



ONTARIO RISK SHARING POOL

JUNE 2018 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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ACTUARIAL HIGHLIGHTS
RSP ONTARIO
OPERATIONAL REPORT
JUNE 2018

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1 Summary

1.1 Valuation Schedule (Fiscal Year 2018)

The June 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 August.

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]).

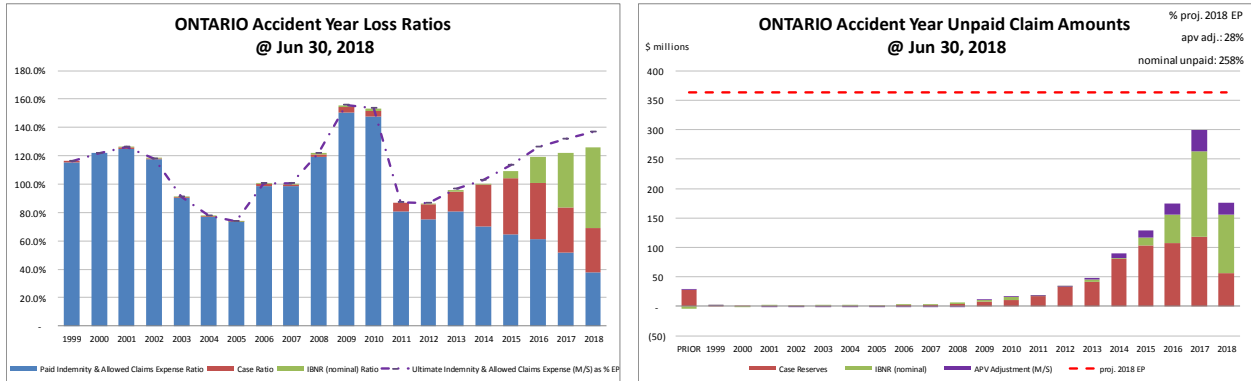
1.5 Current Provision Summary

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 (\$100.9 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	617,262	59.4%
ibnr	320,927	30.9%
M/S apv adjust.	100,925	9.7%
M/S total	1,039,114	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 76% 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	176,048	72.3%
prem def/(dpac)	46,477	19.1%
M/S apv adjust.	21,107	8.7%
M/S total	243,632	100.0%

policy liabilities (\$000s)

	amt	%
claim	938,189	73.1%
premium	222,525	17.3%
M/S apv adjust.	122,032	9.5%
M/S total	1,282,746	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 June 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	(6)	(6)	7,730	(520)	(6,663)	3,349	1,068	2,830
2016	(9)	(9)	2,816	(358)	313	1,948	3,129	1,590
2017	(22)	(22)	4,944	(432)	1,247	3,597	6,191	3,165
2018	29,171	(682)	14,129	(449)	11,238	43	25,366	(406)
TOTAL	29,134	(719)	29,619	(1,759)	6,136	8,938	35,755	7,179

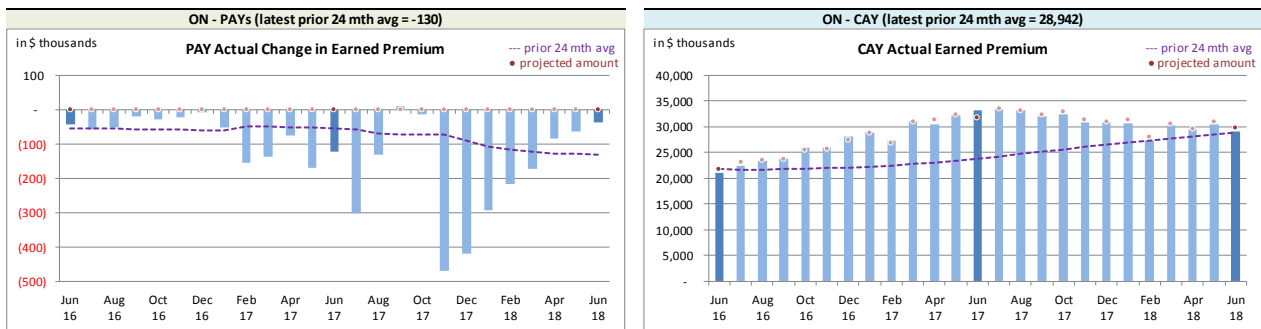
(Recorded transaction amounts exclude IBNR & other actuarial provisions)

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

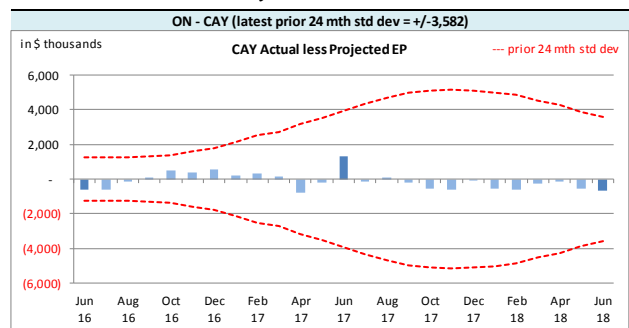
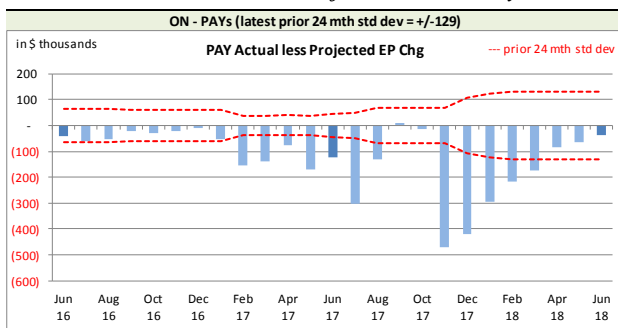
⁷There may be rounding differences in values in this document compared with the associated Bulletin and/or Operational Report.

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 June 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)	(130)	28,942
std dev	129	3,582
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

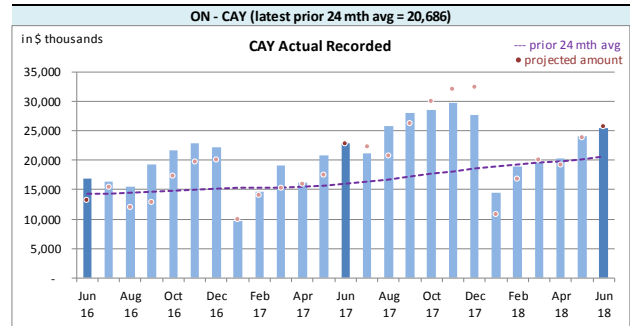
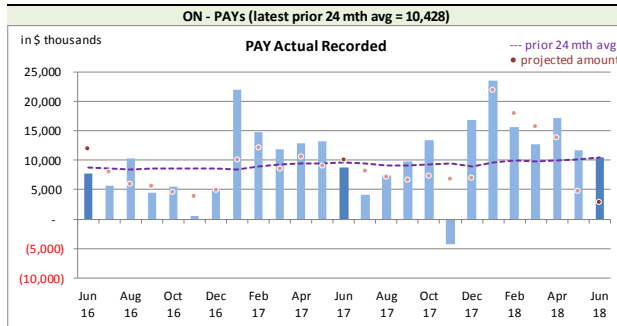
monthly premium. Over time, we may consider other projection approaches to narrow monthly variance levels further, but it is not currently deemed a priority. Readers will also note the significant widening then tapering of the CAY standard deviation band, reflecting recent volume changes and the impact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

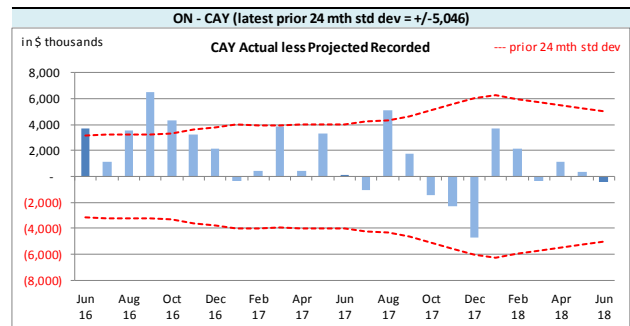
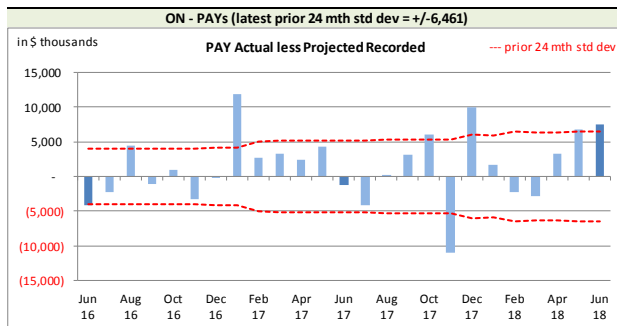
⁹The PAYs’ variances will show bias as the projection upload forces all earned premium projections to be attributed to the CAY.

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)	10,428	10,428	20,686
std dev	6,461	6,461	5,046
A-P <> std dev	8	8	5
% <> std dev	32.0%	32.0%	20.0%
norm <> std dev	31.7%	31.7%	31.7%

With respect to **recorded** indemnity & allowed claims expense, 32% 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 PAY **recorded** variance was outside of one standard deviation, driven by adjustments made to the recorded projection, as FA expected the correction in recorded case reserve overstatement to happen this month, as previously advised by a member (see following sections for more details). As the correction did not go through during the current month, the PAY **recorded** activity was higher than the projected by more than one standard deviation. The member is still engaged in their process to correct the reported levels.

The current accident year (CAY) **recorded** variances (right chart above) fell outside of one standard deviation 20% 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 Jun) provides the average of the 6 monthly ratios (i.e. Jan-Jun) 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 6 months to Jun 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%

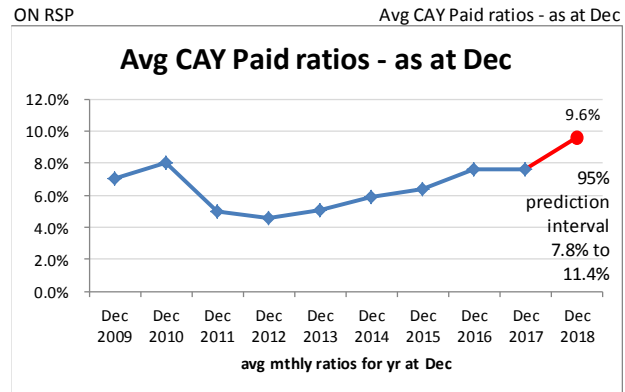
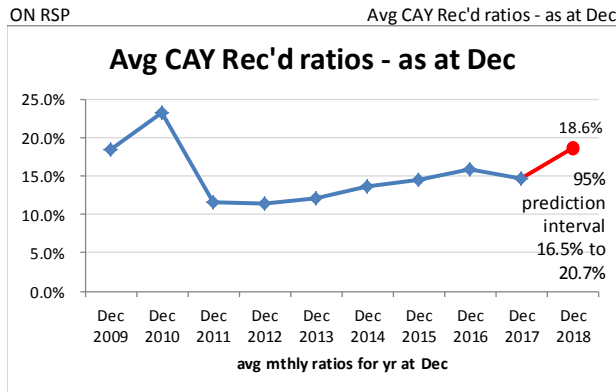
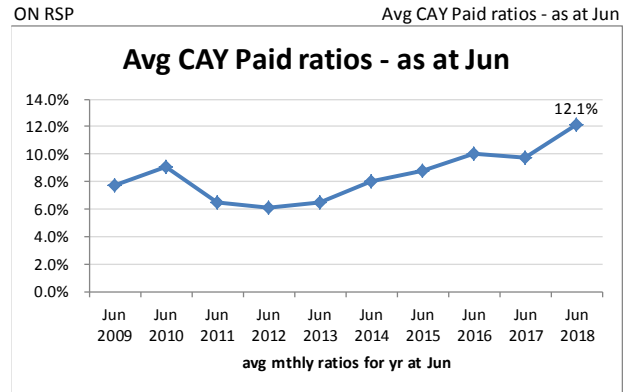
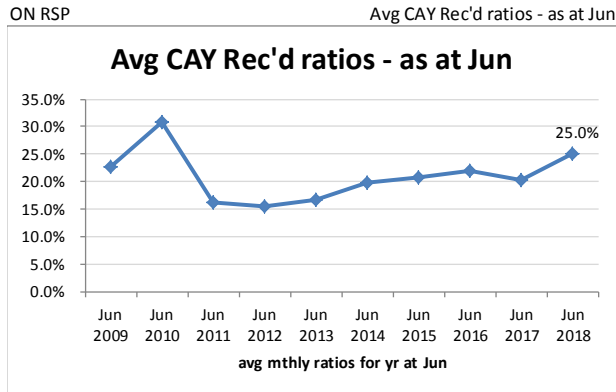
CAY avg of mthly ratios for yr

as at	Rec'd	yr-on-yr chg	Paid	yr-on-yr chg
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%

There has been strong (over 95%) correlation between the ytd monthly average ratios at June each year and the corresponding monthly average ratios at December, suggesting the monthly average ratios for 2018 at June (that is, the average of the 6 monthly ratios Jan 2018 to Jun 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 18.6% (95% prediction interval of 16.5% to 20.7%) for recorded and 9.6% (95% prediction interval of 7.8% to 11.4%) 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 five month's 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

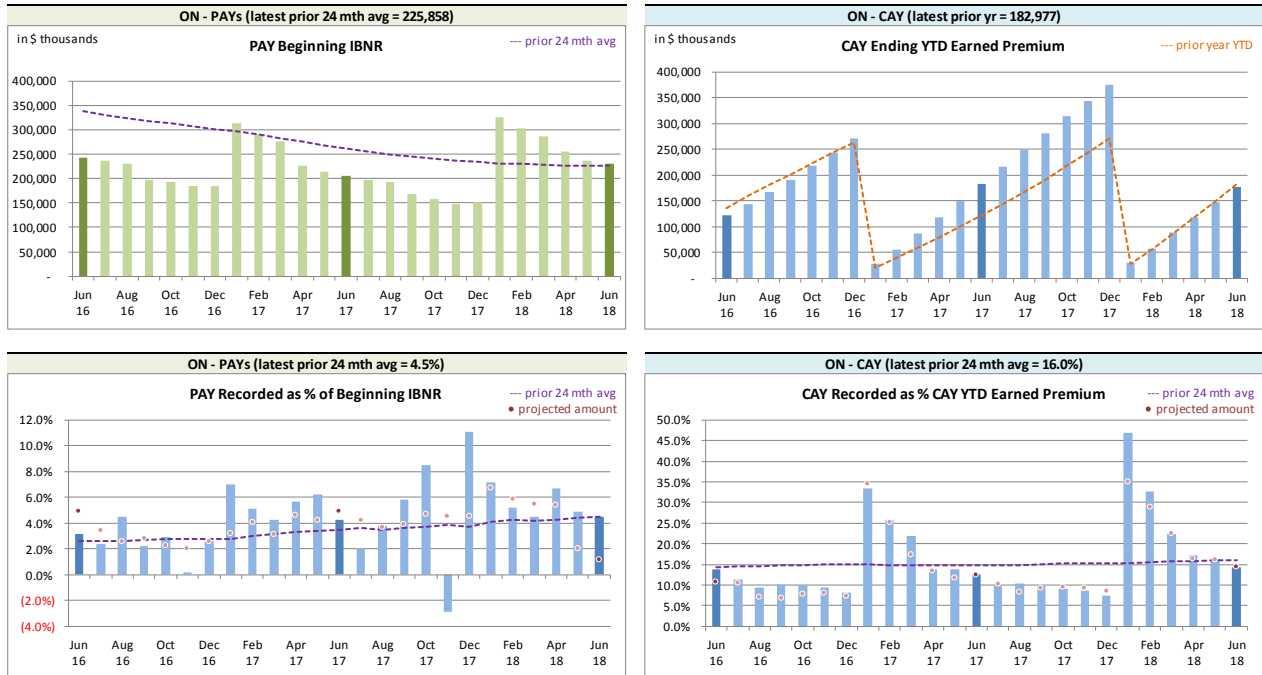
<u>overstatement / (understatement)</u>	
Accident Year	Total Case Reserve Adjustment (\$'000s)
2006	227
2007	201
2008	264
2009	1,030
2010	115
2011	(115)
2012	651
2013	(265)
2014	602
2015	1,162
2016	1,648
2017	2,989
Total	8,509

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:

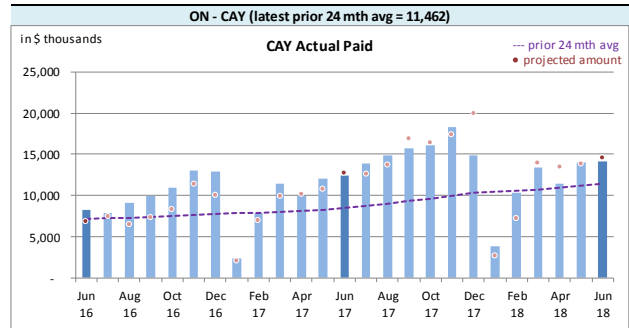
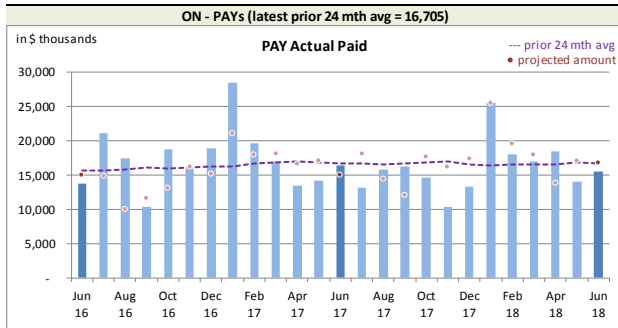
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a current accident year becomes a prior accident year (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of prior accident years’ ultimate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

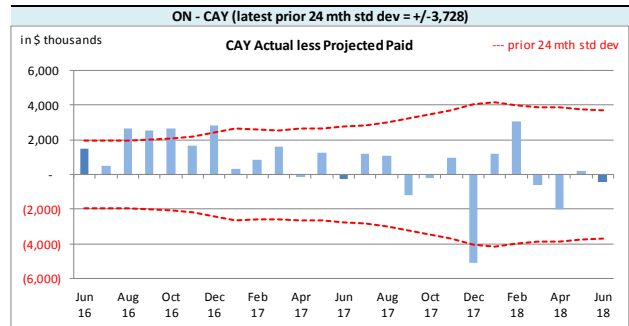
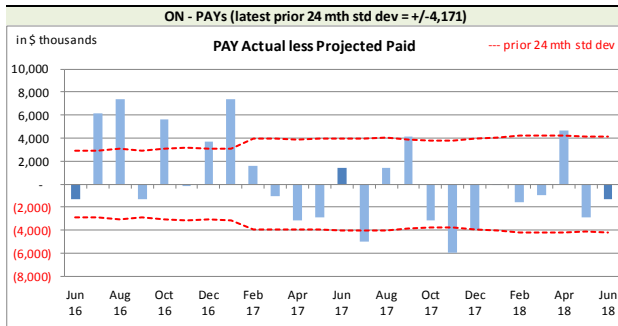
¹¹Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned 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)	16,705	16,705	11,462
std dev	4,171	4,171	3,728
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.

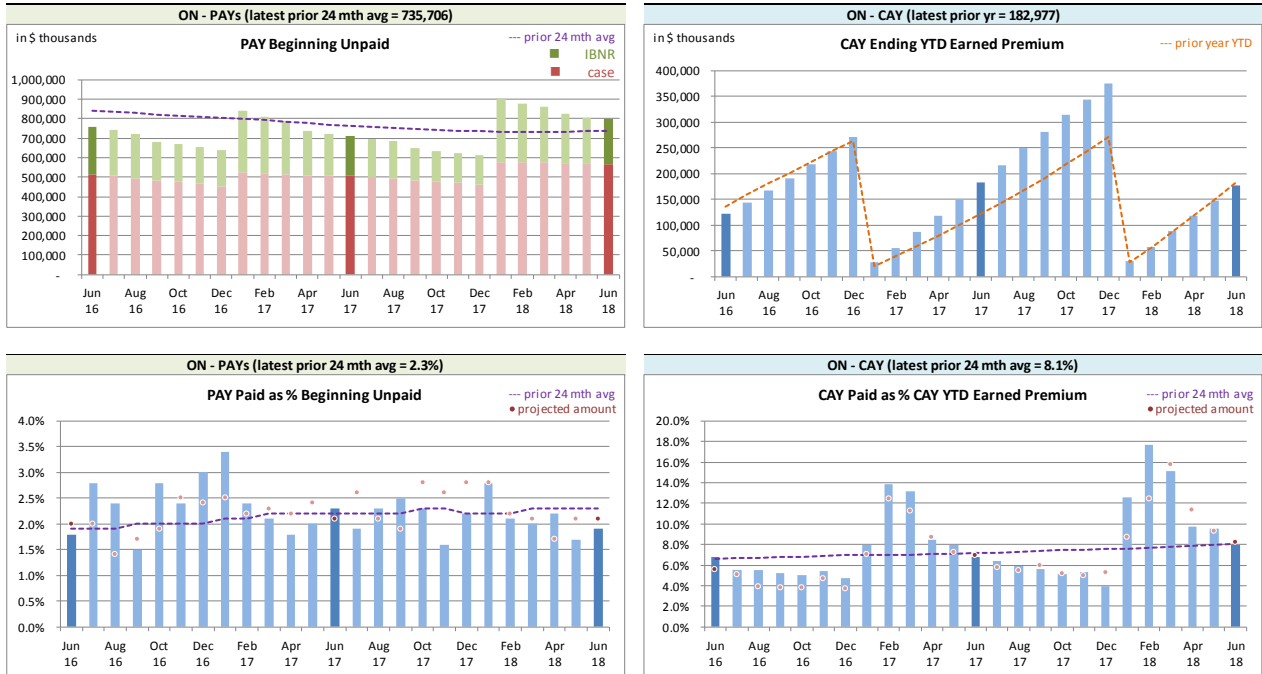
The bottom right chart on the next page shows that the rolling 24-month ratio of CAY **paid** to ytd

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

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 June 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	27,595	(2,833)	(21,183)	(38)	47,100	73	53,512	(2,798)
2016	48,166	(1,601)	(7,637)	(17)	26,578	59	67,107	(1,559)
2017	145,091	(3,192)	(14,510)	(22)	50,961	79	181,542	(3,135)
2018	100,075	(451)	(9,196)	24	28,812	(75)	119,691	(502)
TOTAL	320,927	(8,077)	(52,526)	(53)	153,451	136	421,852	(7,994)

The IBNR provision is \$8.1 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. The lower than projected PAY **IBNR** amount was driven by adjustments made to the recorded projection in anticipation of a member correction in recorded case reserve overstatement this month, which as we understand, did not go through as expected (see detailed discussion in section 2.1.b).

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 June 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

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

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:	46,477	(1,729)	21,107	(773)	67,584	(2,502)
balance as % unearned premium:	26.4%	-	12.0%	-	38.4%	-
actual unearned premium:	176,048					
less projected:	(6,412)					

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	(14,119)	(8.0%)	(13,359)	(7.6%)	(27,478)	(15.6%)	(1,657)	1.9%
CAY	223,031	126.3%	19,616	11.1%	242,647	137.4%	39,505	(0.4%)
TOTAL	208,911	118.3%	6,257	3.5%	215,168	121.9%	37,849	1.6%

(“% 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
		May. 2018	Jun. 2018	Jul. 2018	Aug. 2018	Dec. 2018
IBNR + M/S actuarial present value adjustments	Accident Year					
	prior	(5,908)	(3,751)	(3,542)	(3,427)	(3,150)
	1999	29	28	27	25	24
	2000	(4)	(4)	(4)	(4)	(4)
	2001	63	63	60	58	52
	2002	174	174	165	160	146
	2003	301	301	287	278	255
	2004	341	341	324	313	288
	2005	470	473	448	433	395
	2006	836	788	747	723	662
	2007	1,027	1,093	1,034	1,000	918
	2008	2,421	2,530	2,399	2,325	2,125
	2009	3,305	3,286	3,123	3,030	2,763
	2010	6,162	6,156	5,858	5,688	5,176
	2011	1,444	611	591	578	513
	2012	3,230	1,985	1,906	1,858	1,670
discount rate	2013	6,205	6,196	5,949	5,800	5,210
1.89%	2014	9,501	8,583	8,312	8,038	7,060
	2015	25,572	24,659	23,913	22,708	17,305
interest rate margin	2016	70,590	67,107	65,764	62,562	48,355
25 basis pts	2017	188,447	181,542	176,823	171,880	153,808
	2018	105,552	119,691	138,820	157,374	206,297
	TOTAL	419,758	421,852	433,004	441,400	449,868
	Change		2,094	11,152	8,396	

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. 2018	Actual Jun. 2018	Projected Jul. 2018	Projected Aug. 2018	Projected Dec. 2018
	-	prior	(6,871)	(4,711)	(4,474)	(4,340)	(3,958)
	116.3%	1999	18	18	17	16	15
	122.0%	2000	(4)	(4)	(4)	(4)	(4)
	126.1%	2001	67	67	64	62	55
	118.0%	2002	177	177	168	163	148
	91.2%	2003	323	323	307	298	272
	77.8%	2004	381	381	362	351	321
	73.8%	2005	493	495	470	456	415
	100.7%	2006	970	922	876	850	775
	100.5%	2007	1,190	1,254	1,191	1,155	1,054
	122.0%	2008	2,620	2,725	2,589	2,511	2,290
	155.5%	2009	3,245	3,228	3,067	2,975	2,714
	153.5%	2010	5,651	5,665	5,382	5,221	4,762
	86.9%	2011	885	73	69	67	60
	86.3%	2012	2,226	1,003	953	924	843
	95.8%	2013	3,034	3,071	2,917	2,829	2,580
	99.9%	2014	935	290	267	235	80
	109.0%	2015	13,326	12,618	12,113	11,144	6,638
	119.0%	2016	51,306	48,166	47,203	44,371	31,747
	122.2%	2017	151,309	145,091	140,738	136,516	120,857
	125.7%	2018	88,773	100,075	116,347	132,081	169,892
		TOTAL	320,054	320,927	330,622	337,881	341,556
		Change		873	9,695	7,259	

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

EXHIBIT C

Premium Liabilities

TABLE EXHIBIT C

	Amounts in \$000s				
	Actual May. 2018	Actual Jun. 2018	Projected Jul. 2018	Projected Aug. 2018	Projected Dec. 2018
Premium Liabilities					
(1) unearned premium (UP)	169,902	176,048	184,447	193,135	211,554
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	138.2%	138.4%	138.6%	138.8%	139.9%
(3) expected future costs {(1) x (2)}	234,852	243,632	255,640	268,113	295,876
(4) premium deficiency / (deferred policy acquisition cost)	64,950	67,584	71,193	74,978	84,322
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	126.3%	126.4%	126.6%	126.8%	127.7%
(6) expected future costs {(1) x (5)}	214,504	222,525	233,491	244,884	270,240
(7) premium deficiency / (deferred policy acquisition cost)	44,602	46,477	49,044	51,749	58,686

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	23,455	(3,958)	19,497	(1,180)	157	1,949	(118)	1,831	808	20,305
1999	584	15	599	(53)	7	60	(5)	55	9	608
2000	15	(4)	11	(1)	-	1	-	1	-	11
2001	724	55	779	(83)	10	78	(8)	70	(3)	776
2002	53	148	201	(23)	3	20	(2)	18	(2)	199
2003	707	272	979	(117)	14	98	(12)	86	(17)	962
2004	969	321	1,290	(166)	21	129	(17)	112	(33)	1,257
2005	163	415	578	(79)	9	58	(8)	50	(20)	558
2006	1,799	775	2,574	(376)	44	257	(38)	219	(113)	2,461
2007	1,992	1,054	3,046	(448)	52	305	(45)	260	(136)	2,910
2008	2,955	2,290	5,245	(703)	84	524	(70)	454	(165)	5,080
2009	6,390	2,714	9,104	(874)	100	910	(87)	823	49	9,153
2010	8,558	4,762	13,320	(932)	107	1,332	(93)	1,239	414	13,734
2011	14,549	60	14,609	(1,023)	117	1,461	(102)	1,359	453	15,062
2012	27,973	843	28,816	(2,104)	259	2,882	(210)	2,672	827	29,643
2013	35,539	2,580	38,119	(2,135)	267	4,765	(267)	4,498	2,630	40,749
2014	68,377	80	68,457	(3,217)	411	10,269	(483)	9,786	6,980	75,437
2015	96,476	6,638	103,114	(4,537)	516	15,364	(676)	14,688	10,667	113,781
2016	104,915	31,747	136,662	(6,696)	820	23,643	(1,159)	22,484	16,608	153,270
2017	117,636	120,857	238,493	(13,117)	1,669	46,983	(2,584)	44,399	32,951	271,444
PAYs (sub-total):	513,829	171,664	685,493	(37,864)	4,667	111,088	(5,984)	105,104	71,907	757,400
CAY (2018)	119,383	169,892	289,275	(17,067)	2,025	54,673	(3,226)	51,447	36,405	325,680
claims liabilities:	633,212	341,556	974,768	(54,931)	6,692	165,761	(9,210)	156,551	108,312	1,083,080
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	211,554	58,686	270,240	(12,947)	1,349	39,111	(1,877)	37,234	25,636	295,876
*Total may not be sum of parts, as apvs apply to future costs within UPR										
policy liabilities:			1,245,008	(67,878)	8,041	204,872	(11,087)	193,785	133,948	1,378,956

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	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	
prior	(5,908)	119	2,038	-	2,157	(36.5%)	(3,751)	
1999	29	(1)	-	-	(1)	(3.4%)	28	
2000	(4)	-	-	-	-	-	(4)	
2001	63	(1)	1	-	-	-	63	
2002	174	(5)	5	-	-	-	174	
2003	301	(5)	5	-	-	-	301	
2004	341	(7)	7	-	-	-	341	
2005	470	(9)	12	-	3	0.6%	473	
2006	836	(17)	(31)	-	(48)	(5.7%)	788	
2007	1,027	(20)	86	-	66	6.4%	1,093	
2008	2,421	(48)	157	-	109	4.5%	2,530	
2009	3,305	971	(990)	-	(19)	(0.6%)	3,286	
2010	6,162	(123)	117	-	(6)	(0.1%)	6,156	
2011	1,444	(30)	(803)	-	(833)	(57.7%)	611	
2012	3,230	648	(1,893)	-	(1,245)	(38.5%)	1,985	
2013	6,205	(124)	115	-	(9)	(0.1%)	6,196	
2014	9,501	(361)	(557)	-	(918)	(9.7%)	8,583	
2015	25,572	154	(1,067)	-	(913)	(3.6%)	24,659	
2016	70,590	(1,924)	(1,559)	-	(3,483)	(4.9%)	67,107	
2017	188,447	(3,770)	(3,135)	-	(6,905)	(3.7%)	181,542	
2018	105,552	14,641	(502)	-	14,139	13.4%	119,691	
Grand Total	419,758	10,088	(7,994)	-	2,094	0.5%	421,852	

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	(6,871)	139	2,021	-	2,160	(31.4%)	(4,711)
1999	18	-	-	-	-	-	18
2000	(4)	-	-	-	-	-	(4)
2001	67	(1)	1	-	-	-	67
2002	177	(4)	4	-	-	-	177
2003	323	(6)	6	-	-	-	323
2004	381	(8)	8	-	-	-	381
2005	493	(10)	12	-	2	0.4%	495
2006	970	(19)	(29)	-	(48)	(4.9%)	922
2007	1,190	(24)	88	-	64	5.4%	1,254
2008	2,620	(52)	157	-	105	4.0%	2,725
2009	3,245	974	(991)	-	(17)	(0.5%)	3,228
2010	5,651	(113)	127	-	14	0.2%	5,665
2011	885	(18)	(794)	-	(812)	(91.8%)	73
2012	2,226	668	(1,891)	-	(1,223)	(54.9%)	1,003
2013	3,034	(61)	98	-	37	1.2%	3,071
2014	935	(103)	(542)	-	(645)	(69.0%)	290
2015	13,326	400	(1,108)	-	(708)	(5.3%)	12,618
2016	51,306	(1,539)	(1,601)	-	(3,140)	(6.1%)	48,166
2017	151,309	(3,026)	(3,192)	-	(6,218)	(4.1%)	145,091
2018	88,773	11,753	(451)	-	11,302	12.7%	100,075
Grand Total	320,054	8,950	(8,077)	-	873	0.3%	320,927