	1	(1)	-	-	-	(50)
2003	16	-	-	-	-	-	16
2004	22	(1)	1	-	-	-	22
2005	(43)	-	-	-	-	-	(43)
2006	207	(5)	6	-	1	0.5%	208
2007	208	(5)	4	-	(1)	(0.5%)	207
2008	78	(2)	5	-	3	3.8%	81
2009	384	(8)	6	-	(2)	(0.5%)	382
2010	508	(12)	82	-	70	13.8%	578
2011	433	(14)	(174)	-	(188)	(43.4%)	245
2012	167	(16)	643	-	627	375.4%	794
2013	987	(39)	(201)	-	(240)	(24.3%)	747
2014	3,908	(94)	(151)	-	(245)	(6.3%)	3,663
2015	4,393	(125)	(975)	-	(1,100)	(25.0%)	3,293
2016	4,049	(102)	(501)	-	(603)	(14.9%)	3,446
2017	22,768	(1,001)	(1,313)	-	(2,314)	(10.2%)	20,454
2018	54,052	(2,097)	32	-	(2,065)	(3.8%)	51,987
2019	100,331	(3,070)	417	-	(2,653)	(2.6%)	97,678
2020	193,990	8,119	5,253	-	13,372	6.9%	207,362
Grand Total	389,471	1,451	3,257	-	4,708	1.2%	394,179

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	92	(2)	56	-	54	58.7%	146	
2001	28	-	-	-	-	-	28	
2002	(51)	1	(1)	-	-	-	(51)	
2003	14	-	-	-	-	-	14	
2004	(68)	1	(1)	-	-	-	(68)	
2005	(43)	-	-	-	-	-	(43)	
2006	26	-	2	-	2	7.7%	28	
2007	2	-	(1)	-	(1)	(50.0%)	1	
2008	7	-	4	-	4	57.1%	11	
2009	93	(1)	1	-	-	-	93	
2010	150	(2)	76	-	74	49.3%	224	
2011	(263)	3	(168)	-	(165)	62.7%	(428)	
2012	(689)	7	624	-	631	(91.6%)	(58)	
2013	(813)	8	(209)	-	(201)	24.7%	(1,014)	
2014	482	(5)	(128)	-	(133)	(27.6%)	349	
2015	(653)	7	(807)	-	(800)	122.5%	(1,453)	
2016	(2,651)	133	(512)	-	(379)	14.3%	(3,030)	
2017	8,979	(449)	(1,518)	-	(1,967)	(21.9%)	7,012	
2018	31,599	(1,580)	(56)	-	(1,636)	(5.2%)	29,963	
2019	70,254	(2,529)	282	-	(2,247)	(3.2%)	68,007	
2020	155,390	4,878	5,439	-	10,317	6.6%	165,707	
Grand Total	261,885	470	3,083	-	3,553	1.4%	265,438	