ONTARIO RISK SHARING POOL

JUNE 2019 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

Related Bulletin: F19-057 Ontario RSP June 2019 Operational Report

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ACTUARIAL HIGHLIGHTS

RSP ONTARIO

OPERATIONAL REPORT

JUNE 2019

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1   Summary

1.1   Valuation Schedule (Fiscal Year 2019)

The June 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 increased 0.5 points to 127.0%; discount rate increased 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 decreased 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 increased 0.5 points to 127.6%; discount rate decreased 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 / Regulation[1]

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.

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[1]This 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 liabilities[2] booked by accident year[3]. 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.
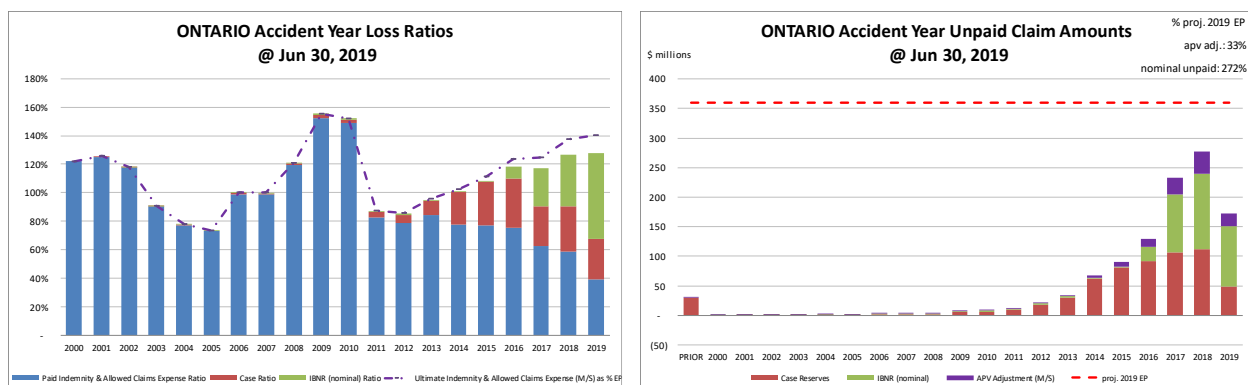
"M/S" refers to "Member Statement" values – that is, actuarial present value adjustments at the selected discount rate.

The current actuarial present value adjustments provision for claims liabilities ($117.6 million – see table immediately below) represents 33% 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	608,241	55.5%
ibnr	370,117	33.8%
M/S apv adjust.	117,648	10.7%
M/S total	1,096,006	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 62% of the IBNR balance relates to accident years 2018 and 2019 (see Exhibit B). Approximately 82% 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 5% is related to accident years 2009 and prior (i.e. prior to the most recent 10 accident years).

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[2]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.

[3]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".

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

premium liabilities ($000s)	amt	%
unearned prem	188,005	70.4%
prem def/(dpac)	53,527	20.0%
M/S apv adjust.	25,582	9.6%
M/S total	267,114	100.0%

policy liabilities ($000s)	amt	%
claim	978,358	71.8%
premium	241,532	17.7%
M/S apv adjust.	143,230	10.5%
M/S total	1,363,120	100.0%

2 Activity During the Month of June 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 Report[4].

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	(254)	(254)	9,554	1,700	(12,954)	(6,266)	(3,400)	(4,566)
2017	(88)	(88)	3,162	40	(2,606)	(3,448)	556	(3,408)
2018	(987)	(987)	2,840	(2,043)	(796)	(1,141)	2,045	(3,183)
2019	28,528	(382)	13,380	(3,258)	7,686	(47)	21,067	(3,305)
TOTAL	27,200	(1,710)	28,937	(3,561)	(8,669)	(10,901)	20,267	(14,462)

(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 certain members 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.

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

[5]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 **Earned Premium** by Calendar Month*
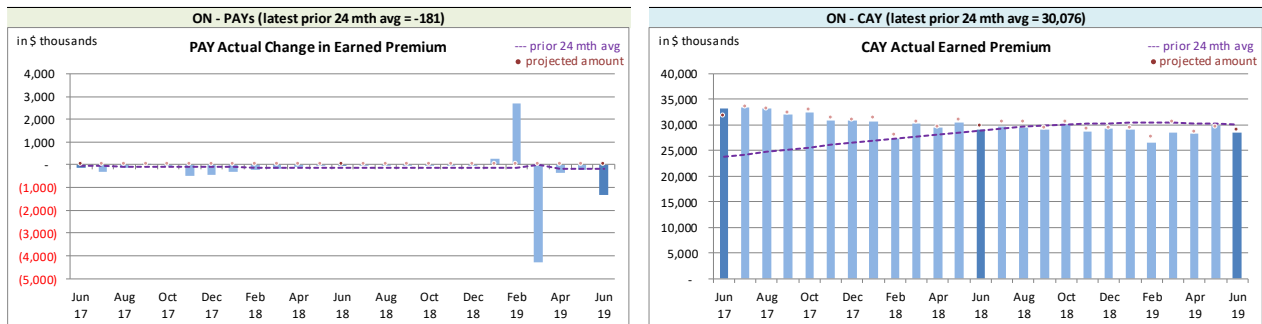
Earned premium changes during a given calendar month in relation to prior accident years tend to be at modest levels (note the different scales in the charts above), although relatively high levels generally occur at the beginning of each year. As commented on earlier, this month's variances are related to certain members' activities in relation to recent audit findings.

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*
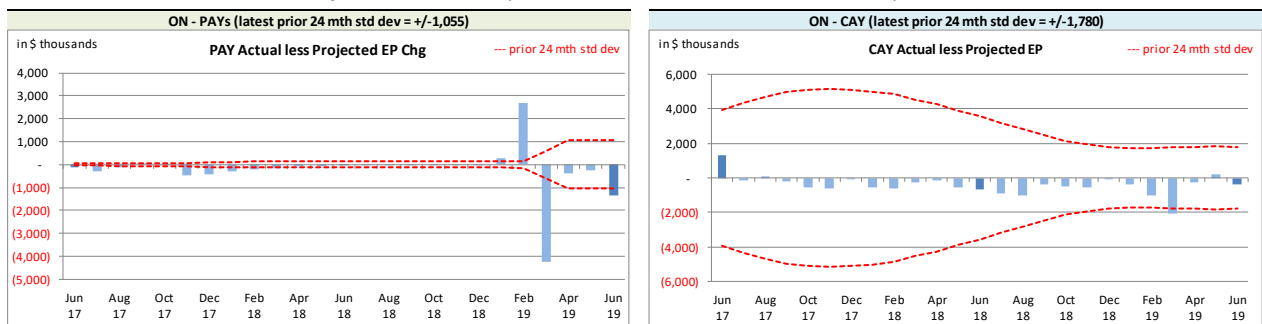
On Latest $ thousands		
Earned Premium	PAYs	CAY
Mthly Avg EP Chg (prior 24 mths)	(181)	30,076
std dev	1,055	1,780
A-P <> std dev	12	1
% <> std dev	48.0%	4.0%
norm <> std dev	31.7%	31.7%

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) bias[6], 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.

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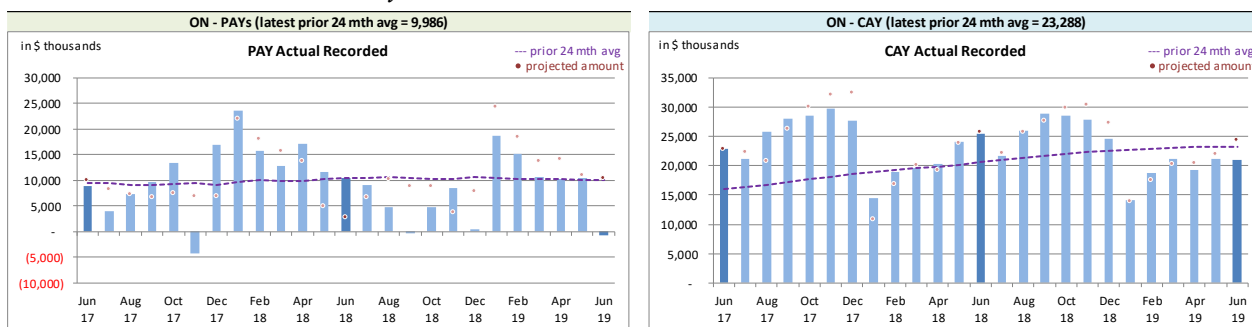
Recorded activity variances from the previous month's projections are shown in the charts immediately below, including the "prior 24-month standard deviation" levels to show how the variances from projection compare with historical standard deviations.

*Ontario RSP Actual vs Projected Summary: **Recorded** Variances by Calendar Month*
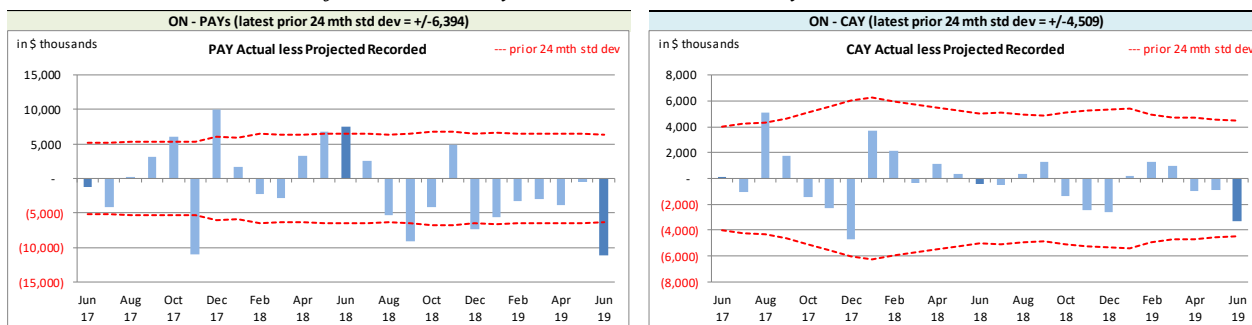
On Latest $ thousands		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	9,986	23,288
std dev	6,394	4,509
A-P <> std dev	8	1
% <> std dev	32.0%	4.0%
norm <> std dev	31.7%	31.7%

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 PAY **recorded** variance (left chart above) was outside of one standard deviation this month. The activity was reviewed and confirmed, with the variance attributed to process variance.

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 June) provides the June 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, six months into 2019 has the second highest **recorded** ratio over the last 11 years (June 2010 had the highest **recorded** ratio) while the **paid** ratio is the highest in the last 11 years.

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
Jun 2009	22.6%		7.7%	
Jun 2010	30.9%	8.3%	9.1%	1.4%
Jun 2011	16.1%	(14.8%)	6.5%	(2.6%)
Jun 2012	15.6%	(0.5%)	6.1%	(0.4%)
Jun 2013	16.6%	1.0%	6.5%	0.4%
Jun 2014	19.8%	3.2%	8.0%	1.5%
Jun 2015	20.8%	1.0%	8.8%	0.8%
Jun 2016	22.0%	1.2%	10.0%	1.2%
Jun 2017	20.2%	(1.8%)	9.7%	(0.3%)
Jun 2018	25.0%	4.8%	12.1%	2.4%
Jun 2019	25.3%	0.3%	12.3%	0.2%

There has been very strong (98%) correlation between the ytd monthly average **recorded** ratios and very strong (96%) correlation between the ytd monthly average **paid** ratios at June each year and the corresponding ytd monthly average ratios at December, suggesting the June **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 June 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 18.6% (95% prediction interval of 16.4% to 20.8%) for **recorded** and 9.4% (95% prediction interval of 7.9% to 10.9%) 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
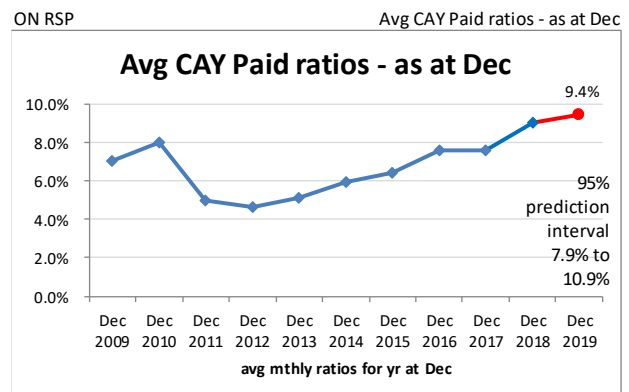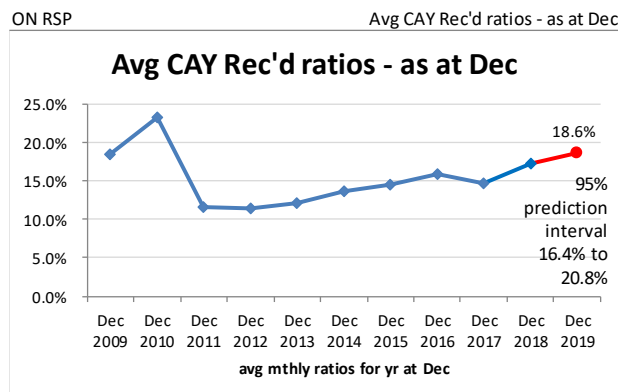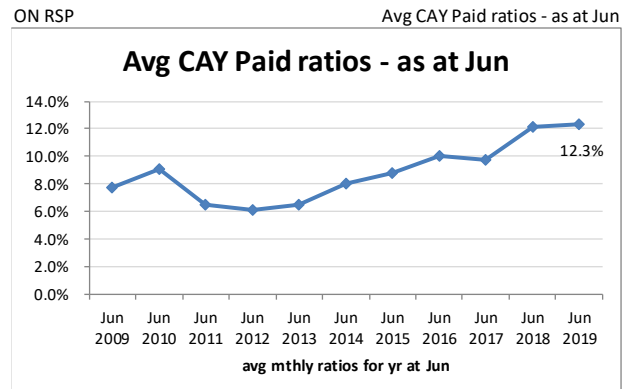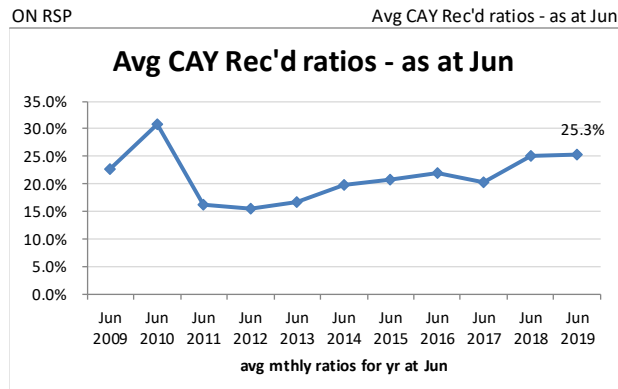
We are taking this information into consideration as part of our projection process.

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 influence[7] Recorded activity by Calendar Month
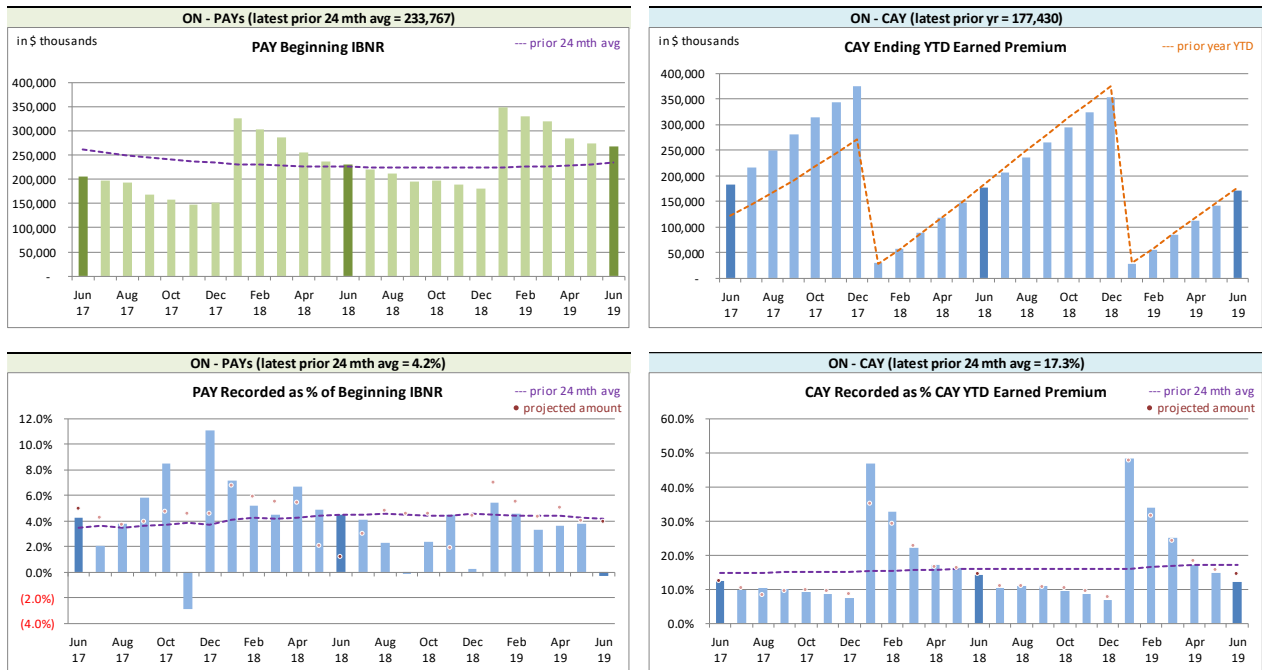
We track beginning prior accident years' IBNR as **recorded** activity "comes out of" IBNR. Changes in the prior accident years' beginning IBNR (see upper left chart above) occur for several possible reasons:

- 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.

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

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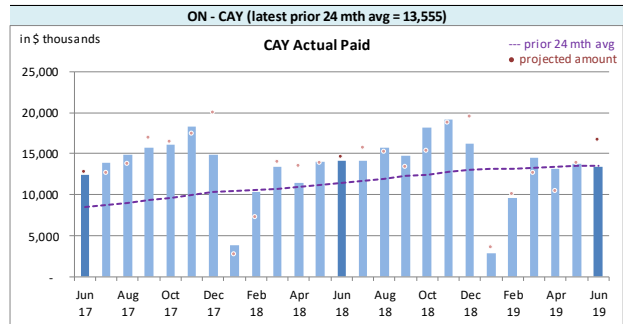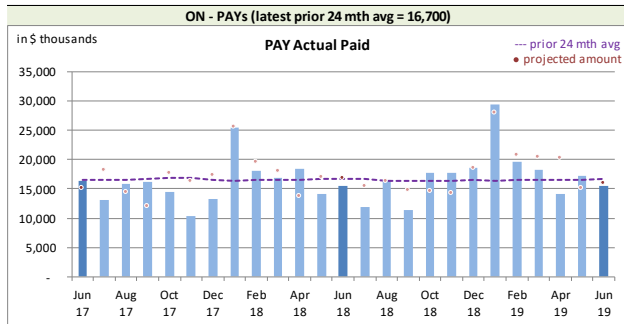
Paid activity variances from the previous month's projections are shown in the charts immediately below, including the "prior 24-month standard deviation" levels to show how the variances from projection compare with historical standard deviations.

*Ontario RSP Actual vs Projected Summary: **Paid** Variances by Calendar Month*
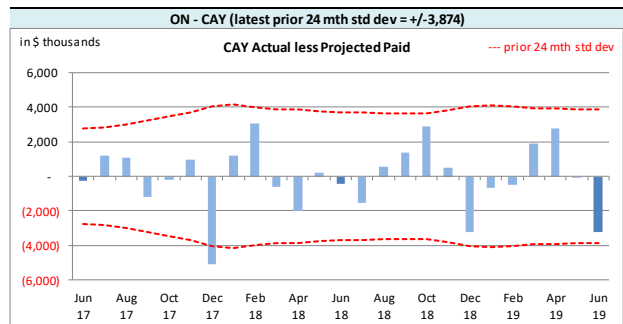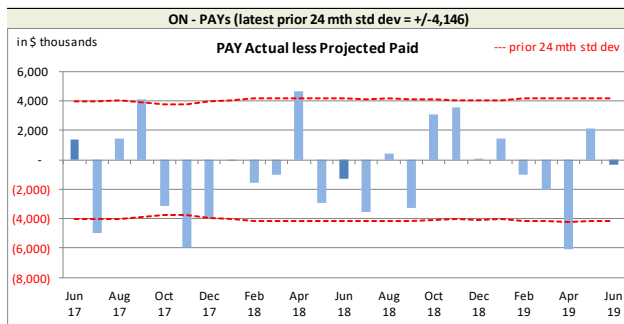
On Latest $ thousands		
Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)	16,700	13,555
std dev	4,146	3,874
A-P <> std dev	5	1
% <> std dev	20.0%	4.0%
norm <> std dev	31.7%	31.7%

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 influence[8] Paid activity by Calendar Month

ON - PAYs (latest prior 24 mth avg = 777,196)	ON - CAY (latest prior yr = 177,430)
PAY Beginning Unpaid	CAY Ending YTD Earned Premium
ON - PAYs (latest prior 24 mth avg = 2.1%)	ON - CAY (latest prior 24 mth avg = 8.9%)
PAY Paid as % Beginning Unpaid	CAY Paid as % CAY YTD Earned Premium
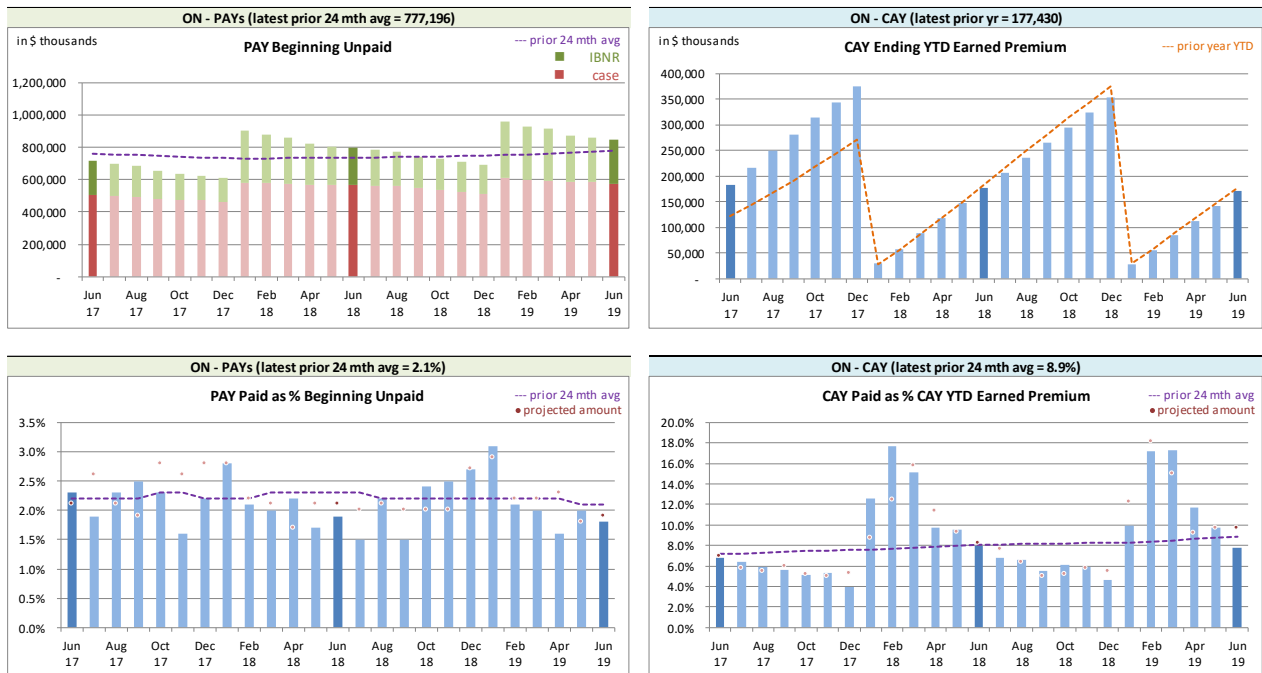
We track beginning prior accident years' unpaid balance (case and IBNR) as **paid** activity "comes out of" the unpaid balance. Changes in the prior accident years' beginning unpaid balance (see upper left chart above) occur for several possible reasons:

- 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 IBNR[9], 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

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[8]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.

[9]For 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			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	41,815	4,273	(16,190)	105	47,123	(264)	72,748	4,114
2017	98,436	3,305	(7,375)	5	35,590	(25)	126,651	3,285
2018	127,400	1,931	(10,083)	(34)	47,216	155	164,533	2,052
2019	102,466	2,818	(6,631)	(122)	27,998	514	123,833	3,210
TOTAL	370,117	12,327	(40,279)	(46)	157,927	380	487,765	12,661

The IBNR provision is $12.3 million higher than projected from last month, counterbalancing the recorded claims activity and adjusting for the earned premium variance impacts indicated in section 2.1.

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

(i)   the change projected last month;

(ii)   the additional change due to variances in earned premium (because we apply a loss ratio to earned premium in determining ultimate level) and/or recorded claims (as IBNR is calculated as ultimate less recorded) differences; and

(iii)   the additional change due to valuation implementation impacts (as applicable)

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

The table 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:	53,527	1,887	25,582	890	79,109	2,777
balance as % unearned premium:	28.5%	-	13.6%	-	42.1%	-
actual unearned premium:	188,005					
less projected:	6,512					

3   Ultimate Loss Ratio Matching Method

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

(a)   Earned premium to-date
(b)   Ultimate loss[10] ratio per latest valuation
(c)   Estimated ultimate incurred = (a) x (b)
(d)   Recorded indemnity & allowed claims expense to-date
(e)   IBNR = (c) – (d)

4   Calendar Year-to-Date Results

The table below summarizes the calendar year-to-date results for indemnity & allowed claims expenses[11], 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 130.1% 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	(16,623)	(9.9%)	14,158	8.4%	(2,465)	(1.5%)	(3,531)	(2.3%)
CAY	218,039	130.1%	21,367	12.7%	239,406	142.8%	39,666	0.6%
TOTAL	201,415	120.1%	35,525	21.2%	236,940	141.3%	36,134	(1.7%)

("% 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

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[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).

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

Operational Report.

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

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

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

6   EXHIBITS

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

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

EXHIBIT B   IBNR

EXHIBIT C   Premium Liabilities

EXHIBIT D   Projected Year-end Policy Liabilities

EXHIBIT E   Discount Rate & Margins for Adverse Deviations

EXHIBIT F   Interest Rate Sensitivity

EXHIBIT G   Components of IBNR Change During Month

FACILITY
Association

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 May. 2019	Actual Jun. 2019	Projected Jul. 2019	Projected Aug. 2019	Projected Dec. 2019
	prior	1,007	960	939	916	790
	2000	14	14	13	13	12
	2001	49	48	47	45	42
	2002	70	70	66	64	58
	2003	148	148	142	136	123
	2004	285	284	273	263	239
	2005	312	312	299	288	262
	2006	773	773	743	714	651
	2007	880	878	842	809	738
	2008	1,551	1,548	1,487	1,428	1,302
	2009	1,698	1,761	1,692	1,625	1,479
	2010	3,697	3,417	3,282	3,153	2,872
	2011	2,044	2,053	1,975	1,901	1,725
	2012	3,414	4,365	4,200	4,042	3,664
	2013	2,932	3,326	3,211	3,097	2,783
discount rate	2014	3,523	5,237	5,067	4,902	4,373
1.43%	2015	10,578	10,349	10,116	9,861	8,619
	2016	37,464	37,205	36,226	35,274	29,951
interest rate margin	2017	127,760	126,651	123,134	119,717	98,583
25 basis pts	2018	168,465	164,533	160,341	156,265	141,127
	2019	105,234	123,833	145,209	164,066	252,106
	TOTAL	471,898	487,765	499,304	508,579	551,499
	Change		15,867	11,539	9,275	

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 May. 2019	Actual Jun. 2019	Projected Jul. 2019	Projected Aug. 2019	Projected Dec. 2019
-	prior	(804)	(845)	(812)	(780)	(713)
122.0%	2000	13	13	12	12	11
125.8%	2001	9	9	9	9	9
117.9%	2002	63	63	60	58	52
90.7%	2003	125	125	120	115	105
77.7%	2004	227	227	218	209	191
73.6%	2005	299	299	287	276	251
100.4%	2006	700	700	672	645	589
100.1%	2007	815	813	780	749	684
121.0%	2008	1,489	1,487	1,428	1,371	1,252
155.5%	2009	1,589	1,666	1,599	1,535	1,400
152.2%	2010	3,508	3,231	3,102	2,978	2,717
86.9%	2011	1,585	1,598	1,534	1,473	1,345
85.5%	2012	2,448	3,431	3,294	3,162	2,885
95.0%	2013	1,249	1,658	1,592	1,528	1,394
101.1%	2014	(561)	1,265	1,214	1,165	1,064
108.5%	2015	2,563	2,560	2,483	2,458	2,064
118.5%	2016	23,391	23,515	22,810	22,126	18,191
117.0%	2017	99,095	98,436	95,483	92,619	73,843
126.9%	2018	130,697	127,400	123,578	119,871	107,215
127.6%	2019	87,131	102,466	120,332	135,609	208,709
	TOTAL	355,631	370,117	379,795	387,188	423,258
	Change		14,486	9,678	7,393	

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 May. 2019	Actual Jun. 2019	Projected Jul. 2019	Projected Aug. 2019	Projected Dec. 2019
(1) unearned premium (UP)	179,820	188,005	190,854	197,760	200,416
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	141.9%	142.1%	142.3%	142.6%	144.0%
(3) expected future costs {(1) x (2)}	255,101	267,114	271,606	281,993	288,624
(4) premium deficiency / (deferred policy acquisition cost)	75,281	79,109	80,752	84,233	88,208
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	128.3%	128.5%	128.7%	128.9%	130.2%
(6) expected future costs {(1) x (5)}	230,668	241,532	245,593	254,987	260,981
(7) premium deficiency / (deferred policy acquisition cost)	50,848	53,527	54,739	57,227	60,565

FACILITY Association

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	TOTAL
prior	24,592	(713)	23,879	(969)	173	2,396	(97)	2,299	1,503	25,382
2000	1	11	12	-	-	1	-	1	1	13
2001	554	9	563	(25)	5	56	(3)	53	33	596
2002	52	52	104	(5)	1	10	-	10	6	110
2003	269	105	374	(20)	3	37	(2)	35	18	392
2004	891	191	1,082	(65)	11	108	(6)	102	48	1,130
2005	35	251	286	(19)	3	29	(2)	27	11	297
2006	1,468	589	2,057	(154)	25	206	(15)	191	62	2,119
2007	1,554	684	2,238	(183)	31	224	(18)	206	54	2,292
2008	1,512	1,252	2,764	(243)	41	276	(24)	252	50	2,814
2009	4,307	1,400	5,707	(525)	86	571	(53)	518	79	5,786
2010	4,846	2,717	7,563	(643)	106	756	(64)	692	155	7,718
2011	8,523	1,345	9,868	(651)	109	987	(65)	922	380	10,248
2012	14,377	2,885	17,262	(1,018)	173	1,726	(102)	1,624	779	18,041
2013	25,431	1,394	26,825	(1,395)	241	2,682	(139)	2,543	1,389	28,214
2014	51,452	1,064	52,516	(2,101)	368	5,252	(210)	5,042	3,309	55,825
2015	67,756	2,064	69,820	(2,304)	419	8,728	(288)	8,440	6,555	76,375
2016	81,424	18,191	99,615	(3,287)	598	14,942	(493)	14,449	11,760	111,375
2017	105,771	73,843	179,614	(6,466)	1,078	31,253	(1,125)	30,128	24,740	204,354
2018	112,017	107,215	219,232	(9,208)	1,535	43,408	(1,823)	41,585	33,912	253,144
PAYs (sub-total):	506,832	214,549	721,381	(29,281)	5,006	113,648	(4,529)	109,119	84,844	806,225
CAY (2019)	97,398	208,709	306,107	(13,469)	2,143	57,242	(2,519)	54,723	43,397	349,504
claims liabilities:	604,230	423,258	1,027,488	(42,750)	7,149	170,890	(7,048)	163,842	128,241	1,155,729

	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	200,416	60,565	260,981	(9,119)	1,563	36,476	(1,277)	35,199	27,643	288,624

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

policy liabilities:			1,288,469	(51,869)	8,712	207,366	(8,325)	199,041	155,884	1,444,353

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

AY	Actuarial Present Value of Provisions at Various Discount Rates - Dec. 31, 2019 projected Unpaid
	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

AY	Dollar Impact Relative to Valuation Assumption
	0.43%	0.93%	1.43%	1.93%	2.43%	2.93%	1.88%	2.22%
Total	33,620	16,455	-	(15,813)	(31,304)	(46,028)	(14,272)	(24,841)
	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
	0.43%	0.93%	1.43%	1.93%	2.43%	2.93%	1.88%	2.22%
2002 & prior	3.0%	1.5%	-	(1.4%)	(2.8%)	(4.2%)	(1.3%)	(2.2%)
2003	4.0%	2.0%	-	(1.8%)	(3.6%)	(5.4%)	(1.6%)	(2.9%)
2004	4.5%	2.2%	-	(2.1%)	(4.1%)	(6.1%)	(1.9%)	(3.3%)
2005	5.0%	2.5%	-	(2.5%)	(4.7%)	(6.9%)	(2.2%)	(4.0%)
2006	5.6%	2.7%	-	(2.6%)	(5.1%)	(7.5%)	(2.4%)	(4.1%)
2007	6.1%	3.0%	-	(2.9%)	(5.6%)	(8.3%)	(2.6%)	(4.5%)
2008	6.6%	3.2%	-	(3.1%)	(6.0%)	(8.8%)	(2.8%)	(4.8%)
2009	7.0%	3.4%	-	(3.2%)	(6.3%)	(9.2%)	(2.9%)	(5.0%)
2010	6.4%	3.1%	-	(3.0%)	(5.8%)	(8.4%)	(2.7%)	(4.6%)
2011	4.9%	2.4%	-	(2.3%)	(4.4%)	(6.4%)	(2.0%)	(3.5%)
2012	4.4%	2.1%	-	(2.0%)	(3.9%)	(5.7%)	(1.8%)	(3.1%)
2013	3.8%	1.8%	-	(1.7%)	(3.4%)	(5.0%)	(1.6%)	(2.7%)
2014	2.9%	1.4%	-	(1.3%)	(2.6%)	(3.8%)	(1.2%)	(2.1%)
2015	2.3%	1.1%	-	(1.1%)	(2.2%)	(3.2%)	(1.0%)	(1.7%)
2016	2.4%	1.2%	-	(1.1%)	(2.2%)	(3.2%)	(1.0%)	(1.7%)
2017	2.6%	1.3%	-	(1.2%)	(2.5%)	(3.6%)	(1.1%)	(2.0%)
2018	3.0%	1.5%	-	(1.4%)	(2.8%)	(4.2%)	(1.3%)	(2.2%)
2019	3.2%	1.6%	-	(1.5%)	(3.0%)	(4.4%)	(1.4%)	(2.4%)
Total	3.0%	1.5%	-	(1.4%)	(2.8%)	(4.1%)	(1.3%)	(2.2%)
	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 |

	Values						
	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**	**Sum of Current Month Final Amount**
AccYear							
prior	1,007	(31)	(16)	-	(47)	(4.7%)	960
2000	14	-	-	-	-	-	14
2001	49	(2)	1	-	(1)	(2.0%)	48
2002	70	(2)	2	-	-	-	70
2003	148	(2)	2	-	-	-	148
2004	285	(4)	3	-	(1)	(0.4%)	284
2005	312	(3)	3	-	-	-	312
2006	773	(8)	8	-	-	-	773
2007	880	(11)	9	-	(2)	(0.2%)	878
2008	1,551	(16)	13	-	(3)	(0.2%)	1,548
2009	1,698	(18)	81	-	63	3.7%	1,761
2010	3,697	(39)	(241)	-	(280)	(7.6%)	3,417
2011	2,044	(24)	33	-	9	0.4%	2,053
2012	3,414	(44)	995	-	951	27.9%	4,365
2013	2,932	(46)	440	-	394	13.4%	3,326
2014	3,523	(76)	1,790	-	1,714	48.7%	5,237
2015	10,578	(262)	33	-	(229)	(2.2%)	10,349
2016	37,464	(1,217)	958	-	(259)	(0.7%)	37,205
2017	127,760	(4,394)	3,285	-	(1,109)	(0.9%)	126,651
2018	168,465	(5,984)	2,052	-	(3,932)	(2.3%)	164,533
2019	105,234	15,389	3,210	-	18,599	17.7%	123,833
Grand Total	**471,898**	**3,206**	**12,661**	**-**	**15,867**	**3.4%**	**487,765**

EXHIBIT G

Page 2 of 2

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

RSP	Ontario
AccountCode Desc	IBNR - Undiscounted

IBNR - in $000s

	Values						
AccYear	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	Sum of Current Month Final Amount
prior	(804)	7	(48)	-	(41)	5.1%	(845)
2000	13	-	-	-	-	-	13
2001	9	-	-	-	-	-	9
2002	63	(1)	1	-	-	-	63
2003	125	(1)	1	-	-	-	125
2004	227	(2)	2	-	-	-	227
2005	299	(3)	3	-	-	-	299
2006	700	(7)	7	-	-	-	700
2007	815	(8)	6	-	(2)	(0.2%)	813
2008	1,489	(15)	13	-	(2)	(0.1%)	1,487
2009	1,589	(16)	93	-	77	4.8%	1,666
2010	3,508	(35)	(242)	-	(277)	(7.9%)	3,231
2011	1,585	(16)	29	-	13	0.8%	1,598
2012	2,448	(24)	1,007	-	983	40.2%	3,431
2013	1,249	(12)	421	-	409	32.7%	1,658
2014	(561)	6	1,820	-	1,826	(325.5%)	1,265
2015	2,563	(103)	100	-	(3)	(0.1%)	2,560
2016	23,391	(936)	1,060	-	124	0.5%	23,515
2017	99,095	(3,964)	3,305	-	(659)	(0.7%)	98,436
2018	130,697	(5,228)	1,931	-	(3,297)	(2.5%)	127,400
2019	87,131	12,517	2,818	-	15,335	17.6%	102,466
Grand Total	**355,631**	**2,159**	**12,327**	**-**	**14,486**	**4.1%**	**370,117**