



ONTARIO RISK SHARING POOL

JULY 2018 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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ACTUARIAL HIGHLIGHTS
RSP ONTARIO
OPERATIONAL REPORT
JULY 2018

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1 Summary

1.1 Valuation Schedule (Fiscal Year 2018)

The July 2018 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 2018.

ONTARIO RISK SHARING POOL FISCAL YEAR 2018 – SCHEDULE OF VALUATIONS			
Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep. 30, 2017 (completed)	1.75% mfad: 25 bp	Oct. 2017	updated valuation (roll forward): accident year 2017 loss ratio increased 1.4 points to 121.3%; discount rate increased by 52 basis points; no change to selected margins for adverse deviations
Dec. 31, 2017 (completed)	1.73% mfad 25 bp	Mar. 2018	updated valuation: accident year 2018 loss ratio increased 3.4 points to 125.9%; discount rate decreased by 2 basis points; no change to selected margins for adverse deviations
Mar. 31, 2018 (completed)	1.89% mfad 25 bp	May 2018	update valuation (roll forward): accident year 2018 loss ratio decreased 0.2 points to 125.7%; discount rate increased by 16 basis points; no change to selected margins for adverse deviations
Jun. 30, 2018		Aug. 2018	update valuation:
Sep. 30, 2018		Oct. 2018	update valuation (roll forward):

Under the proposed schedule for fiscal year 2018, the “off-half” valuation quarters ending March 31, 2018 and September 30, 2018 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. With the most recent valuation (March 31, 2018), reform adjustments (originally introduced with the June 30, 2015 valuation) specifically related to changes in the non-pecuniary prejudgment interest provision calculation impacting the bodily injury coverage and the applicable interest rate applied to overdue payments in the SABS impacting the accident benefits coverage, were included with the updated industry trend analysis (completed using industry data as at June 30, 2017) and nominal valuation selections, impacting the selection of ultimates. Additional discussion in relation to the application of changes to the prejudgment interest rate on general damages for non-pecuniary loss can be found in section 1.4.

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, 2018), reform adjustments (originally introduced with the September 30, 2015 valuation) specifically related to changes in the tort threshold and deductibles impacting the bodily injury coverage and 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, 2017) and nominal valuation estimates, impacting the selection of ultimates. Additional discussion in relation to the application of changes in the tort threshold and deductibles can be found in section 1.4.

¹How bills become laws in Ontario is described in detail in the publication: <http://www.ontla.on.ca/lao/en/media/laointernet/pdf/bills-and-lawmaking-background-documents/how-bills-become-law-en.pdf>.

The **Supreme Court of Canada** rendered its judgment on **Saadati v Moorhead (2017 SCC 28, rendered on Jun 2, 2017)**. Saadati was involved in a collision in July of 2005 in British Columbia and sued the at-fault driver for damages. According to the Supreme Court decision, “*The trial judge found that the ... accident caused S[aadati] psychological injuries, including personality change and cognitive difficulties. ...and awarded S[aadati] \$100,000 for non-pecuniary damages.*” The trial decision was appealed to the BC Court of Appeal where the trial’s \$100,000 non-pecuniary award was dismissed. The Supreme Court upheld the \$100,000 non-pecuniary award, determining:

- “*A finding of legally compensable mental injury need not rest, in whole or in part, on the claimant proving a recognized psychiatric injury.*”
- “*...a trier of fact adjudicating a claim of mental injury is not concerned with diagnosis, but with symptoms and their effects.*”
- “*Expert evidence can assist in determining whether or not a mental injury has been shown, but where psychiatric diagnosis is unavailable, it remains open to a trier of fact to find on other evidence adduced by the claimant that he or she has proven on a balance of probabilities the occurrence of mental injury.*”

At the current time, no adjustments have been made to our valuation estimates or views based on the judgment as rendered, but we continue to review and consider the implications of the judgment.

1.4 Ontario RSP Bodily Injury Case Reserve summary

There have been no changes in these descriptions since last month’s Highlights except for the anticipated timing of the release of the Quarterly Valuation Highlights.

With the most recent (March 31, 2018) valuation, the impact of recent Ontario Court of Appeal decisions in relation to the application of changes to the prejudgment interest rate on general damages for non-pecuniary loss was reviewed and a nominal valuation adjustment was included impacting accident years 2014 and prior, further discussion will be provided in the “Actuarial Highlights – Quarterly Valuation” report which is to be posted to the FA website in September.

As indicated in the previous section, reform adjustments, specifically related to changes in the non-pecuniary prejudgment interest provisions in **Ontario Bill 15** and the changes in the tort threshold and deductibles in **Ontario Bill 91** impacting the third party liability - bodily injury coverage for accident year 2015 and subsequent, was included with the updated Ontario Private Passenger Vehicle industry trend analysis (completed using industry data as at June 30, 2017).

In the **Ontario Court of Appeal** decisions in **El-Khodr v. Lackie** (September 19, 2017; 2017 ONCA 716) and **Cobb v. Long Estate** (September 19, 2017; 2017 ONCA 717), the court of appeal ruled that the change to prejudgment interest for non-pecuniary² losses from a set level of 5% to the level that applies to pecuniary losses were implemented to achieve particular policy objectives and therefore should have retrospective application (i.e. to be applied to all settlements on or after

²**Pecuniary** awards are defined on the Ontario Attorney General’s website as “Damages that can be measured in money (i.e., special damages)” with special damages further defined as “Damages intended to compensate a plaintiff for a quantifiable monetary loss. Examples of such losses include: lost earnings, medical bills, and repair costs.” In contrast, **non-pecuniary** awards defined as “Damages that cannot be measured in money, but nevertheless are compensated for with money (i.e., general damages)” with general damages further defined as “Damages for non-monetary losses suffered by a plaintiff. These damages are not capable of exact quantification. Examples of such losses suffered include pain, suffering, and disfigurement.”

January 1, 2015). The Ontario Court of Appeal ruling in **El-Khodr v. Lackie** was appealed to the **Supreme Court of Canada**; on June 7, 2018, the Supreme Court of Canada dismissed the application for leave to appeal from the judgment of the Court of Appeal for Ontario.

During the **most recent valuation** (March 31, 2018), the reform adjustment in relation to the **application of changes to the prejudgement interest rate on general damages for non-pecuniary loss**, initially introduced with the September 30, 2017 valuation, was decreased from 1.5% to 1.0%. The reform adjustment applied retroactively (using negative IBNR) against bodily injury nominal unpaid claims amounts (outstanding case reserve and selected IBNR) impacting accidents years 2014 and prior, will be reduced at each successive valuation, assuming the impact of this product reform change will be fully reflected in outstanding case reserves by the September 30, 2018 valuation (that is, as this adjustment is unwound, it is anticipated that member settlement and case adjustment activity will occur simultaneously, neutralizing the adjustment unwind).

In addition to the above, in the **Ontario Court of Appeal** decisions in **El-Khodr v. Lackie** (September 19, 2017; 2017 ONCA 716) and **Cobb v. Long Estate** (September 19, 2017; 2017 ONCA 717), the court of appeal ruled that the changes to the tort deductible and monetary threshold were implemented to achieve particular policy objectives and therefore should have retrospective application (i.e. to be applied to all settlements on or after January 1, 2015). The Facility Association view, consistent with these decisions, is that the changes to the bodily injury tort threshold and deductibles are on a settlement date basis. With the **most recent valuation** (March 31, 2018), no additional reform adjustment was included as we have assumed the retroactive impact of this product reform change has been fully reflected in outstanding case reserves.

Recognizing that individual members may interpret these results differently, we have included a table at the top of the next page displaying the levels of Ontario RSP Third Party Liability – Bodily Injury Case Reserves (as at December 31, 2017³) by accident year as well as projected average duration, from accident date to projected settlement date, from the December 31, 2017 valuation paid emergence projection model. No attempt has been made to distinguish case reserves held for pecuniary versus non-pecuniary losses, nor in estimating the amount of prejudgment interest, if any, is included in the case reserve estimates.

³As we anticipate the full impact of the reforms will be accounted for in case reserves by December 31, 2018 and therefore with the 2018 Q4 valuation, we anticipated being able to remove this section when that valuation is implemented with the March 2019 Operational Report.

ON RSP (Amounts in \$000s; as at Dec. 31, 2017)

AY	Curr BI Case	avg yrs to Dec 2017	projected avg # yrs to settlement	projected avg duration
[1]	[2]	[5]	[6]	[7]
1993	-	24.5	-	-
1994	-	23.5	-	-
1995	-	22.5	-	-
1996	168	21.5	1.5	23.0
1997	-	20.5	-	-
1998	-	19.5	-	-
1999	-	18.5	-	-
2000	-	17.5	-	-
2001	-	16.5	-	-
2002	-	15.5	-	-
2003	8	14.5	5.0	19.5
2004	-	13.5	-	-
2005	16	12.5	6.3	18.8
2006	25	11.5	6.6	18.1
2007	734	10.5	7.2	17.7
2008	1,770	9.5	3.7	13.2
2009	4,207	8.5	2.0	10.5
2010	8,454	7.5	1.9	9.4
2011	8,745	6.5	2.0	8.5
2012	16,577	5.5	2.1	7.6
2013	27,154	4.5	2.1	6.6
2014	43,100	3.5	2.2	5.7
2015	47,100	2.5	2.5	5.0
2016	46,452	1.5	3.0	4.5
2017	36,601	0.5	3.8	4.3
TOTAL	241,111	3.1	2.6	5.8

In the table above, the column referenced as [7] (“projected avg duration”) is an estimate of the number of years from claim occurrence⁴ to claim settlement, via summing the average number of years from claim occurrence to December 31, 2017 (column [5]) and from December 31, 2017 to settlement (column [6]).

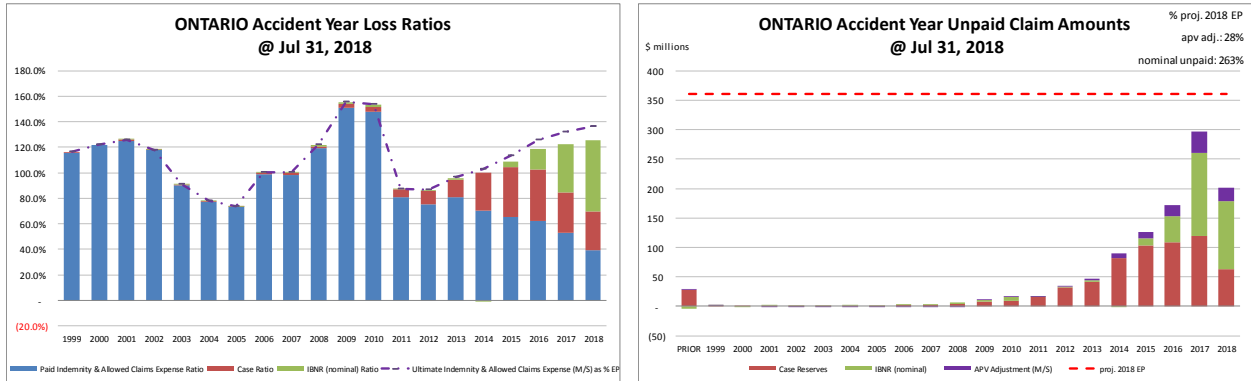
1.5 Current Provision Summary

The charts at the top of the next page show the current levels of claim liabilities⁵ booked by accident

⁴Prejudgment interest in Ontario applies to the period from the date the claim is reported, not from the time of occurrence. We have provided the latter to allow actuarial judgment to be applied in estimating the lag between occurrence and reporting.

⁵Claim 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.

year⁶. 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 2018 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 (\$102.7 million – see table immediately below) represents 28% of the earned premium projected for the full year 2018 (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	621,995	59.1%
ibnr	327,316	31.1%
M/S apv adjust.	102,665	9.8%
M/S total	1,051,976	100.0%

The table to the left breaks down the Member Statement (M/S) claim liabilities total into component parts, indicating case reserves represent the largest portion. Approximately 79% of the IBNR balance relates to accident years 2017 and 2018 (see Exhibit B). Approximately 84% of the M/S total claim

liabilities are related to accident years 2014-2018 inclusive (i.e. the most recent 5 accident years), and approximately 4% is related to accident years 2008 and prior (i.e. prior to the most recent 10 accident years).

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

premium liabilities (\$000s)

	amt	%
unearned prem	178,027	72.2%
prem def/(dpac)	47,303	19.2%
M/S apv adjust.	21,375	8.7%
M/S total	246,705	100.0%

policy liabilities (\$000s)

	amt	%
claim	949,311	73.1%
premium	225,330	17.4%
M/S apv adjust.	124,040	9.6%
M/S total	1,298,681	100.0%

⁶The 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”.

2 Activity During the Month of July 2018

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 Report⁷.

Ontario RSP Actual vs Projected Summary: Recorded Transaction Amounts (\$ thousands)

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	(1)	(1)	6,239	(3,478)	(4,751)	3,705	1,488	227
2016	(4)	(4)	2,511	(606)	1,353	3,507	3,864	2,901
2017	(33)	(33)	3,210	572	603	(1,112)	3,813	(540)
2018	29,660	(907)	14,153	(1,563)	7,527	1,093	21,681	(470)
TOTAL	29,623	(945)	26,113	(5,075)	4,733	7,193	30,846	2,118

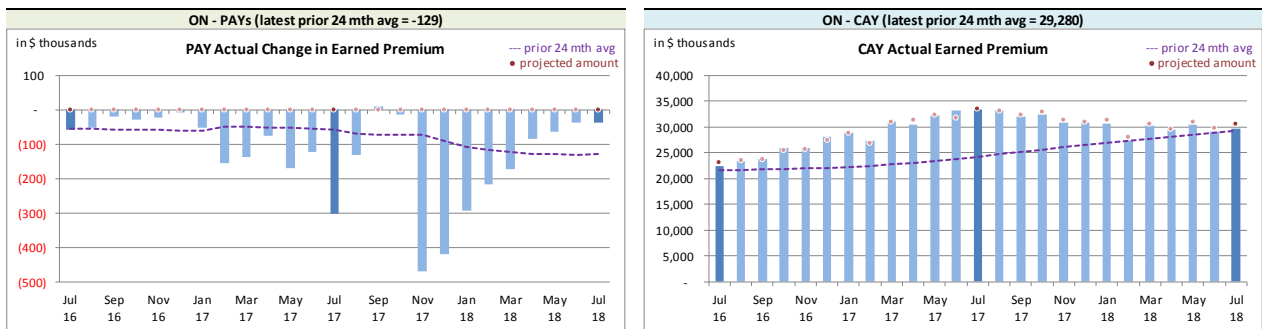
(Recorded transaction amounts exclude IBNR & other actuarial provisions)

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 immediately below show actual **earned premium**⁸ activity in each of the most recent 25 calendar months, along with a “prior 24-month average” to show how each month’s actual compares with the average amount of the preceding 24 calendar months.

Ontario RSP Actual **Earned Premium** by Calendar Month



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

The relatively high level of PAYs negative earned premium for share months November and

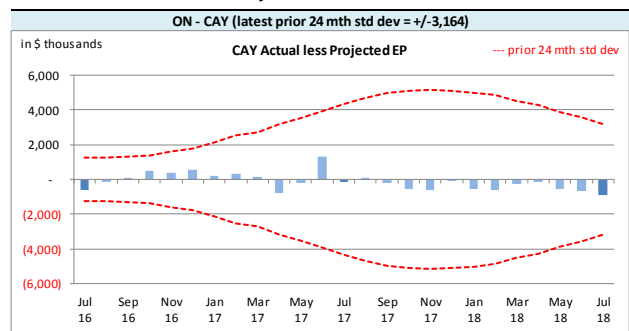
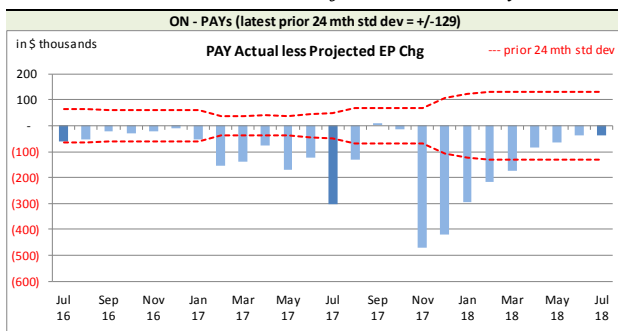
⁷There may be rounding differences in values in this document compared with the associated Bulletin and/or Operational Report.

⁸Premium 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.

December 2017 was related to a member company’s removal of ineligible risks as a result of a regular audit by FA internal audit. The high level of PAY negative earned premium for January through July 2018 is attributed to activity across several member companies and continues to be investigated by FA management.

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)	(129)	29,280
std dev	129	3,164
A-P <> std dev	12	-
% <> std dev	48.0%	0.0%
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) bias⁹, with actuals generally lower than projected, although the magnitude is not high relative to

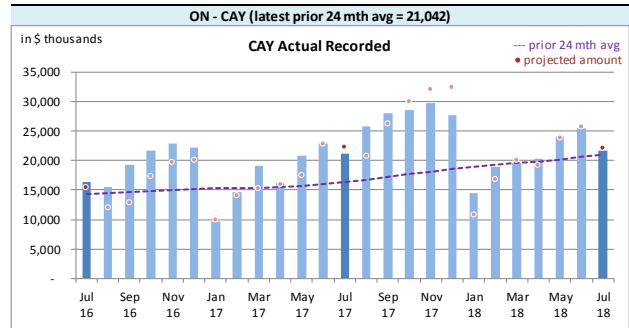
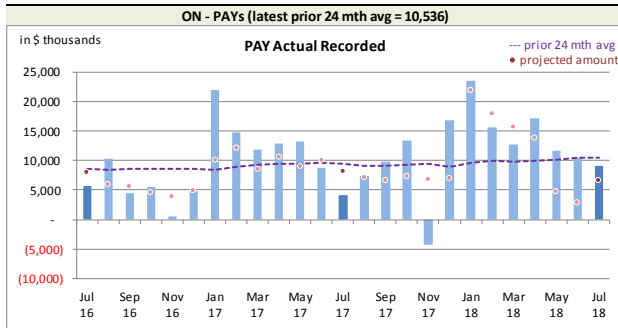
monthly premium. Over time, we may consider other projection approaches to narrow monthly variance levels further, but it is not currently deemed a priority. Readers will also note the significant widening then tapering of the CAY standard deviation band, reflecting recent volume changes and the impact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

2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

The charts at the top of the next page 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.

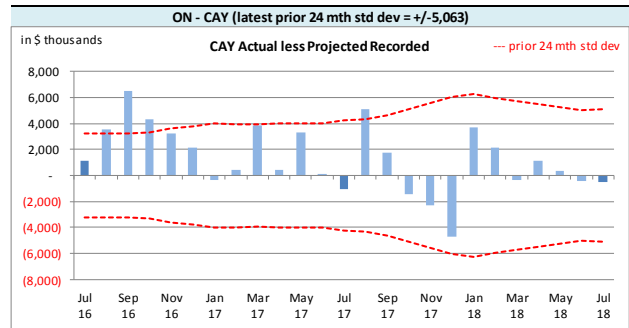
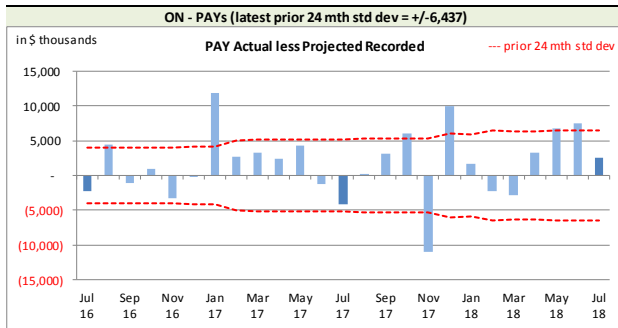
⁹The PAYs’ variances will show bias as the projection upload forces all earned premium projections to be attributed to the CAY.

Ontario RSP Actual Recorded by Calendar Month



Recorded activity variances from the previous month’s projections are shown in the 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)	10,536	10,536	21,042
std dev	6,437	6,437	5,063
A-P <> std dev	7	7	4
% <> std dev	28.0%	28.0%	16.0%
norm <> std dev	31.7%	31.7%	31.7%

With respect to **recorded** indemnity & allowed claims expense, 28% of the prior accident years’ (PAYs) variances (left chart above) were outside of one standard deviation over the period, suggesting the projection process has performed no better than simply projecting the prior 24-month average amount. No bias has been

indicated at a 95% confidence level on a lagging 24-month basis.

As first noted in the May 2018 Actuarial Highlights, the PAY projected **recorded** activity was adjusted for the months of May and June 2018 to account for a member correction in recorded case reserve overstatement. The May and June 2018 PAY **recorded** variances were outside of one standard deviation driven by adjustments made to the recorded projection, as FA expected corrections in recorded case reserve overstatement to happen during these months, as previously advised by the member (see following sections for more details). As the corrections did not go through as expected, the PAY **recorded** activity was higher than the projected by more than one standard deviation. The member is still engaged in a process to correct the reported levels.

The current accident year (CAY) **recorded** variances (right chart above) fell outside of one standard deviation 16% of the time over the entire period, suggesting that the projection process has performed better than simply projecting the prior 24-month average amount. Up until May 2018,

there does appear to be evidence of some bias at the 95% confidence level as 18¹⁰ times in the past 24 months (June 2016 to May 2018), actuals were higher than our projections for the CAY **recorded** amount. Among the 18 months in the past 24 where actuals were higher than our projections, 5 variances were outside the one standard deviation band. We modified our projections processes in response to these findings and continue to monitor.

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 Jul) provides the average of the 7 monthly ratios (i.e. Jan-Jul) for that row's calendar year.

Per the *left* table below (showing average monthly ratios for each calendar year), the 2017 average **recorded** ratio at 14.7% was the second highest ratio since 2010 (2016 was the highest), and the 2017 **paid** ratio at 7.6% tied with 2016 as the highest level since 2010. 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 (average of 7 months to Jul of each year), the 2018 average ratio for **recorded** is at its highest level since 2010 while the **paid** ratio is at its highest level in the last 10 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%

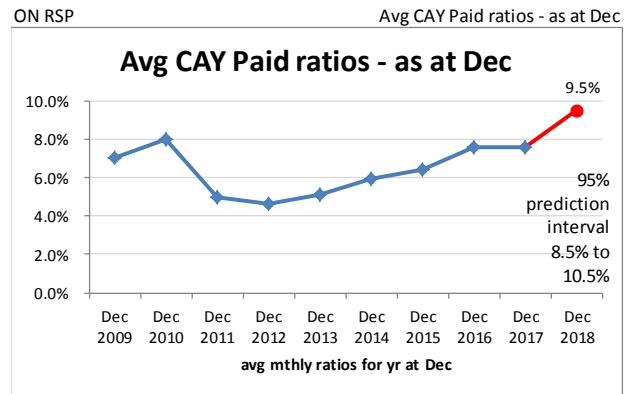
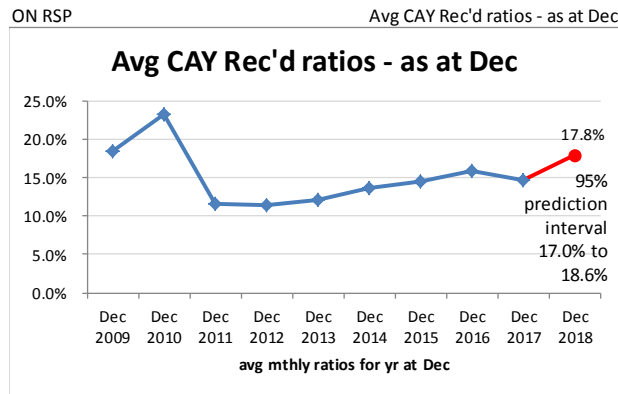
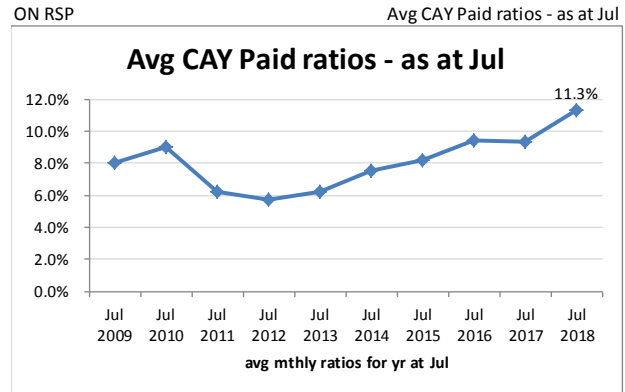
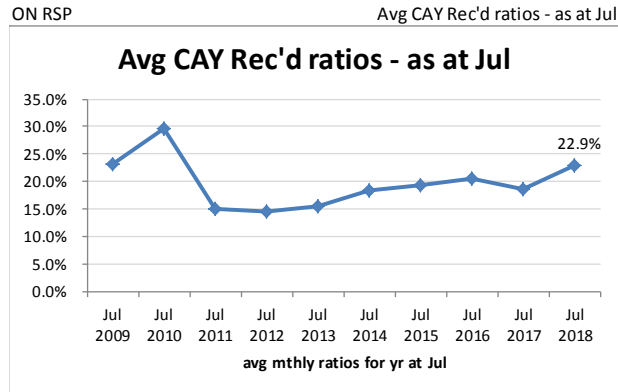
CAY avg of mthly ratios for yr

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%

There has been strong (over 95%) correlation between the ytd monthly average ratios at July each year and the corresponding monthly average ratios at December, suggesting the monthly average ratios for 2018 at July (that is, the average of the 7 monthly ratios Jan 2018 to Jul 2018) are predictive of where the 2018 monthly average ratios will be at year-end (that is, the 12 monthly ratios Jan 2018 – Dec 2018). Using simple regression, we forecast the average of the 12 monthly ratios for calendar year 2018 (i.e. the average of the monthly ratios for Jan 2018 – Dec 2018) will be 17.8% (95% prediction interval of 17.0% to 18.6%) for **recorded** and 9.5% (95% prediction interval of 8.5% to 10.5%) for **paid**. The results are presented in the charts at the top of the next page.

¹⁰For the binomial distribution with 24 trials and an assumed 50% success probability, the 95% confidence range is 7 to 17.

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.

As noted in the last six monthly Actuarial Highlights, FA management was notified on January 31, 2018 by a member of a potential recorded case reserve overstatement. Furthermore, during the latest valuation (March 31, 2018), FA management was advised of an additional and separate recorded case reserve understatement primarily due to incorrect reporting after FA's October 31, 2017 fiscal year end. Management investigated and estimated the overall overstatement for the Ontario RSP as at March 31, 2018 as indicated in the table at the top of the next page.

Estimated case reserve overstatement as at Mar 31, 2018

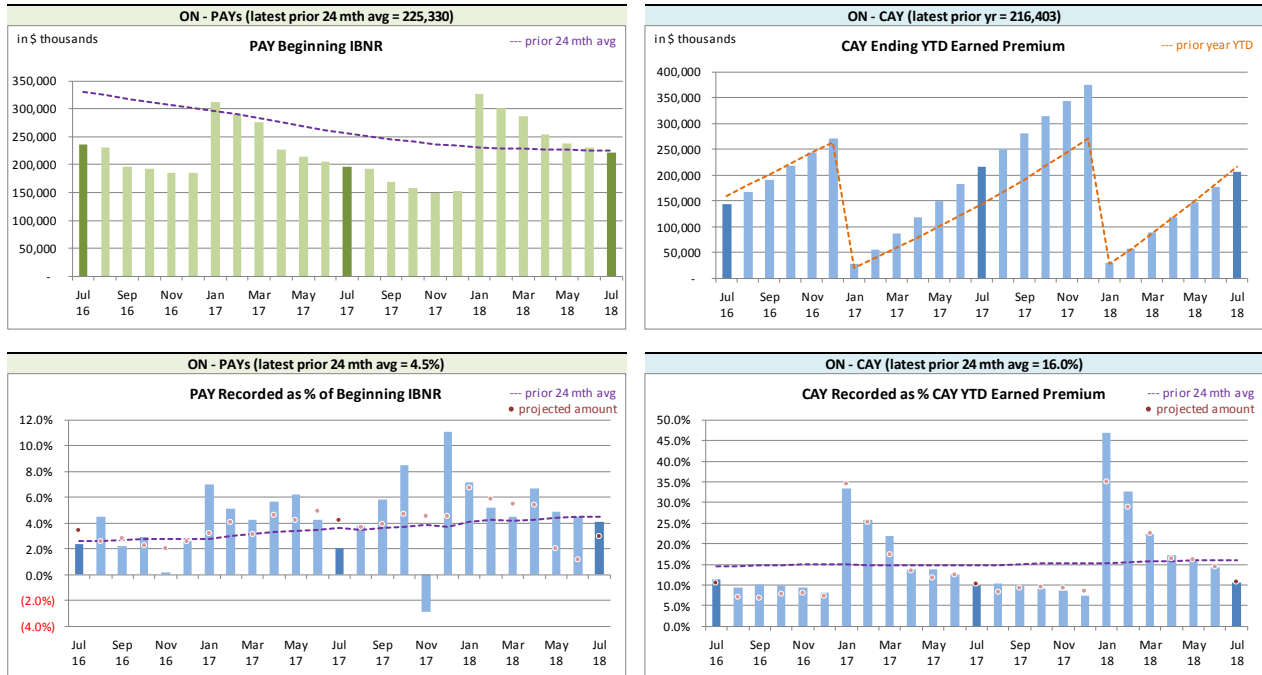
overstatement / (understatement)	
Accident Year	Total Case Reserve Overstatement (\$'000s)
2006	227
2007	201
2008	264
2009	1,030
2010	115
2011	(115)
2012	651
2013	(265)
2014	602
2015	1,162
2016	1,648
2017	2,989
Total	8,509

With the latest valuation (March 31, 2018), prior accident years' ultimates selections have taken into account the member's misstatement of case reserves (both the original amount as notified, and the subsequent amount, with the combination of the two being summarized in the table above). The member is still engaged in a process to correct the reported levels but we currently do not have a timeline on when this issue will be resolved.

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 influence¹¹ 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:

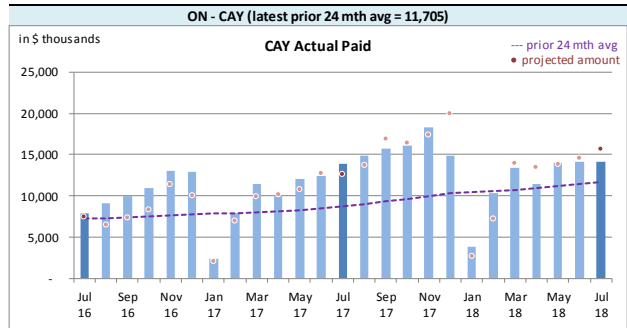
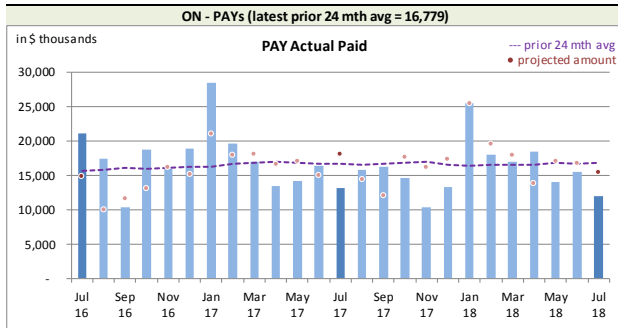
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a current accident year becomes a prior accident year (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of prior accident years’ ultimate (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.

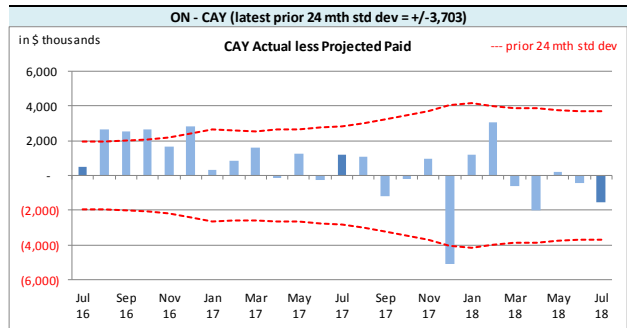
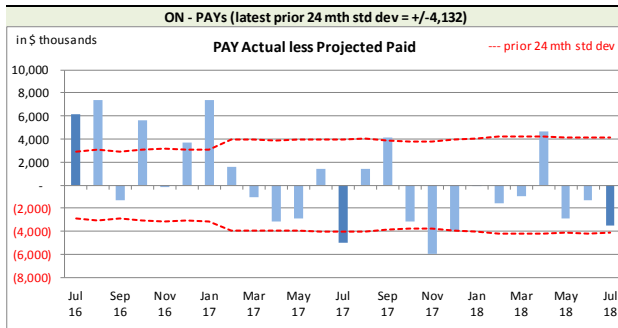
¹¹Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned 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)	16,779	16,779	11,705
std dev	4,132	4,132	3,703
A-P <> std dev	9	9	5
% <> std dev	36.0%	36.0%	20.0%
norm <> std dev	31.7%	31.7%	31.7%

With respect to **paid** indemnity & allowed claims expense, 36% of the prior accident years’ (PAYS) variances (left chart above) over the last 25 calendar months have fallen outside of one standard deviation, suggesting the projection process has performed no better than projecting simply based on the preceding 24-month average. No bias has been indicated at a 95% confidence level on a lagging 24-month basis.

The current accident year (CAY) **paid** variances over the last 25 calendar months have fallen outside of one standard deviation 20% of the time, suggesting the projection process has performed better than projecting simply based on the preceding 24-month average (see right chart above). Bias has been indicated at a 95% confidence level on a lagging 24-month basis¹² up until March 2018, as 18 times in the past 24 months (April 2016 to March 2018), actuals were higher than our projections for the CAY **paid** amount. Among the 18 months in the past 25 where actuals were higher than our projections, 4 variances were outside the one standard deviation band. We made adjustments to our projection process to reflect these findings, and they appear to have been somewhat successful.

¹²For the binomial distribution with 24 trials and an assumed 50% success probability, the 95% confidence range is 7 to 17.

The *bottom right* chart below shows that the rolling 24-month ratio of CAY **paid** to ytd **earned premium** has been increasing, which adds to the difficulty in projecting **paid** activity. We have made adjustments to our assumption selections in an attempt to account for these issues, but recognize, as discussed in the previous section, that the results may be signalling a change in paid patterns, a change in claims levels in general, or the impact of rate changes.

We have included, for reference, additional charts immediately below related to levels influencing **paid** activity.

Ontario RSP Levels that influence¹³ 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).

¹³Our 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.

2.2 Actuarial Provisions

An “ultimate loss ratio matching method” (described in section 3) is used to determine the month’s IBNR¹⁴, 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 immediately below summarizes variances in provisions included in the July 2018 Operational Report and the associated one-month projections from last month’s Report.

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

Table 02

Accident Year	IBNR		actuarial present value adjustments				IBNR + actuarial present value adjustments	
	Actual	Actual less Projected	Discount Amount		Provisions for Adverse Deviations		Actual	Actual less Projected
			Actual	Actual less Projected	Actual	Actual less Projected		
Prior	26,105	(229)	(20,806)	(211)	46,308	450	51,607	10
2016	44,297	(2,906)	(7,514)	(29)	26,149	103	62,932	(2,832)
2017	141,238	500	(14,331)	34	50,333	(117)	177,240	417
2018	115,676	(671)	(10,561)	(25)	33,087	78	138,202	(618)
TOTAL	327,316	(3,306)	(53,212)	(231)	155,877	514	429,981	(3,023)

The IBNR provision is \$3.3 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 at the top of the next page summarizes the variances in the provisions for premium deficiency liability / (deferred policy acquisition cost asset) included in the July 2018 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.

¹⁴For ease of discussion, “IBNR” is used in place of “provisions for incurred but not recorded (IBNR) and development”.

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:	47,303	(1,741)	21,375	(774)	68,678	(2,515)
balance as % unearned premium:	26.6%	-	12.0%	-	38.6%	-
actual unearned premium:	178,027					
less projected:	(6,421)					

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 loss¹⁵ 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 at the top of the next page summarizes the calendar year-to-date results for indemnity & allowed claims expenses¹⁶, 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 126.3% rather than 125.7% (the valuation ultimate ratio for accident year 2018), 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.)

¹⁵“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).

¹⁶Allowed claims expenses are first party legal and other expenses as listed in the RSP Claims Guide. Claims expenses paid through the member company expense allowance are NOT included in this analysis.

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

Table 04	YTD Nominal Values		YTD actuarial present value adjustment		YTD Total		Change from Prior Month YTD	
	Amount	% EP	Amount	% EP	Amount	% EP	Amount	LR pts
PAYs	(14,167)	(6.9%)	(14,529)	(7.0%)	(28,696)	(13.9%)	(1,217)	1.7%
CAY	260,312	126.3%	22,526	10.9%	282,838	137.2%	40,192	(0.2%)
TOTAL	246,146	119.4%	7,997	3.9%	254,143	123.3%	38,975	1.4%

(“% EP” based on 2018 calendar year-to-date earned premium; ratios may not total due to rounding)

In general, prior accident years (PAYs) changes from last month are due to the release of the actuarial present value adjustments with claims payments, except when valuations are implemented. The loss ratio change year-to-date in Table 04 reflects not only changes in the prior accident year levels, but also the increase in the calendar year-to-date earned premium with an additional month’s earned premium.

For the current accident year (CAY), changes in the year-to-date total reflects the additional month’s exposure and regular changes to actuarial present value adjustments as the year ages.

5 Current Operational Report – Additional Exhibits

Section 6 provides exhibits pertaining to the actuarial provisions reflected in the current month’s Operational Report.

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

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

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

6 EXHIBITS

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

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

EXHIBIT A

IBNR for Member Sharing – includes Actuarial Present Value Adjustments

TABLE EXHIBIT A

		Amounts in \$000s				
		Actual	Actual	Projected	Projected	Projected
		Jun. 2018	Jul. 2018	Aug. 2018	Sep. 2018	Dec. 2018
IBNR + M/S actuarial present value adjustments	Accident Year					
	prior	(3,751)	(3,687)	(3,565)	(3,549)	(3,277)
	1999	28	29	27	26	25
	2000	(4)	(4)	(4)	(4)	(4)
	2001	63	63	61	60	53
	2002	174	174	168	167	154
	2003	301	817	793	786	725
	2004	341	341	331	328	303
	2005	473	473	459	454	417
	2006	788	789	764	759	700
	2007	1,093	1,086	1,053	1,045	964
	2008	2,530	2,558	2,479	2,457	2,267
	2009	3,286	2,928	2,841	2,812	2,590
	2010	6,156	6,152	5,973	5,905	5,436
	2011	611	777	759	741	678
	2012	1,985	2,878	2,803	2,756	2,530
discount rate	2013	6,196	6,247	6,089	5,968	5,474
1.89%	2014	8,583	6,632	6,388	6,151	6,499
	2015	24,659	23,354	22,201	20,177	16,883
interest rate margin	2016	67,107	62,932	59,459	54,975	46,167
25 basis pts	2017	181,542	177,240	170,868	166,449	152,910
	2018	119,691	138,202	153,889	168,807	209,045
	TOTAL	421,852	429,981	433,836	437,270	450,539
	Change		8,129	3,855	3,434	

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 Jun. 2018	Actual Jul. 2018	Projected Aug. 2018	Projected Sep. 2018	Projected Dec. 2018
	-	prior	(4,711)	(4,638)	(4,499)	(4,454)	(4,103)
	116.3%	1999	18	18	17	17	16
	122.0%	2000	(4)	(4)	(4)	(4)	(4)
	126.1%	2001	67	67	65	64	58
	118.0%	2002	177	177	172	170	156
	91.2%	2003	323	839	814	806	743
	77.8%	2004	381	381	370	366	337
	73.8%	2005	495	496	481	476	438
	100.7%	2006	922	922	894	885	815
	100.5%	2007	1,254	1,248	1,211	1,199	1,104
	122.0%	2008	2,725	2,752	2,669	2,642	2,435
	155.5%	2009	3,228	2,873	2,787	2,759	2,542
	153.5%	2010	5,665	5,667	5,497	5,442	5,014
	86.9%	2011	73	269	261	258	237
	86.3%	2012	1,003	1,914	1,857	1,838	1,694
	95.8%	2013	3,071	3,186	3,090	3,059	2,818
	99.9%	2014	290	(1,512)	(1,512)	(1,512)	(565)
	109.0%	2015	12,618	11,450	10,534	8,743	6,121
	119.0%	2016	48,166	44,297	41,196	37,076	29,150
	122.2%	2017	145,091	141,238	135,588	131,520	120,035
	125.7%	2018	100,075	115,676	128,440	140,556	172,959
		TOTAL	320,927	327,316	329,928	331,906	342,000
		Change		6,389	2,612	1,978	

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. 2018	Actual Jul. 2018	Projected Aug. 2018	Projected Sep. 2018	Projected Dec. 2018
Premium Liabilities					
(1) unearned premium (UP)	176,048	178,027	187,535	196,223	207,092
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	138.4%	138.6%	138.8%	139.0%	139.9%
(3) expected future costs {(1) x (2)}	243,632	246,705	260,314	272,843	289,633
(4) premium deficiency / (deferred policy acquisition cost)	67,584	68,678	72,779	76,620	82,541
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	126.4%	126.6%	126.8%	127.0%	127.7%
(6) expected future costs {(1) x (5)}	222,525	225,330	237,759	249,203	264,539
(7) premium deficiency / (deferred policy acquisition cost)	46,477	47,303	50,224	52,980	57,447

EXHIBIT D
Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2018, broken down by component.

Ontario		Projected Balances as at Dec. 31, 2018 (\$000s)									
ending 2018		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	24,062	(4,103)	19,959	(1,209)	160	1,996	(121)	1,875	826	20,785	
1999	597	16	613	(54)	7	61	(5)	56	9	622	
2000	15	(4)	11	(1)	-	1	-	1	-	11	
2001	744	58	802	(86)	10	80	(9)	71	(5)	797	
2002	51	156	207	(24)	3	21	(2)	19	(2)	205	
2003	267	743	1,010	(121)	14	101	(12)	89	(18)	992	
2004	992	337	1,329	(171)	21	133	(17)	116	(34)	1,295	
2005	156	438	594	(81)	9	59	(8)	51	(21)	573	
2006	1,830	815	2,645	(386)	45	265	(39)	226	(115)	2,530	
2007	2,028	1,104	3,132	(460)	53	313	(46)	267	(140)	2,992	
2008	2,933	2,435	5,368	(719)	86	537	(72)	465	(168)	5,200	
2009	6,385	2,542	8,927	(857)	98	893	(86)	807	48	8,975	
2010	8,590	5,014	13,604	(952)	109	1,360	(95)	1,265	422	14,026	
2011	13,972	237	14,209	(995)	114	1,421	(99)	1,322	441	14,650	
2012	27,465	1,694	29,159	(2,129)	262	2,916	(213)	2,703	836	29,995	
2013	35,672	2,818	38,490	(2,155)	269	4,811	(269)	4,542	2,656	41,146	
2014	69,861	(565)	69,296	(3,257)	416	10,394	(489)	9,905	7,064	76,360	
2015	97,909	6,121	104,030	(4,577)	520	15,501	(682)	14,819	10,762	114,792	
2016	110,878	29,150	140,028	(6,861)	840	24,225	(1,187)	23,038	17,017	157,045	
2017	117,900	120,035	237,935	(13,086)	1,666	46,873	(2,578)	44,295	32,875	270,810	
PAYs (sub-total):	522,307	169,041	691,348	(38,181)	4,702	111,961	(6,029)	105,932	72,453	763,801	
CAY (2018)	113,789	172,959	286,748	(16,918)	2,007	54,195	(3,198)	50,997	36,086	322,834	
claims liabilities:	636,096	342,000	978,096	(55,099)	6,709	166,156	(9,227)	156,929	108,539	1,086,635	
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*	
premium liabilities:	207,092	57,447	264,539	(12,674)	1,320	38,286	(1,838)	36,448	25,094	289,633	
*Total may not be sum of parts, as apvs apply to future costs within UPR											
policy liabilities:			1,242,635	(67,773)	8,029	204,442	(11,065)	193,377	133,633	1,376,268	

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, 2018 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Selected Claims Development MfADs (Mar. 31, 2018)

Accident Year	Third Party Liability Margins	Accident Benefits Margins	Other Coverages Margins	Total Margins
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	8.9%	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%	9.8%	10.0%
2012	10.0%	10.0%	9.0%	10.0%
2013	12.5%	12.5%	12.1%	12.5%
2014	15.0%	15.0%	13.0%	15.0%
2015	14.9%	15.0%	11.1%	14.9%
2016	17.3%	17.5%	11.3%	17.3%
2017	19.7%	20.0%	10.0%	19.7%
2018	18.7%	20.0%	6.3%	18.9%
2019	14.0%	20.0%	5.2%	14.5%
prem liab	14.0%	20.0%	5.2%	14.5%

discount rate: 1.89%
 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, 2018 from the latest valuation date (projections in exhibits A to D are also to Dec. 31, 2018, but are based on more up-to-date information). We have included the most recent valuation selection (1.89%), the prior valuation assumption (1.73%) and the prior fiscal year end valuation assumption (1.75%) 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, 2018 projected Unpaid							
	0.89%	1.39%	1.89%	2.39%	2.89%	3.39%	1.73%	1.75%
2003 & prior	27,643	27,151	26,671	26,212	25,764	25,328	26,826	26,805
2004	1,609	1,551	1,497	1,445	1,396	1,349	1,514	1,512
2005	747	719	692	666	642	620	700	699
2006	3,213	3,082	2,958	2,842	2,732	2,629	2,997	2,992
2007	3,514	3,369	3,233	3,105	2,984	2,871	3,276	3,271
2008	4,543	4,374	4,214	4,065	3,923	3,791	4,264	4,258
2009	8,853	8,620	8,401	8,197	8,004	7,824	8,470	8,462
2010	14,095	13,827	13,574	13,336	13,111	12,899	13,653	13,644
2011	16,925	16,604	16,299	16,013	15,741	15,484	16,395	16,384
2012	29,991	29,397	28,833	28,302	27,796	27,318	29,013	28,990
2013	34,902	34,378	33,875	33,398	32,939	32,503	34,037	34,015
2014	69,756	68,876	68,027	67,222	66,443	65,702	68,299	68,260
2015	110,057	108,752	107,487	106,268	105,098	103,968	107,883	107,839
2016	158,681	156,584	154,566	152,615	150,737	148,893	155,214	155,121
2017	280,584	276,448	272,419	268,564	264,802	261,155	273,730	273,548
2018	359,864	354,185	348,654	343,358	338,193	333,246	350,431	350,187
Total	1,124,977	1,107,917	1,091,400	1,075,608	1,060,305	1,045,580	1,096,702	1,095,987
	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							
	0.89%	1.39%	1.89%	2.39%	2.89%	3.39%	1.73%	1.75%
Total	33,577	16,517	-	(15,792)	(31,095)	(45,820)	5,302	4,587
	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							
	0.89%	1.39%	1.89%	2.39%	2.89%	3.39%	1.73%	1.75%
2003 & prior	3.6%	1.8%	-	(1.7%)	(3.4%)	(5.0%)	0.6%	0.5%
2004	7.5%	3.6%	-	(3.5%)	(6.7%)	(9.9%)	1.1%	1.0%
2005	7.9%	3.9%	-	(3.8%)	(7.2%)	(10.4%)	1.2%	1.0%
2006	8.6%	4.2%	-	(3.9%)	(7.6%)	(11.1%)	1.3%	1.1%
2007	8.7%	4.2%	-	(4.0%)	(7.7%)	(11.2%)	1.3%	1.2%
2008	7.8%	3.8%	-	(3.5%)	(6.9%)	(10.0%)	1.2%	1.0%
2009	5.4%	2.6%	-	(2.4%)	(4.7%)	(6.9%)	0.8%	0.7%
2010	3.8%	1.9%	-	(1.8%)	(3.4%)	(5.0%)	0.6%	0.5%
2011	3.8%	1.9%	-	(1.8%)	(3.4%)	(5.0%)	0.6%	0.5%
2012	4.0%	2.0%	-	(1.8%)	(3.6%)	(5.3%)	0.6%	0.5%
2013	3.0%	1.5%	-	(1.4%)	(2.8%)	(4.1%)	0.5%	0.4%
2014	2.5%	1.2%	-	(1.2%)	(2.3%)	(3.4%)	0.4%	0.3%
2015	2.4%	1.2%	-	(1.1%)	(2.2%)	(3.3%)	0.4%	0.3%
2016	2.7%	1.3%	-	(1.3%)	(2.5%)	(3.7%)	0.4%	0.4%
2017	3.0%	1.5%	-	(1.4%)	(2.8%)	(4.1%)	0.5%	0.4%
2018	3.2%	1.6%	-	(1.5%)	(3.0%)	(4.4%)	0.5%	0.4%
Total	3.1%	1.5%	-	(1.4%)	(2.8%)	(4.2%)	0.5%	0.4%
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

EXHIBIT G

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Components of Member Statement IBNR (i.e. “Discounted”) Change During Month

RSP		Ontario						M/S IBNR - in \$000s
AccountCode	Desc	IBNR - Discou						
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	(3,751)	209	(145)	-	64	(1.7%)	(3,687)	
1999	28	(1)	2	-	1	3.6%	29	
2000	(4)	-	-	-	-	-	(4)	
2001	63	(3)	3	-	-	-	63	
2002	174	(9)	9	-	-	-	174	
2003	301	(14)	530	-	516	171.4%	817	
2004	341	(17)	17	-	-	-	341	
2005	473	(25)	25	-	-	-	473	
2006	788	(41)	42	-	1	0.1%	789	
2007	1,093	(59)	52	-	(7)	(0.6%)	1,086	
2008	2,530	(131)	159	-	28	1.1%	2,558	
2009	3,286	(163)	(195)	-	(358)	(10.9%)	2,928	
2010	6,156	(298)	294	-	(4)	(0.1%)	6,152	
2011	611	(20)	186	-	166	27.2%	777	
2012	1,985	(79)	972	-	893	45.0%	2,878	
2013	6,196	(247)	298	-	51	0.8%	6,247	
2014	8,583	(271)	(1,680)	-	(1,951)	(22.7%)	6,632	
2015	24,659	(746)	(559)	-	(1,305)	(5.3%)	23,354	
2016	67,107	(1,343)	(2,832)	-	(4,175)	(6.2%)	62,932	
2017	181,542	(4,719)	417	-	(4,302)	(2.4%)	177,240	
2018	119,691	19,129	(618)	-	18,511	15.5%	138,202	
Grand Total	421,852	11,152	(3,023)	-	8,129	1.9%	429,981	

EXHIBIT G

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

RSP **Ontario**

AccountCode Desc **IBNR - Undiscounted**

IBNR - in \$000s

AccYear	Values				Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation			
prior	(4,711)	237	(164)	-	73	(1.5%)	(4,638)
1999	18	(1)	1	-	-	-	18
2000	(4)	-	-	-	-	-	(4)
2001	67	(3)	3	-	-	-	67
2002	177	(9)	9	-	-	-	177
2003	323	(16)	532	-	516	159.8%	839
2004	381	(19)	19	-	-	-	381
2005	495	(25)	26	-	1	0.2%	496
2006	922	(46)	46	-	-	-	922
2007	1,254	(63)	57	-	(6)	(0.5%)	1,248
2008	2,725	(136)	163	-	27	1.0%	2,752
2009	3,228	(161)	(194)	-	(355)	(11.0%)	2,873
2010	5,665	(283)	285	-	2	-	5,667
2011	73	(4)	200	-	196	268.5%	269
2012	1,003	(50)	961	-	911	90.8%	1,914
2013	3,071	(154)	269	-	115	3.7%	3,186
2014	290	(23)	(1,779)	-	(1,802)	(621.4%)	(1,512)
2015	12,618	(505)	(663)	-	(1,168)	(9.3%)	11,450
2016	48,166	(963)	(2,906)	-	(3,869)	(8.0%)	44,297
2017	145,091	(4,353)	500	-	(3,853)	(2.7%)	141,238
2018	100,075	16,272	(671)	-	15,601	15.6%	115,676
Grand Total	320,927	9,695	(3,306)	-	6,389	2.0%	327,316