



ONTARIO RISK SHARING POOL

JULY 2019 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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ACTUARIAL HIGHLIGHTS**RSP ONTARIO****OPERATIONAL REPORT****JULY 2019**

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1 Summary

1.1 Valuation Schedule (Fiscal Year 2019)

The July 2019 Operational Report leverages actuarial assumptions consistent with last month (that is, it does not reflect the results of an updated valuation). The table immediately below summarizes the implemented valuations and future scheduled valuations for fiscal year 2019.

ONTARIO RISK SHARING POOL FISCAL YEAR 2019 – SCHEDULE OF VALUATIONS			
Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep. 30, 2018 (completed)	2.22% mfad 25 bp	Oct. 2018	updated valuation (roll forward): accident year 2018 loss ratio <u>increased</u> 0.5 points to 127.0%; discount rate <u>increased</u> by 39 basis points; selected margins for adverse deviations were updated
Dec. 31, 2018 (completed)	1.88% mfad 25 bp	Mar. 2019	updated valuation: accident year 2019 loss ratio 127.1%; discount rate <u>decreased</u> by 34 basis points; no change to selected margins for adverse deviations
Mar. 31, 2019 (completed)	1.43% mfad 25 bp	May 2019	updated valuation (roll forward): accident year 2019 loss ratio <u>increased</u> 0.5 points to 127.6%; discount rate <u>decreased</u> by 45 basis points; no change to selected margins for adverse deviations
Jun. 30, 2019		Aug. 2019	update valuation
Sep. 30, 2019		Oct. 2019	update valuation (roll forward)

Under the proposed schedule for fiscal year 2019, the “off-half” valuation quarters ending March 31, 2019 and September 30, 2019 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

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

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

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 are provided below.

Ontario Bill 15 (Fighting Fraud and Reducing Automobile Insurance Rates Act, 2014) was introduced into the Legislature by the Minister of Finance on July 15, 2014 and **received Royal Assent on November 20, 2014**. Bill 15 includes various amendments and provisions such as moving the Ontario Automobile Dispute Resolution System (DRS) for statutory accident benefits from the Financial Services Commission of Ontario to the Ministry of the Attorney General (Licence Appeal Tribunal), regulation of the Tow and Storage Industry (amendments to the Consumer Protection Act and Repair and Storage Liens Act), regulations related to licensing of insurance agents and adjusters, changes the applicable interest rate applied to overdue payments in the Statutory Accident Benefits Schedule (SABS), and changes to the prejudgment interest rate on general damages for non-pecuniary loss from the rate as set out in the Courts of Justice Act to rates linked to market conditions.

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 (March 31, 2019), reform adjustments (originally introduced with the September 30, 2015 valuation) specifically related to changes to the SABS impacting the bodily injury and accident benefits coverages, were included with the updated industry trend analysis (completed using industry data as at June 30, 2018), impacting the selection of ultimates.

1.4 Harmonized Sales Tax Class Action - Ontario

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

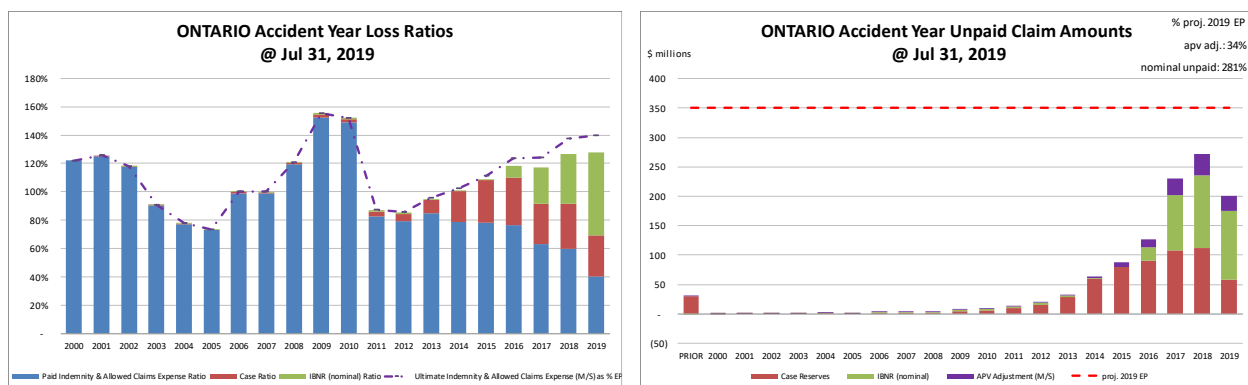
Since the end of October 2018, class action lawsuits have been brought against multiple insurers related to HST and limits / sub-limits of benefits per the Statutory Accident Benefits Schedule and FSCO's Professional Services Guideline as part of claims settlement practices in Ontario.

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

¹This link is to a helpful guide on how bills become laws: <http://www.ontla.on.ca/lao/en/media/laointernet/pdf/bills-and-lawmaking-background-documents/how-bills-become-law-en.pdf>.

1.5 Current Provision Summary

The charts immediately below 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 2019 full year earned premium (the red hash-mark line) to provide some perspective.



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

The current actuarial present value adjustments provision for claims liabilities (\$119.2 million – see table immediately below) represents 34% of the earned premium projected for the full year 2019 (see the upper right corner of the right chart above). If our current estimates of the nominal unpaid amounts prove to match actual claims payments, the actuarial present value adjustments will be released into the net operating result over future periods.

claim liabilities (\$000s)

	amt	%
case	608,358	55.1%
ibnr	377,242	34.1%
M/S apv adjust.	119,239	10.8%
M/S total	1,104,839	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 64% of the IBNR balance relates to accident years 2018 and 2019 (see Exhibit B). Approximately 83% of the M/S total claim

liabilities are related to accident years 2015-2019 inclusive (i.e. the most recent 5 accident years), and approximately 4% is related to accident years 2009 and prior (i.e. prior to the most recent 10 accident years).

The tables at the top of the next page summarize the premium liabilities and the total policy liabilities.

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".

premium liabilities (\$000s)			policy liabilities (\$000s)		
	amt	%		amt	%
unearned prem	178,145	70.3%	claim	985,600	72.6%
prem def/(dpac)	51,098	20.2%	premium	229,243	16.9%
M/S apv adjust.	24,282	9.6%	M/S apv adjust.	143,521	10.6%
M/S total	253,525	100.0%	M/S total	1,358,364	100.0%

2 Activity During the Month of July 2019

2.1 Recorded Premium and Claims Activity

The table immediately below summarizes the extent to which premiums and claims amounts recorded during the month differ from projections reflected in the prior month's Operational Report⁴.

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	0	0	10,369	877	(10,814)	(2,735)	(445)	(1,858)
2017	(4)	(4)	2,660	(1,437)	1,435	2,579	4,095	1,142
2018	(146)	(146)	4,040	1,639	(65)	(1,486)	3,975	153
2019	30,143	(916)	13,962	(909)	9,563	2,668	23,525	1,758
TOTAL	29,993	(1,066)	31,031	170	118	1,025	31,149	1,195

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

It is typically unusual to see actual earned premium transactions affecting accident years older than the first prior accident year – the changes in 2018 and prior accident years reflect activity undertaken by a member to remove risks from the RSP, reflecting recent audit findings.

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

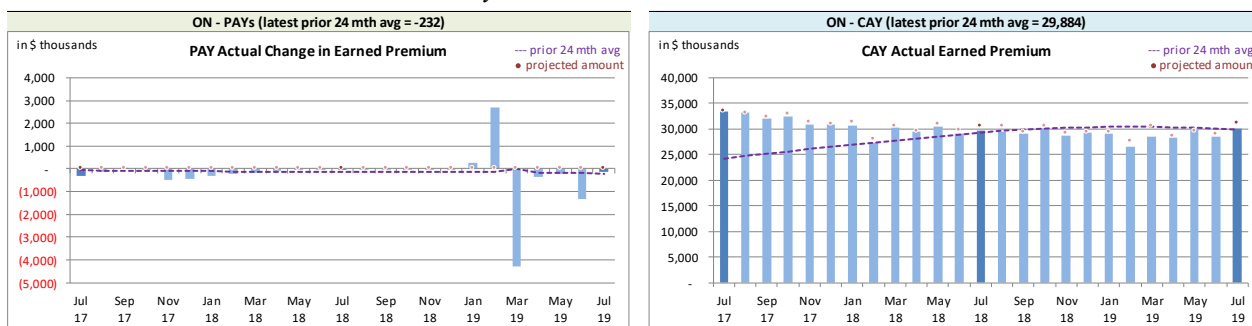
2.1.a Actual vs. Projected (AvsP): Earned Premium

The charts at the top of the next page 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.

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

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.

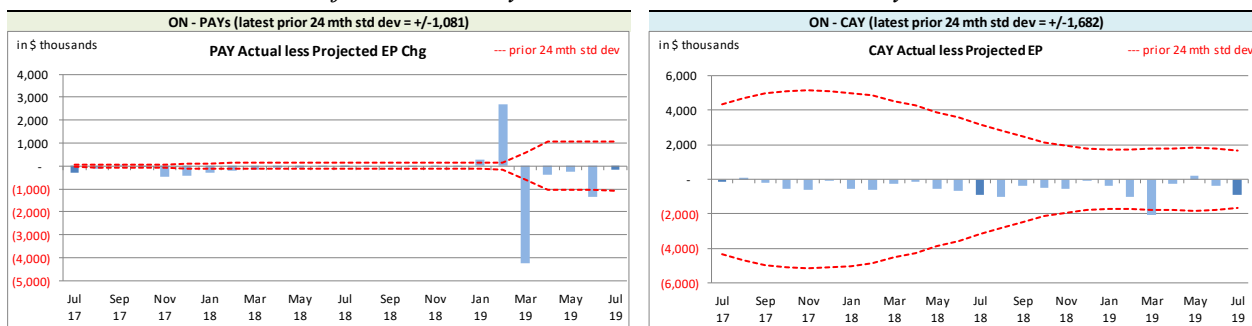
Ontario RSP Actual *Earned Premium* by Calendar Month



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

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



On Latest \$ thousands		
Earned Premium	PAYS	CAY
Mthly Avg EP Chg (prior 24 mths)	(232)	29,884
std dev	1,081	1,682
A-P <> std dev	11	1
% <> std dev	44.0%	4.0%
norm <> std dev	31.7%	31.7%

We project **earned premium** changes from known unearned premium and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years' (PAYS) bias⁶, with actuals generally lower than projected, although the magnitude is not high relative to monthly

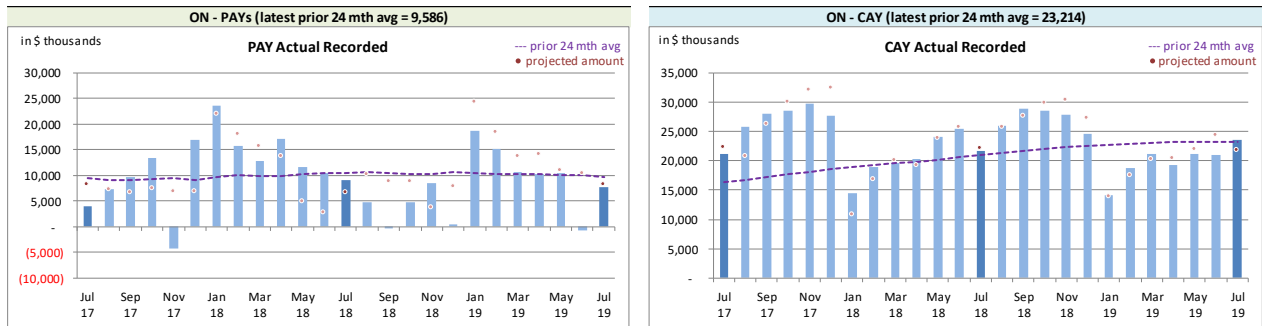
premium. Over time, we may consider other projection approaches to narrow monthly variance levels further, but it is not currently deemed a priority. Readers will also note the significant widening then tapering of the CAY standard deviation band, reflecting significant volume changes and the impact as those changes were earned.

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

2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

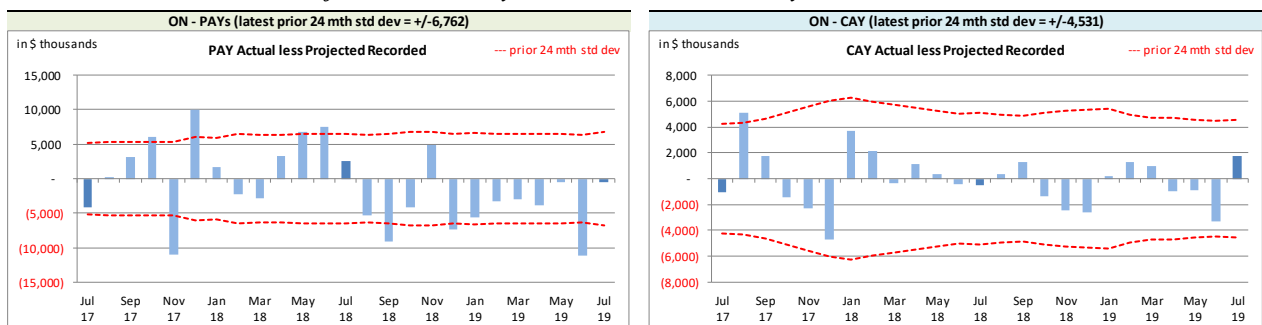
The charts immediately below show actual **recorded** activity (**paid** and **case reserve** changes), in each of the most recent 25 calendar months, along with a “prior 24-month average” to show how each month’s actual compares with the average amount of the preceding 24 calendar months.

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



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

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



On Latest \$ thousands			
	Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)		9,586	23,214
std dev		6,762	4,531
A-P <> std dev		8	1
% <> std dev		32.0%	4.0%
norm <> std dev		31.7%	31.7%

With respect to **recorded** indemnity & allowed claims expense, 32% 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 no 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 lagging 24-month basis, but on a lagging 12-month basis, bias is indicated (our projections tend to be too high and we are considering this for future projections).

The current accident year (CAY) **recorded** variances (right chart above) fell outside of one standard deviation 4% 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 lagging 24-month basis.

The averages of monthly ratios for **recorded** and **paid** to year-to-date earned premium have been on the rise generally since 2012, as is evident in the tables below. These tables show, in each row, the average monthly ratio for each calendar year. That is, each row in the *left* table (as at Dec) provides the average of the 12 monthly-ratios (i.e. Jan, Feb, ... Dec) for that row's calendar year, whereas each row in the *right* table (as at July) provides the July ratios.

Per the *left* table below (showing average monthly ratios for each calendar year), the 2018 average **recorded** ratio at 17.3% was the highest ratio since 2010, and the 2018 **paid** ratio at 9.0% was the highest ratio over the last 10 years. That is, both ratios remained at “elevated” levels compared with the ratios for the 3 calendar years immediately following the 2010 reforms.

As can be seen in the *right* table below, seven months into 2019 has the second highest **recorded** ratio over the last 11 years (July 2010 had the highest **recorded** ratio) while the **paid** ratio is the highest in the last 11 years.

Ontario RSP year-to-date CAY claims activity (ratio to EP)

CAY avg of mthly ratios for yr

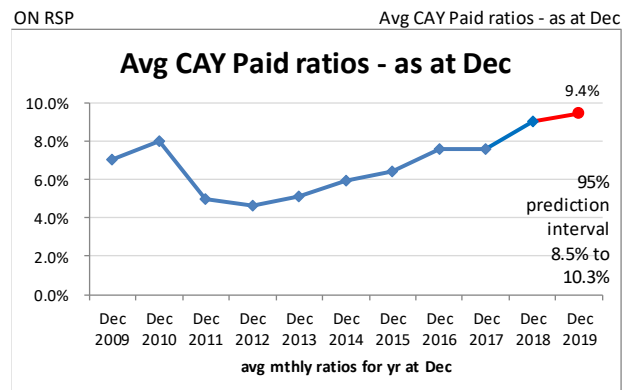
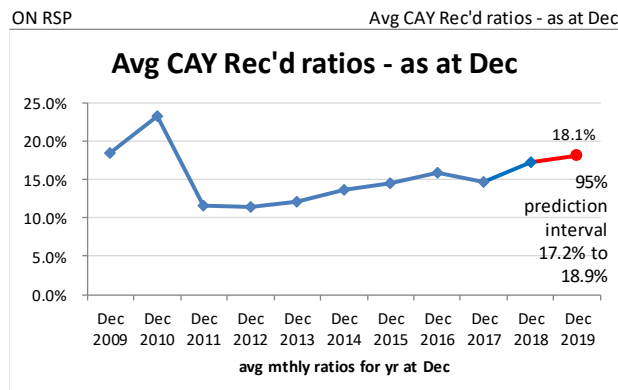
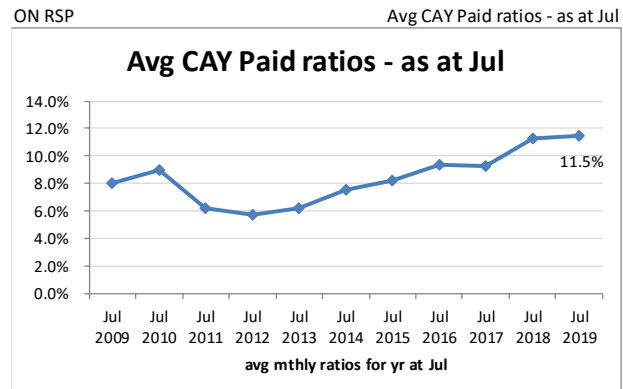
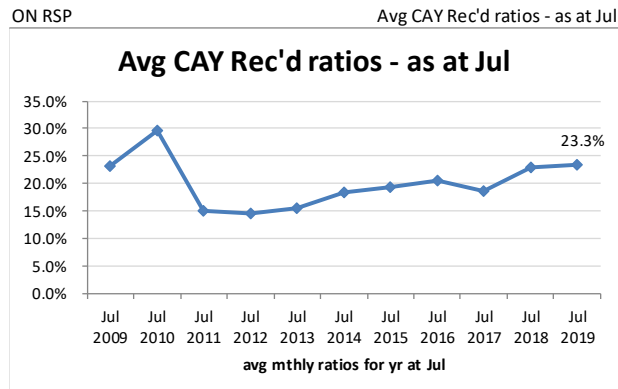
as at	Rec'd	yr-on-yr chg	Paid	yr-on-yr chg
Dec 2009	18.5%		7.0%	
Dec 2010	23.2%	4.7%	8.0%	1.0%
Dec 2011	11.5%	(11.7%)	5.0%	(3.0%)
Dec 2012	11.4%	(0.1%)	4.6%	(0.4%)
Dec 2013	12.0%	0.6%	5.1%	0.5%
Dec 2014	13.7%	1.7%	5.9%	0.8%
Dec 2015	14.4%	0.7%	6.4%	0.5%
Dec 2016	15.8%	1.4%	7.6%	1.2%
Dec 2017	14.7%	(1.1%)	7.6%	0.0%
Dec 2018	17.3%	2.6%	9.0%	1.4%

CAY avg of mthly ratios for yr

as at	Rec'd	yr-on-yr chg	Paid	yr-on-yr chg
Jul 2009	23.2%		8.0%	
Jul 2010	29.6%	6.4%	9.0%	1.0%
Jul 2011	15.1%	(14.5%)	6.2%	(2.8%)
Jul 2012	14.6%	(0.5%)	5.7%	(0.5%)
Jul 2013	15.5%	0.9%	6.2%	0.5%
Jul 2014	18.3%	2.8%	7.5%	1.3%
Jul 2015	19.2%	0.9%	8.2%	0.7%
Jul 2016	20.5%	1.3%	9.4%	1.2%
Jul 2017	18.7%	(1.8%)	9.3%	(0.1%)
Jul 2018	22.9%	4.2%	11.3%	2.0%
Jul 2019	23.3%	0.4%	11.5%	0.2%

There has been very strong (99.6%) correlation between the ytd monthly average **recorded** ratios and very strong (98.4%) correlation between the ytd monthly average **paid** ratios at July each year and the corresponding ytd monthly average ratios at December, suggesting the July **recorded** ratio is predictive of where the 2019 ytd monthly average **recorded** ratios will be at year-end (that is, the 12 monthly ratios Jan 2019 – Dec 2019), and July ytd monthly **paid** ratios would likewise be predictive of December ytd monthly paid ratios. Using simple regression, we forecast the average of the 12 monthly ratios for calendar year 2019 (i.e. the average of the monthly ratios for Jan 2019 – Dec 2019) will be 18.1% (95% prediction interval of 17.2% to 18.9%) for **recorded** and 9.4% (95% prediction interval of 8.5% to 10.3%) for **paid**. The results are presented in charts at the top of the next page.

Ontario RSP average of monthly CAY claims activity ratios to EP



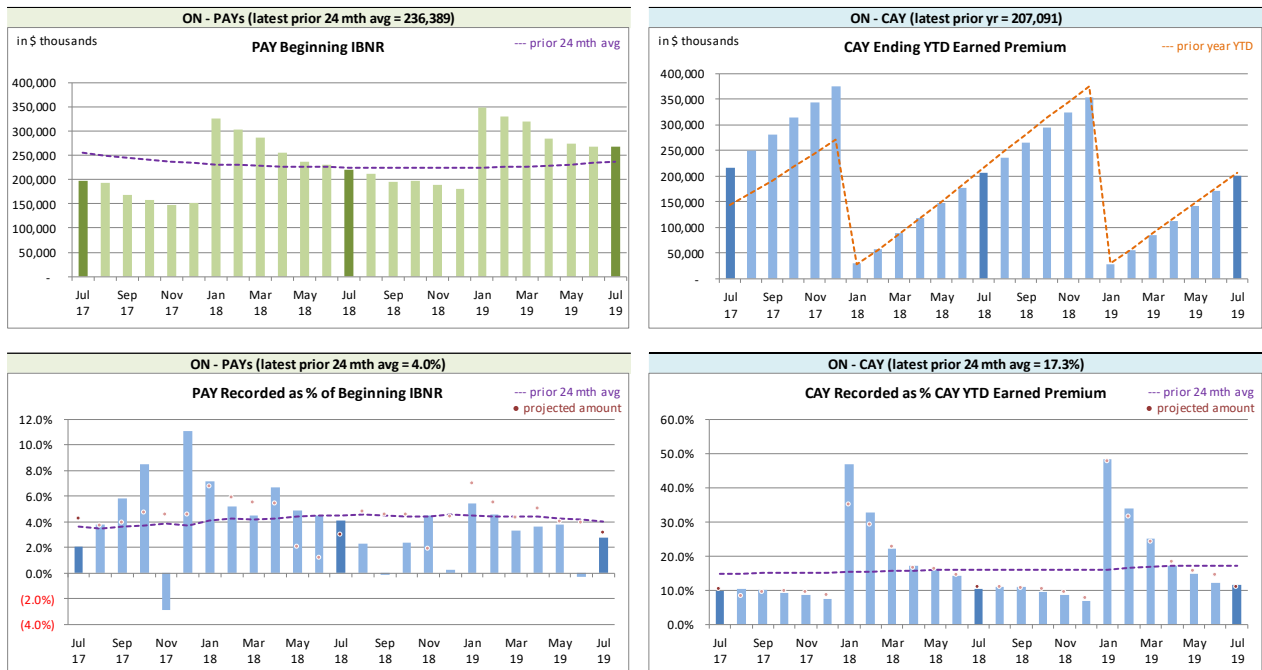
We are taking this information into consideration as part of our projection process.

These monthly-average ratios may be signalling an actual increase in relative claim amounts generally, signaling a change in the pattern of **recorded** / **paid** activity, or signaling belated impacts of rate decreases (reducing **earned premium** level per loss cost level). The CAY **recorded** activity will be monitored to determine if this is an ongoing trend.

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

We have included, for reference, additional charts at the top of the next page related to levels influencing **recorded** activity. Note in particular the reduction in the level of PAY beginning IBNR over the months, as a response to valuations and showing up as a beginning IBNR change one month after the valuation is implemented (i.e. April, June, September, and November).

Ontario RSP Levels that influence⁷ Recorded activity by Calendar Month



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

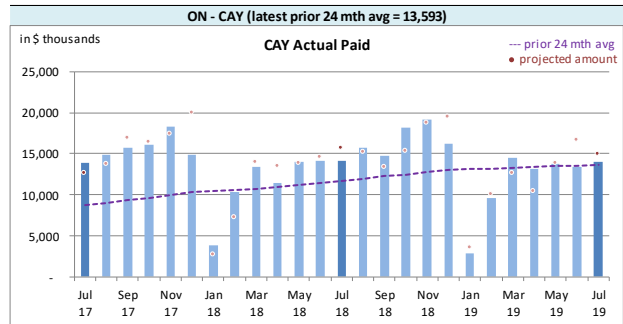
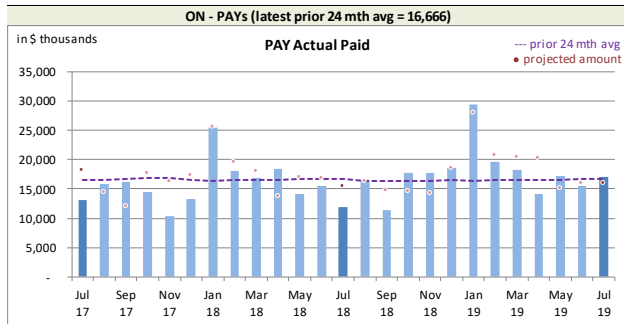
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a current accident year becomes a prior accident year (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of prior accident years' ultimate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

2.1.c AvsP: Paid Indemnity & Allowed Claims Expense

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

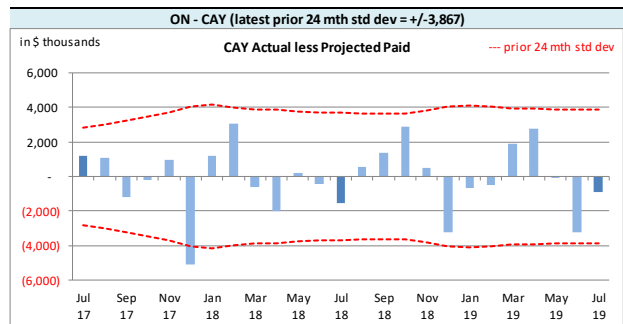
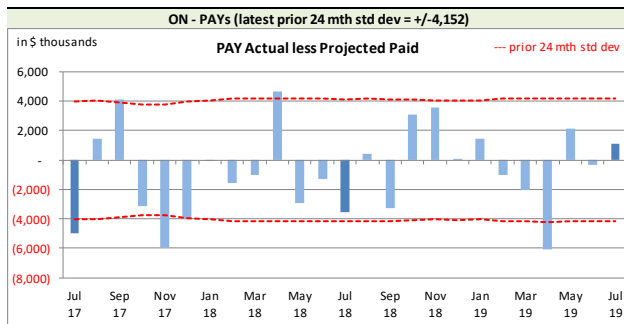
⁷Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned premium), deriving year-to-date recorded as selected ultimate less IBNR. In both cases, the ratio selection is based on our review of the more recent recorded activity and recent AvsP analyses.

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



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

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



On Latest \$ thousands			
	Paid	PAYS	CAY
Mthly Avg Paid (prior 24 mths)	16,666	16,666	13,593
std dev	4,152	4,152	3,867
A-P <> std dev	5	5	1
% <> std dev	20.0%	20.0%	4.0%
norm <> std dev	31.7%	31.7%	31.7%

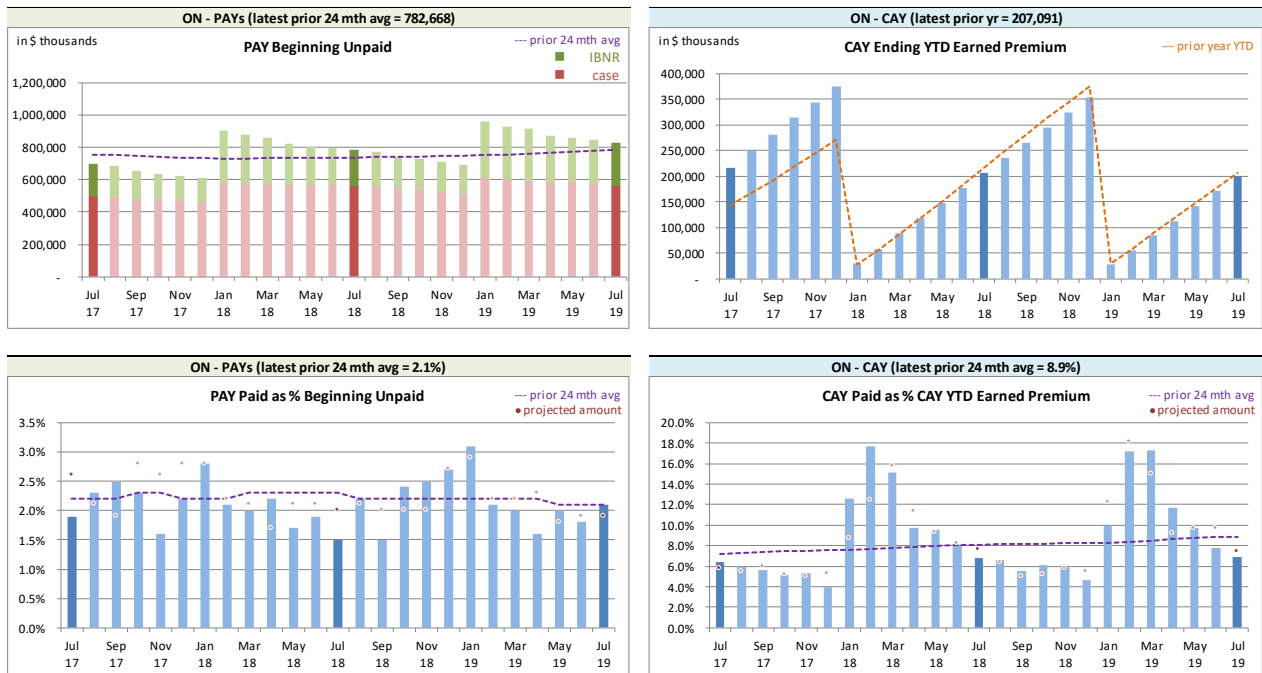
With respect to **paid** indemnity & allowed claims expense, 20% of the prior accident years' (PAYS) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **paid** amounts (see table on left), suggesting the projection process has performed better than 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 lagging 24-month basis.

The current accident year (CAY) **paid** variances fell outside of one standard deviation 4% of the time over the last 25 calendar months (see table above), suggesting the projection process has performed better than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a lagging 24-month basis.

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

Ontario RSP Levels that influence⁸ Paid activity by Calendar Month



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

- to offset actual **paid** activity (may reduce case or IBNR or both);
- the annual switchover as a current accident year becomes a prior accident year (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of prior accident years' ultimate (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 IBNR⁹, and factors are applied to the nominal unpaid claims liability (case plus IBNR) to determine the discount amount (shown as a negative value to indicate its impact of reducing the liability) and the Provisions for Adverse Deviations. The loss ratios and the factors used to determine the projections and actuals were based on the applicable valuation. The table at the top of the next page summarizes variances in provisions included in this month's Operational Report and the associated one-month

⁸Our 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.

⁹For ease of discussion, "IBNR" is used in place of "provisions for incurred but not recorded (IBNR) and development".

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	42,261	1,859	(15,779)	(8)	45,849	(140)	72,331	1,711
2017	94,337	(1,146)	(7,279)	(52)	35,127	249	122,185	(949)
2018	123,240	(338)	(9,905)	77	46,386	(359)	159,721	(620)
2019	117,404	(2,928)	(7,709)	12	32,549	(49)	142,244	(2,965)
TOTAL	377,242	(2,553)	(40,672)	29	159,911	(299)	496,481	(2,823)

The IBNR provision is \$2.6 million lower than projected from last month, counterbalancing the recorded claims activity and adjusting for the earned premium variance impacts indicated in section 2.1.

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

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

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

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

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

Table 03

	Premium Deficiency / (Deferred Policy Acquisition Costs)		actuarial present value adjustments		Premium Deficiency / (DPAC) including actuarial present value adjustments	
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
balance:	51,098	(3,641)	24,282	(1,731)	75,380	(5,372)
balance as % unearned premium:	28.7%	-	13.6%	-	42.3%	-
actual unearned premium:	178,145					
less projected:	(12,709)					

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 loss¹⁰ ratio per latest valuation
- (c) Estimated ultimate incurred = (a) x (b)
- (d) Recorded indemnity & allowed claims expense to-date
- (e) IBNR = (c) – (d)

4 Calendar Year-to-Date Results

The table below summarizes the calendar year-to-date results for indemnity & allowed claims expenses¹¹, 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 129.8% rather than 127.6% (the valuation ultimate ratio for accident year 2019), as the calendar year-to-date earned premium includes prior accident year earned premium adjustments. (Note that the ratios in this table may differ slightly from those shown in the Ontario RSP Summary of Operations due to rounding.)

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

Table 04	YTD Nominal Values		YTD actuarial present value adjustment		YTD Total		Change from Prior Month YTD	
	Amount	% EP	Amount	% EP	Amount	% EP	Amount	LR pts
PAYs	(16,812)	(8.5%)	12,276	6.2%	(4,536)	(2.3%)	(2,071)	(0.8%)
CAY	256,501	129.8%	24,840	12.6%	281,341	142.3%	41,936	(0.5%)
TOTAL	239,689	121.3%	37,116	18.8%	276,805	140.1%	39,865	(1.2%)

(“% EP” based on 2019 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

¹⁰“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).

¹¹Allowed claims expenses are first party legal and other expenses as listed in the RSP Claims Guide. Claims expenses paid through the member company expense allowance are NOT included in this analysis.

Operational Report.

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

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

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

6 EXHIBITS

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

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

EXHIBIT A
IBNR for Member Sharing – includes Actuarial Present Value Adjustments
TABLE EXHIBIT A

 IBNR + M/S actuarial present
 value adjustments

 discount rate
 1.43%

 interest rate margin
 25 basis pts

Amounts in \$000s					
Accident Year	Actual Jun. 2019	Actual Jul. 2019	Projected Aug. 2019	Projected Sep. 2019	Projected Dec. 2019
prior	960	941	909	873	780
2000	14	14	14	14	13
2001	48	48	47	45	43
2002	70	70	67	66	61
2003	148	148	143	140	130
2004	284	284	276	271	250
2005	312	312	303	297	275
2006	773	603	586	573	531
2007	878	875	850	831	772
2008	1,548	1,651	1,605	1,571	1,462
2009	1,761	1,823	1,773	1,735	1,614
2010	3,417	3,540	3,440	3,369	3,133
2011	2,053	2,943	2,860	2,799	2,598
2012	4,365	5,225	5,077	4,967	4,609
2013	3,326	3,905	3,794	3,703	3,418
2014	5,237	5,188	5,034	4,896	4,493
2015	10,349	8,408	8,157	7,929	7,221
2016	37,205	36,353	35,442	34,287	30,477
2017	126,651	122,185	118,988	114,774	99,578
2018	164,533	159,721	155,904	153,147	140,793
2019	123,833	142,244	158,237	170,664	246,385
TOTAL	487,765	496,481	503,506	506,951	548,636
Change		8,716	7,025	3,445	

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

EXHIBIT B
IBNR
TABLE EXHIBIT B

TABLE EXHIBIT B

Amounts in \$000s							
IBNR	Ultimate Loss Ratio	Accident Year	Actual Jun. 2019	Actual Jul. 2019	Projected Aug. 2019	Projected Sep. 2019	Projected Dec. 2019
	-	prior	(845)	(859)	(835)	(819)	(766)
	122.0%	2000	13	13	13	13	12
	125.8%	2001	9	9	9	9	9
	117.9%	2002	63	63	61	60	55
	90.7%	2003	125	125	121	119	111
	77.7%	2004	227	227	221	217	202
	73.6%	2005	299	299	291	285	265
	100.4%	2006	700	530	515	505	470
	100.1%	2007	813	811	788	772	718
	121.0%	2008	1,487	1,591	1,546	1,515	1,411
	155.5%	2009	1,666	1,729	1,681	1,647	1,534
	152.2%	2010	3,231	3,354	3,260	3,195	2,974
	86.9%	2011	1,598	2,485	2,415	2,367	2,204
	85.5%	2012	3,431	4,335	4,214	4,130	3,846
	95.0%	2013	1,658	2,287	2,223	2,179	2,028
	101.1%	2014	1,265	1,384	1,345	1,318	1,227
	108.5%	2015	2,560	878	853	844	754
	118.5%	2016	23,515	23,000	22,356	21,462	18,772
	117.0%	2017	98,436	94,337	91,696	88,028	74,662
	126.9%	2018	127,400	123,240	119,789	117,393	107,141
	127.6%	2019	102,466	117,404	130,057	139,410	203,972
		TOTAL	370,117	377,242	382,619	384,649	421,601
		Change		7,125	5,377	2,030	

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

EXHIBIT C
Premium Liabilities
TABLE EXHIBIT C

	Amounts in \$000s				
	Actual Jun. 2019	Actual Jul. 2019	Projected Aug. 2019	Projected Sep. 2019	Projected Dec. 2019
Premium Liabilities					
(1) unearned premium (UP)	188,005	178,145	187,102	195,415	195,041
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	142.1%	142.3%	142.6%	142.9%	144.0%
(3) expected future costs {(1) x (2)}	267,114	253,525	266,813	279,260	280,884
(4) premium deficiency / (deferred policy acquisition cost)	79,109	75,380	79,711	83,845	85,843
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	128.5%	128.7%	128.9%	129.2%	130.2%
(6) expected future costs {(1) x (5)}	241,532	229,243	241,260	252,514	253,982
(7) premium deficiency / (deferred policy acquisition cost)	53,527	51,098	54,158	57,099	58,941

EXHIBIT D

Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2019, broken down by component.

Ontario		Projected Balances as at Dec. 31, 2019 (\$000s)							
ending 2019		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	25,322	(766)	24,556	(996)	178	2,464	(100)	2,364	1,546
2000	-	12	12	-	-	1	-	1	1
2001	570	9	579	(26)	5	58	(3)	55	34
2002	52	55	107	(5)	1	11	(1)	10	6
2003	275	111	386	(21)	3	39	(2)	37	19
2004	912	202	1,114	(67)	11	111	(7)	104	48
2005	30	265	295	(20)	3	29	(2)	27	10
2006	1,643	470	2,113	(159)	25	211	(16)	195	61
2007	1,583	718	2,301	(189)	32	230	(19)	211	54
2008	1,410	1,411	2,821	(248)	42	282	(25)	257	51
2009	4,283	1,534	5,817	(535)	87	582	(54)	528	80
2010	4,797	2,974	7,771	(661)	109	777	(66)	711	159
2011	8,057	2,204	10,261	(677)	113	1,026	(68)	958	394
2012	13,086	3,846	16,932	(999)	169	1,693	(100)	1,593	763
2013	24,812	2,028	26,840	(1,396)	242	2,684	(140)	2,544	1,390
2014	50,607	1,227	51,834	(2,073)	363	5,183	(207)	4,976	3,266
2015	68,132	754	68,886	(2,273)	413	8,611	(284)	8,327	6,467
2016	80,378	18,772	99,150	(3,272)	595	14,873	(491)	14,382	11,705
2017	106,233	74,662	180,895	(6,512)	1,085	31,476	(1,133)	30,343	24,916
2018	110,409	107,141	217,550	(9,137)	1,523	43,075	(1,809)	41,266	33,652
PAYs (sub-total):	502,591	217,629	720,220	(29,266)	4,999	113,416	(4,527)	108,889	84,622
CAY (2019)	95,187	203,972	299,159	(13,163)	2,094	55,943	(2,461)	53,482	42,413
claims liabilities:	597,778	421,601	1,019,379	(42,429)	7,093	169,359	(6,988)	162,371	127,035
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs
premium liabilities:	195,041	58,941	253,982	(8,874)	1,521	35,497	(1,242)	34,255	26,902
*Total may not be sum of parts, as apvs apply to future costs within UPR									
policy liabilities:			1,273,361	(51,303)	8,614	204,856	(8,230)	196,626	153,937

EXHIBIT E

Discount Rate & Margins for Adverse Deviations

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

Selected Claims Development MfADs (Mar. 31, 2019)

Accident Year	Third Party Liability Margins	Accident Benefits Margins	Other Coverages Margins	Total Margins
1993	10.0%	10.0%	10.0%	10.0%
1994	10.0%	10.0%	10.0%	10.0%
1995	10.0%	10.0%	10.0%	10.0%
1996	10.0%	10.0%	10.0%	10.0%
1997	10.0%	10.0%	10.0%	10.0%
1998	10.0%	10.0%	10.0%	10.0%
1999	10.0%	10.0%	10.0%	10.0%
2000	10.0%	10.0%	10.0%	10.0%
2001	10.0%	10.0%	10.0%	10.0%
2002	8.8%	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%	8.6%	10.0%
2013	10.0%	10.0%	8.2%	10.0%
2014	10.0%	10.0%	9.4%	10.0%
2015	12.5%	12.5%	11.9%	12.5%
2016	15.0%	15.0%	13.7%	15.0%
2017	17.4%	17.5%	11.8%	17.4%
2018	19.8%	20.0%	13.9%	19.8%
2019	18.4%	20.0%	6.2%	18.7%
2020	13.5%	20.0%	5.2%	14.0%
prem liab	13.5%	20.0%	5.2%	14.0%

discount rate: 1.43%
 margin (basis points): 25

EXHIBIT F

Interest Rate Sensitivity

The tables below present sensitivity to the member statement claims liability as projected to Dec. 31, 2019 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2019, and are based on more up-to-date information). We have included the most recent valuation selection (1.43%), the prior valuation assumption (1.88%) and the prior fiscal year end valuation assumption (2.22%) for comparative purposes. A 25 basis point margin for investment return adverse deviation is used in all scenarios presented.

\$ Format: \$000s

Actuarial Present Value of Provisions at Various Discount Rates - Dec. 31, 2019 projected Unpaid								
AY	0.43%	0.93%	1.43%	1.93%	2.43%	2.93%	1.88%	2.22%
2002 & prior	28,662	28,244	27,837	27,446	27,056	26,679	27,484	27,221
2003	463	454	445	437	429	421	438	432
2004	1,350	1,320	1,292	1,265	1,239	1,213	1,268	1,250
2005	423	413	403	393	384	375	394	387
2006	2,506	2,437	2,372	2,310	2,250	2,193	2,316	2,275
2007	2,749	2,667	2,590	2,516	2,444	2,376	2,523	2,474
2008	3,724	3,605	3,492	3,385	3,281	3,184	3,395	3,324
2009	7,432	7,184	6,948	6,726	6,512	6,312	6,747	6,601
2010	7,561	7,326	7,104	6,894	6,693	6,505	6,914	6,776
2011	10,045	9,803	9,575	9,359	9,152	8,958	9,379	9,237
2012	19,880	19,453	19,051	18,669	18,305	17,962	18,706	18,456
2013	24,762	24,299	23,859	23,445	23,047	22,671	23,486	23,211
2014	46,540	45,869	45,234	44,627	44,044	43,494	44,689	44,286
2015	70,062	69,237	68,454	67,709	66,982	66,288	67,781	67,283
2016	113,441	112,100	110,821	109,600	108,387	107,237	109,718	108,898
2017	211,762	208,998	206,354	203,794	201,277	198,884	204,035	202,324
2018	257,922	254,044	250,329	246,770	243,229	239,858	247,102	244,710
2019	337,510	332,176	327,014	322,016	317,159	312,536	322,527	319,188
Total	1,146,794	1,129,629	1,113,174	1,097,361	1,081,870	1,067,146	1,098,902	1,088,333
	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	0.43%	0.93%	1.43%	1.93%	2.43%	2.93%	1.88%
Total	33,620	16,455	-	(15,813)	(31,304)	(46,028)	(14,272)
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption

Percentage Impact Relative to Valuation Assumption							
AY	0.43%	0.93%	1.43%	1.93%	2.43%	2.93%	1.88%
2002 & prior	3.0%	1.5%	-	(1.4%)	(2.8%)	(4.2%)	(1.3%)
2003	4.0%	2.0%	-	(1.8%)	(3.6%)	(5.4%)	(1.6%)
2004	4.5%	2.2%	-	(2.1%)	(4.1%)	(6.1%)	(1.9%)
2005	5.0%	2.5%	-	(2.5%)	(4.7%)	(6.9%)	(2.2%)
2006	5.6%	2.7%	-	(2.6%)	(5.1%)	(7.5%)	(2.4%)
2007	6.1%	3.0%	-	(2.9%)	(5.6%)	(8.3%)	(2.6%)
2008	6.6%	3.2%	-	(3.1%)	(6.0%)	(8.8%)	(2.8%)
2009	7.0%	3.4%	-	(3.2%)	(6.3%)	(9.2%)	(2.9%)
2010	6.4%	3.1%	-	(3.0%)	(5.8%)	(8.4%)	(2.7%)
2011	4.9%	2.4%	-	(2.3%)	(4.4%)	(6.4%)	(2.0%)
2012	4.4%	2.1%	-	(2.0%)	(3.9%)	(5.7%)	(1.8%)
2013	3.8%	1.8%	-	(1.7%)	(3.4%)	(5.0%)	(1.6%)
2014	2.9%	1.4%	-	(1.3%)	(2.6%)	(3.8%)	(1.2%)
2015	2.3%	1.1%	-	(1.1%)	(2.2%)	(3.2%)	(1.0%)
2016	2.4%	1.2%	-	(1.1%)	(2.2%)	(3.2%)	(1.0%)
2017	2.6%	1.3%	-	(1.2%)	(2.5%)	(3.6%)	(1.1%)
2018	3.0%	1.5%	-	(1.4%)	(2.8%)	(4.2%)	(1.3%)
2019	3.2%	1.6%	-	(1.5%)	(3.0%)	(4.4%)	(1.4%)
Total	3.0%	1.5%	-	(1.4%)	(2.8%)	(4.1%)	(1.3%)
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val 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	960	(21)	2	-	(19)	(2.0%)	941
2000	14	(1)	1	-	-	-	14
2001	48	(1)	1	-	-	-	48
2002	70	(4)	4	-	-	-	70
2003	148	(6)	6	-	-	-	148
2004	284	(11)	11	-	-	-	284
2005	312	(13)	13	-	-	-	312
2006	773	(30)	(140)	-	(170)	(22.0%)	603
2007	878	(36)	33	-	(3)	(0.3%)	875
2008	1,548	(61)	164	-	103	6.7%	1,651
2009	1,761	(69)	131	-	62	3.5%	1,823
2010	3,417	(135)	258	-	123	3.6%	3,540
2011	2,053	(78)	968	-	890	43.4%	2,943
2012	4,365	(165)	1,025	-	860	19.7%	5,225
2013	3,326	(115)	694	-	579	17.4%	3,905
2014	5,237	(170)	121	-	(49)	(0.9%)	5,188
2015	10,349	(233)	(1,708)	-	(1,941)	(18.8%)	8,408
2016	37,205	(979)	127	-	(852)	(2.3%)	36,353
2017	126,651	(3,517)	(949)	-	(4,466)	(3.5%)	122,185
2018	164,533	(4,192)	(620)	-	(4,812)	(2.9%)	159,721
2019	123,833	21,376	(2,965)	-	18,411	14.9%	142,244
Grand Total	487,765	11,539	(2,823)	-	8,716	1.8%	496,481

EXHIBIT G

Page 2 of 2

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

RSP
AccountCode Desc Ontario
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	(845)	33	(47)	-	(14)	1.7%	(859)
2000	13	(1)	1	-	-	-	13
2001	9	-	-	-	-	-	9
2002	63	(3)	3	-	-	-	63
2003	125	(5)	5	-	-	-	125
2004	227	(9)	9	-	-	-	227
2005	299	(12)	12	-	-	-	299
2006	700	(28)	(142)	-	(170)	(24.3%)	530
2007	813	(33)	31	-	(2)	(0.2%)	811
2008	1,487	(59)	163	-	104	7.0%	1,591
2009	1,666	(67)	130	-	63	3.8%	1,729
2010	3,231	(129)	252	-	123	3.8%	3,354
2011	1,598	(64)	951	-	887	55.5%	2,485
2012	3,431	(137)	1,041	-	904	26.3%	4,335
2013	1,658	(66)	695	-	629	37.9%	2,287
2014	1,265	(51)	170	-	119	9.4%	1,384
2015	2,560	(77)	(1,605)	-	(1,682)	(65.7%)	878
2016	23,515	(705)	190	-	(515)	(2.2%)	23,000
2017	98,436	(2,953)	(1,146)	-	(4,099)	(4.2%)	94,337
2018	127,400	(3,822)	(338)	-	(4,160)	(3.3%)	123,240
2019	102,466	17,866	(2,928)	-	14,938	14.6%	117,404
Grand Total	370,117	9,678	(2,553)	-	7,125	1.9%	377,242