



**NEW BRUNSWICK RISK SHARING POOL**

**SEPTEMBER 2016 OPERATIONAL REPORT**

**ACTUARIAL HIGHLIGHTS**

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**ACTUARIAL HIGHLIGHTS**  
**RSP NEW BRUNSWICK**  
**OPERATIONAL REPORT**  
**SEPTEMBER 2016**

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## 1 Summary

### 1.1 Valuation Schedule (Fiscal Year 2016)

The September 2016 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 2016.

NEW BRUNSWICK RISK SHARING POOL FISCAL YEAR 2016 – SCHEDULE OF VALUATIONS			
Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep. 30, 2015 (completed)	0.73% mfad: 25 bp	Oct. 2015	updated valuation (roll forward): accident year 2015 loss ratio increased 0.6 points to 83.5%; discount rate decreased by 17 basis points; no change to selected margins for adverse deviations
Dec. 31, 2015 (completed)	0.67% mfad: 25 bp	Mar. 2016	updated valuation: accident year 2015 loss ratio decreased 5.0 points to 78.5%; accident year 2016 loss ratio decreased 3.0 points to 77.6%; discount rate decreased by 6 basis points; no change to selected margins for adverse deviations
Mar. 31, 2016 (completed)	0.63% mfad: 25 bp	May 2016	updated valuation (roll forward): accident year 2016 loss ratio increased 0.7 points to 78.3%; discount rate decreased by 4 basis points; no change to selected margins for adverse deviations
Jun. 30, 2016 (completed)	0.57% mfad: 25 bp	Aug. 2016	updated valuation: accident year 2016 loss ratio decreased 2.7 points to 75.6%; discount rate decreased by 6 basis points; selected claims development margins for adverse deviations were updated
Sep. 30, 2016		Oct. 2016	update valuation (roll forward):

Under the proposed schedule for fiscal year 2016, the “off-half” valuation quarters ending March 31, 2016 and September 30, 2016 would not reflect a full valuation update of assumptions, but would rather “roll-forward” key assumptions from the previous valuation.

### 1.2 Appointed Actuary and Hybrid Actuarial Services Model

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

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

needed.

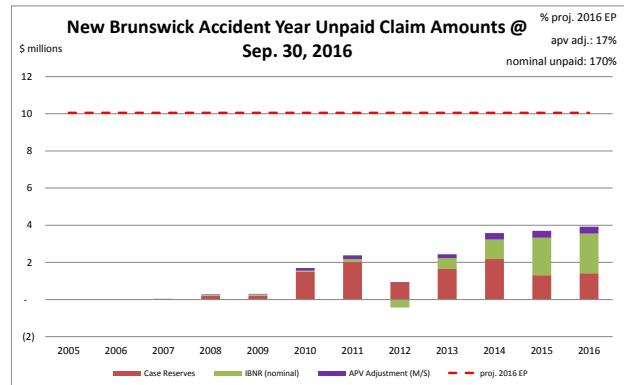
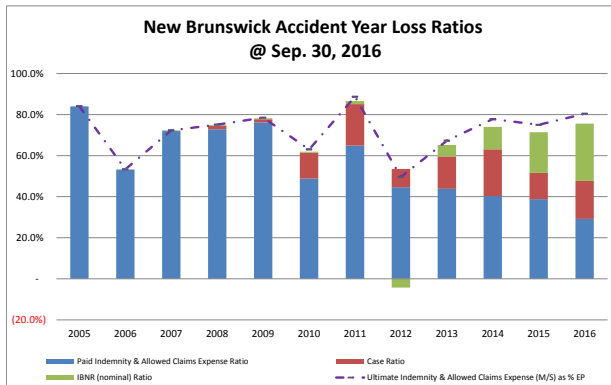
### 1.3 Consideration of Recent Legal Decisions and Changes in Legislation / Regulation

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.

**New Brunswick Regulation 2013-37** was filed by the Government of New Brunswick on May 7, 2013, amending Regulation 2003-20 (Injury Regulation), made under the Insurance Act. The Regulation introduced a new Part 2 which applies to all injuries arising from motor vehicle accidents occurring on or after August 1, 2013. The new Part 2 re-defines “minor personal injury”, raises the maximum non-pecuniary damages recoverable by those suffering a “minor personal injury”, and sets out a process for annually indexing the monetary cap for inflation. With the current valuation, reform adjustments (originally introduced with the June 30, 2014 valuation) were explicitly taken into account with the updated industry trend analysis (completed using industry data as at December 31, 2015), impacting the selection of ultimates.

### 1.4 Current Provision Summary

The charts immediately below show the current levels of claim liabilities<sup>1</sup> booked by accident year. 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 2016 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 balance (\$1.7 million – see table at top of next page) represents 17% of the earned premium projected for the full year 2016 (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.

<sup>1</sup>Claim liabilities refer to provision for unpaid indemnity and allowed claims expenses. Allowed claims expenses are first party legal and other expenses as listed in the RSP Claims Guide. Claims expenses paid through the member company expense allowance are NOT included in this discussion.

claim liabilities (\$000s)

	amt	%
case	11,387	60.4%
ibnr	5,727	30.4%
M/S apv adjust.	1,731	9.2%
<b>M/S total</b>	<b>18,845</b>	<b>100.0%</b>

The table to the left breaks down the Member Statement (M/S) claim liabilities total into component parts, showing that the majority of the claim liabilities is in case reserves for this pool. Approximately 73% of the IBNR balance relates to accident years 2015 and 2016 (see Exhibit B). Approximately 75% of the M/S claim liabilities

are related to accident years 2012-2016 inclusive (i.e. the most recent 5 accident years).

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

premium liabilities (\$000s)

	amt	%
unearned prem	5,408	116.5%
prem def/(dpac)	(1,130)	(24.3%)
M/S apv adjust.	363	7.8%
<b>M/S total</b>	<b>4,641</b>	<b>100.0%</b>

policy liabilities (\$000s)

	amt	%
claim	17,114	72.9%
premium	4,278	18.2%
M/S apv adjust.	2,094	8.9%
<b>M/S total</b>	<b>23,486</b>	<b>100.0%</b>

## 2 Activity During the Month of September 2016

### 2.1 Recorded Premium and Claims Activity

The table immediately below summarizes the extent to which premiums and claims amounts recorded during the month differ from projections reflected in the prior month's Operational Report<sup>2</sup>.

*New Brunswick 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	(2)	(2)	461	363	175	213	636	576
2014	(8)	(8)	42	(23)	(23)	(1)	19	(24)
2015	(12)	(12)	35	(100)	(44)	(10)	(9)	(110)
2016	809	5	277	(10)	1	(98)	278	(108)
<b>TOTAL</b>	<b>786</b>	<b>(18)</b>	<b>815</b>	<b>229</b>	<b>109</b>	<b>104</b>	<b>924</b>	<b>333</b>

(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" (this is particularly true where volumes are low). Each month, the projection variances are reviewed for signs of projection bias and to identify potential ways to reduce the level of the variance. Commentary from our review is provided in the sub-sections that follow.

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

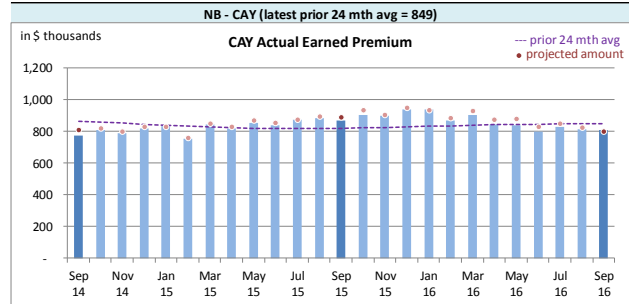
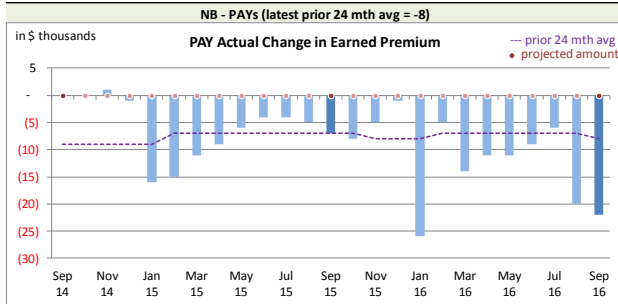
The charts at the top of the next page show actual **earned premium**<sup>3</sup> activity in each of the most

<sup>2</sup>There may be rounding differences in values in this document compared with the associated Bulletin and/or Operational Report.

<sup>3</sup>Premium is earned on a daily basis based on the transaction term measured in days. As a result, months with 31 days earned relatively more than those with 30 days, and February earns the least.

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.

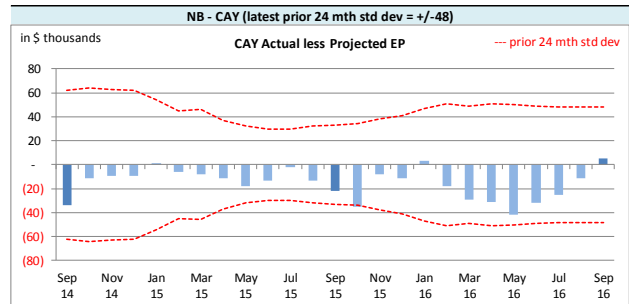
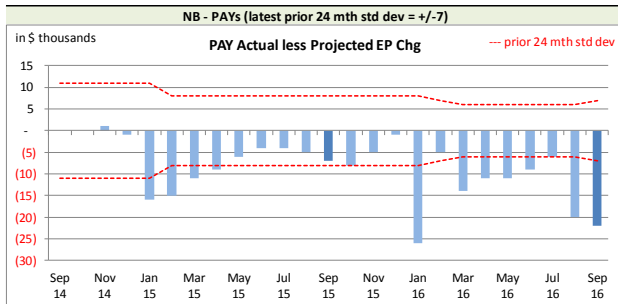
New Brunswick RSP Actual **Earned Premium** by Calendar Month



**Earned premium** changes during a given calendar month in relation to prior accident years tend to be at modest levels, although relatively high levels seem to occur in January each year.

The associated variance between the actual changes and the projections from the previous month are shown in the charts immediately below. **Earned premium** change projections are all attributed to the current accident year as the projection upload does not accept **earned premium** changes for other accident years. We do not see this limitation as being significant for our purposes, but it does mean that the actual less projection variance will equal the actual **earned premium** change in relation to prior accident years.

New Brunswick RSP Actual vs. Projected Summary: **Earned Premium** Variances by Calendar Month



On Latest \$ thousands		
<b>Earned Premium</b>	PAYs	CAY
Mthly Avg EP Chg (prior 24 mths)	(8)	849
std dev	7	48
A-P <> std dev	11	1
% <> std dev	44.0%	4.0%
norm <> std dev	31.7%	31.7%

We project **earned premium** changes from known unearned premium and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated bias<sup>4</sup>, with actuals generally lower than our projections. However, the magnitude is not high relative to monthly premium, and the

variances are within the prior 24-month standard deviation more often than indicated by a normal distribution (see chart above). Starting with the August 2016 projections, we have modified our projections processes in an attempt to account for bias in the current process. Over time, we may

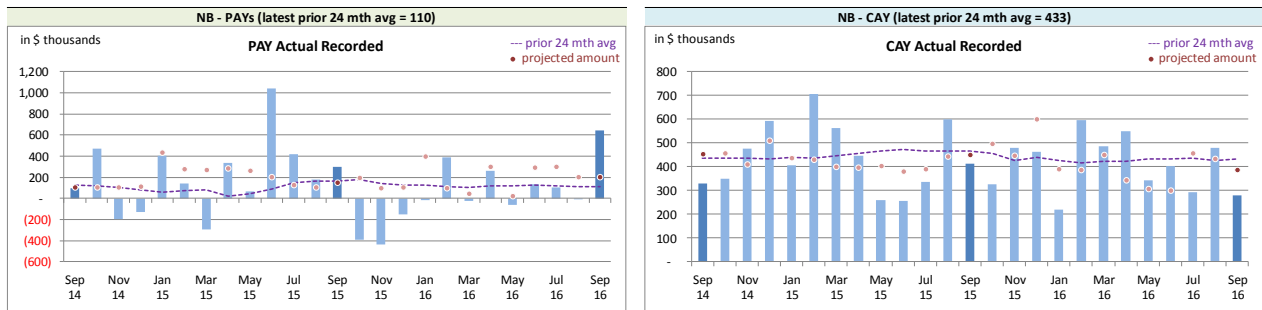
<sup>4</sup>The prior accident years (PAYs) variances will show bias as the projection upload forces all earned premium projections to be attributed to the current accident year.

consider other projection approaches to narrow monthly variance levels further, but it is not currently deemed a priority.

**2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense**

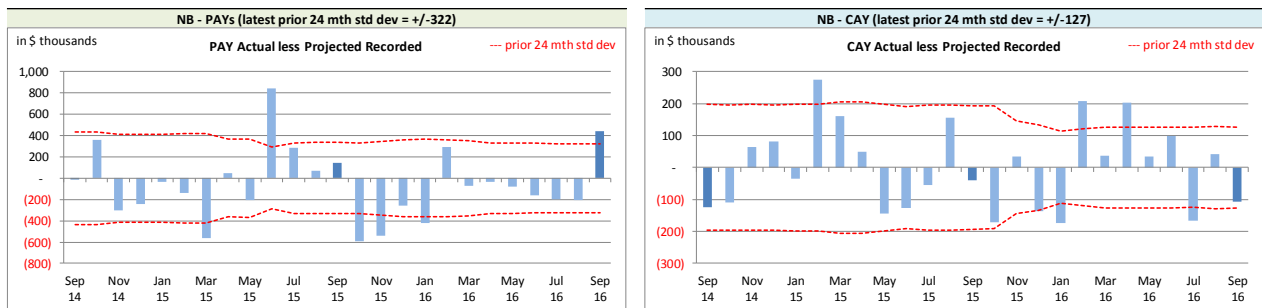
Actual **recorded** activity (**paid** and case reserve changes) over the last 25-month period are shown in the charts immediately below, including the “prior 24-month average” level.

*New Brunswick 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.

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



On Latest \$ thousands		
	<b>Recorded</b>	
Mthly Avg Recorded (prior 24 mths)	PAYS 110	CAY 433
std dev	322	127
A-P <> std dev	6	6
% <> std dev	24.0%	24.0%
norm <> std dev	31.7%	31.7%

With respect to **recorded** indemnity & allowed claims expense activity, caution must be exercised in reviewing the variances as this is a small pool and single claim transactions that are normal course for the business may look “unusual” and generate relatively “significant” variances that in nominal value terms are not that

significant. The prior accident years’ (PAYs) **recorded** variances (left chart above) appear to have bias, as 10 of the last 12 projections have proven higher than actual. That said, the magnitude of the variances is fairly small and at 24%, the percentage of months with variances beyond one standard deviation of the experience period activity suggests the projection process is somewhat better than projections based simply on a 24-month average.

The PAY **recorded** variance for the current month was outside the one standard deviation band. The activity was reviewed and confirmed, with the variance attributed to process variance.

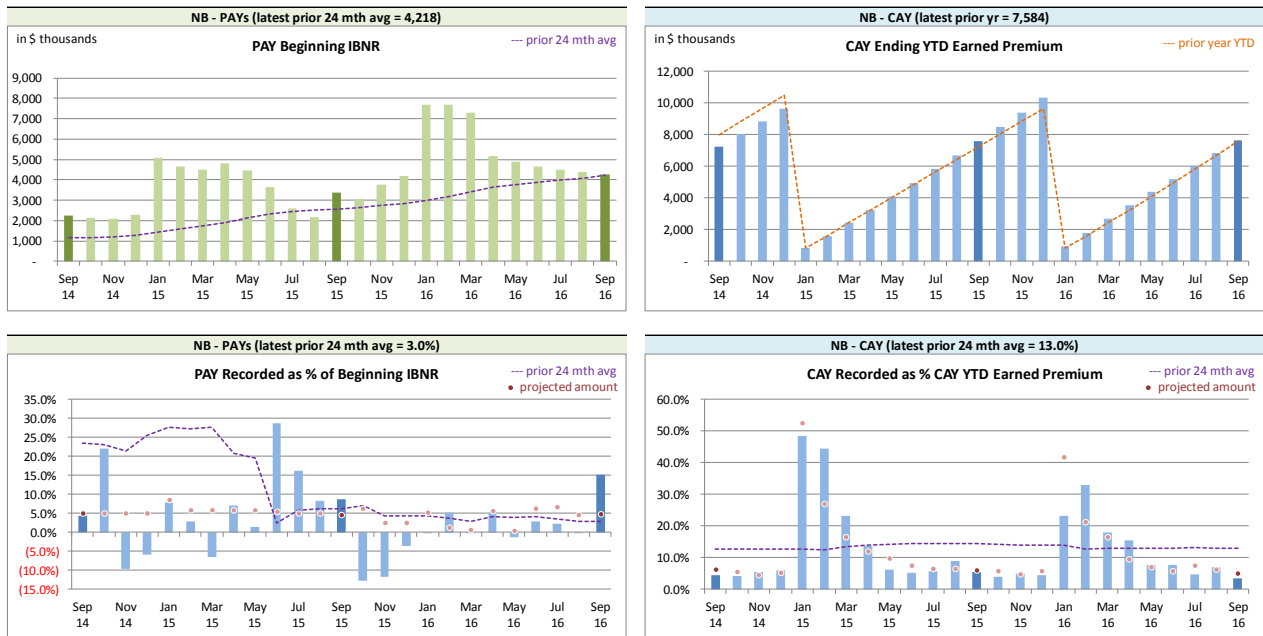
The current accident year (CAY) **recorded** variances (right chart above), with 24% of months with

variances outside of one standard deviation, suggest the projection process is somewhat better than projecting simply on a 24-month average. We do not see evidence of bias in the variances, although 5 of the 6 variances beyond one standard deviation were in relation to our 10 most recent projections. However, it is notable that the standard deviation of the prior 24 months’ activity has narrowed considerably in the most recent 10 periods (reduced by almost half).

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 immediately below related to levels influencing **recorded** activity. Note in particular the increase in the level of PAY beginning IBNR over the months. Part of this will be 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).

*New Brunswick RSP Levels that influence<sup>5</sup> 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

<sup>5</sup>Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned premium), deriving year-to-date recorded as selected ultimate less IBNR. In both cases, the ratio selection is based on our review of the more recent recorded activity and recent AvsP analyses.

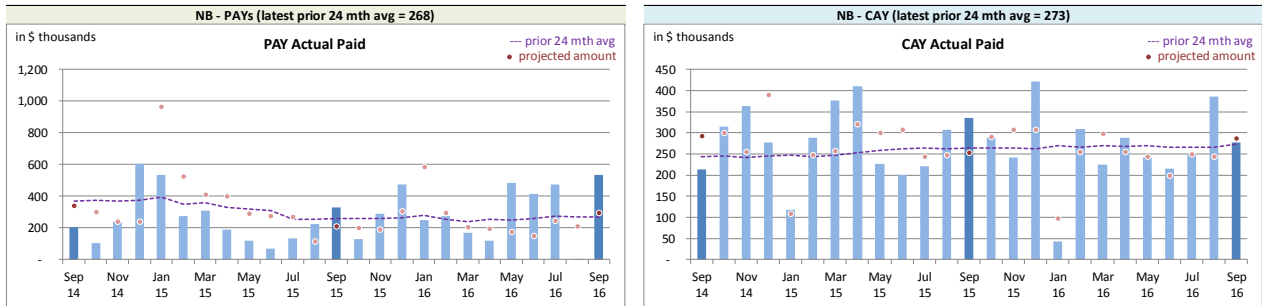


month after the valuation is implemented, i.e. the change will generally show in April, June, September, and November).

**2.1.c AvsP: Paid Indemnity & Allowed Claims Expense**

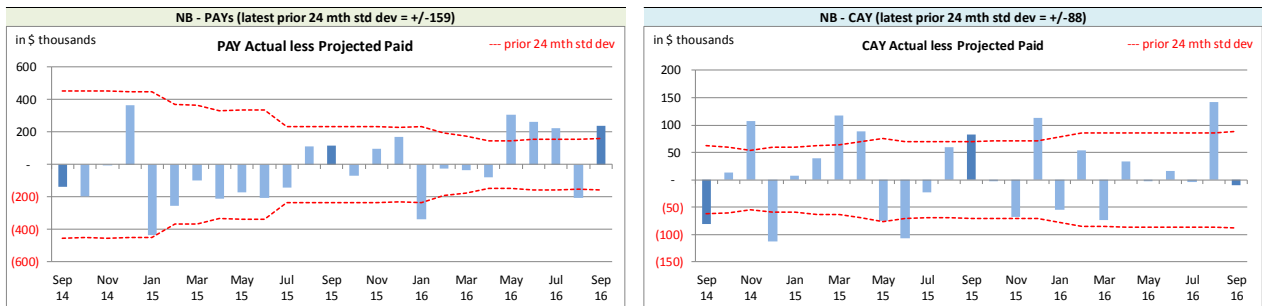
The charts immediately below show actual **paid** activity in each of the most recent 25 calendar months, along with a “prior 24-month average” to show how each month’s actual compares with the average amount of the preceding 24 calendar months.

*New Brunswick RSP Actual **Paid** activity by Calendar Month*



The charts immediately below show the actual less projected **paid** variances for the last 25 calendar months, along with bands for the “prior 24-month standard deviations” to show how the variances from projection compare with historical standard deviations.

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



On Latest \$ thousands		
<b>Paid</b>	PAYS	CAY
Mthly Avg Paid (prior 24 mths)	268	273
std dev	159	88
A-P <> std dev	6	9
% <> std dev	24.0%	36.0%
norm <> std dev	31.7%	31.7%

With respect to **paid** indemnity & allowed claims expense, caution must be exercised in reviewing the variances as this is a small pool, and single claim transactions that are normal course for the business may look “unusual” and generate relatively “significant” variances that in nominal value terms are not that significant.

That said, the prior accident years’(PAYS) **paid** variances (left chart above) do not seem to indicate bias. At 24%, the percentage of months with variances outside of the experience period’s standard deviation suggests the projection process performs better than projecting simply on average values.

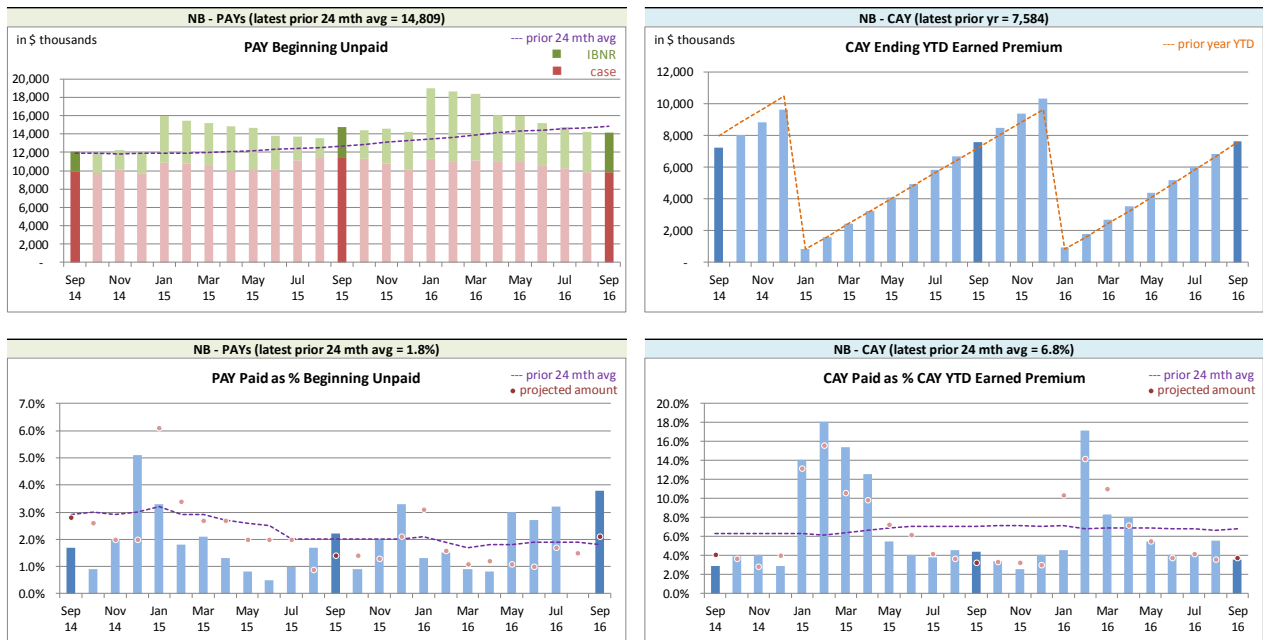
This is the fifth consecutive month where the PAY **paid** variance for the current month was outside the one standard deviation band. The activity was reviewed and confirmed, with the variance attributed to process variance. However, it should be noted that the standard deviation of the prior

24 months’ activity has continued to narrow and has been below \$200K for the past 8 months.

The current accident year (CAY) **paid** variances (right chart at bottom of previous page) do not appear to show bias, but at 36%, the percentage of months with variances falling outside of the experience period’s standard deviation suggests the projection process is performing worse than simply projecting a 24-month average.

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

*New Brunswick RSP Levels that influence<sup>6</sup> 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).

<sup>6</sup>Our paid projections for the prior accident years are based on selected ratios of paid to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date paid to year-to-date selected ultimate indemnity (i.e. selected LR x earned premium). In both cases, the ratio selection is based on our review of the more recent recorded activity and recent AvsP analyses.

## 2.2 Actuarial Provisions

An “ultimate loss ratio matching method” (described in section 3) was used to determine the month’s IBNR<sup>7</sup>, and factors were 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 current month’s provisions and projections were based on the applicable valuation. The table immediately below summarizes variances in provisions included in the September 2016 Operational Report and the associated one-month projections from last month’s Report.

*New Brunswick 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	526	(578)	(85)	4	727	(39)	1,168	(613)
2014	1,045	18	(48)	-	403	2	1,400	20
2015	2,021	101	(63)	(1)	429	13	2,387	113
2016	2,135	112	(71)	-	439	1	2,503	113
TOTAL	5,727	(347)	(267)	3	1,998	(23)	7,458	(367)

The IBNR provision is \$0.3 million lower than projected 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 deferred policy acquisition cost asset included in the September 2016 Operational Report and the one-month projections from last month’s Report. This RSP is in a deferred policy acquisition cost asset position (shown as a negative amount) prior to and after actuarial present value adjustments. Actuarial present value adjustments decrease the asset 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.

<sup>7</sup>For ease of discussion, “IBNR” is used in place of “provisions for incurred but not recorded (IBNR) and development”.

*New Brunswick 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:	(1,130)	(33)	363	7	(767)	(26)
balance as % unearned premium:	(20.9%)	(0.2%)	6.7%	-	(14.2%)	(0.2%)
actual unearned premium:	5,408					
less projected:	117					

### 3 Ultimate Loss Ratio Matching Method

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

- (a) Earned premium to-date
- (b) Ultimate loss<sup>8</sup> ratio per latest valuation
- (c) Estimated ultimate incurred = (a) x (b)
- (d) Recorded indemnity & allowed claims expense to-date
- (e) IBNR = (c) – (d)

### 4 Calendar Year-to-Date Results

The table below summarizes the calendar year-to-date results for indemnity & allowed claims expenses<sup>9</sup>, including IBNR.

In calculating the amounts as percentages of earned premium, the calendar year-to-date earned premium has been used, which includes not only the 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 76.9% rather than 75.6% (the valuation ultimate ratio for accident year 2016), 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 New Brunswick RSP Summary of Operations due to rounding.)

*New Brunswick 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	(2,664)	(35.4%)	(856)	(11.4%)	(3,520)	(46.8%)	(73)	4.4%
CAY	5,783	76.9%	368	4.9%	6,151	81.8%	646	0.1%
TOTAL	3,119	41.5%	(488)	(6.5%)	2,631	35.0%	573	4.5%

(“% EP” based on 2016 calendar year-to-date earned premium; ratios may not total due to rounding)

<sup>8</sup>“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).

<sup>9</sup>Allowed claims expenses are first party legal and other expenses as listed in the RSP Claims Guide. Claims expenses paid through the member company expense allowance are NOT included in this analysis.

The prior accident years (PAYs) changes from last month are due to the release of the actuarial present value adjustments with claims payments. The loss ratio change year-to-date 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, 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 detailed in section 6, Exhibit B, refer to the estimates derived on the basis of various actuarial methodologies applied to the experience of the New Brunswick Risk Sharing Pool for the purposes of the most recent quarterly valuation. As discussed in section 3, IBNR reflected in the current month's Operational Report was derived as the difference between the estimated ultimate for the claims amount (i.e. earned premium x ultimate loss ratio) and the associated current recorded amounts (life-to-date payments plus current case reserves).

## **6 EXHIBITS**

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

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

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

TABLE EXHIBIT A

		Amounts in \$000s				
IBNR + M/S actuarial present value adjustments	Accident Year	Actual Aug. 2016	Actual Sep. 2016	Projected Oct. 2016	Projected Nov. 2016	Projected Dec. 2016
	2005	(2)	(2)	(2)	(2)	(2)
	2006	12	12	12	12	12
	2007	35	35	34	33	32
	2008	74	74	72	71	69
	2009	99	99	98	96	95
	2010	197	196	195	192	186
discount rate	2011	353	351	346	340	330
0.57%	2012	312	(387)	(378)	(370)	(364)
	2013	772	790	765	753	733
interest rate margin	2014	1,431	1,400	1,369	1,344	1,311
25 basis pts	2015	2,391	2,387	2,330	2,289	2,236
	2016	2,135	2,503	2,828	3,024	2,330
	<b>TOTAL</b>	<b>7,809</b>	<b>7,458</b>	<b>7,669</b>	<b>7,782</b>	<b>6,968</b>
	Change		(351)	211	113	

*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 Aug. 2016	Actual Sep. 2016	Projected Oct. 2016	Projected Nov. 2016	Projected Dec. 2016
	84.0%	2005	(2)	(2)	(2)	(2)	(2)
	53.3%	2006	11	11	11	11	11
	72.3%	2007	32	32	31	30	29
	74.9%	2008	49	49	48	47	46
	78.3%	2009	73	73	72	71	70
	61.8%	2010	54	54	53	52	51
	86.7%	2011	153	151	148	145	142
	49.2%	2012	231	(428)	(419)	(411)	(403)
	65.3%	2013	563	586	563	555	544
	74.1%	2014	1,070	1,045	1,019	1,004	984
	71.4%	2015	2,021	2,021	1,970	1,940	1,901
	75.6%	2016	1,802	2,135	2,432	2,593	1,923
		<b>TOTAL</b>	<b>6,057</b>	<b>5,727</b>	<b>5,926</b>	<b>6,035</b>	<b>5,296</b>
		Change		(330)	199	109	

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

## EXHIBIT C

## Premium Liabilities

TABLE EXHIBIT C

	Amounts in \$000s				
	Actual Aug. 2016	Actual Sep. 2016	Projected Oct. 2016	Projected Nov. 2016	Projected Dec. 2016
Premium Liabilities					
(1) unearned premium (UP)	5,148	5,408	5,331	5,413	5,282
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	85.7%	85.8%	86.2%	86.4%	86.6%
(3) expected future costs {(1) x (2)}	4,410	4,641	4,593	4,676	4,577
(4) premium deficiency / (deferred policy acquisition cost)	(738)	(767)	(738)	(737)	(705)
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	79.0%	79.1%	79.5%	79.6%	79.9%
(6) expected future costs {(1) x (5)}	4,067	4,278	4,236	4,311	4,220
(7) premium deficiency / (deferred policy acquisition cost)	(1,081)	(1,130)	(1,095)	(1,102)	(1,062)



**EXHIBIT D**
**Projected Year-end Policy Liabilities**

The table below presents the projected policy liabilities as at December 31, 2016, broken down by component.

New Brunswick ending 2016	Projected Balances as at Dec. 31, 2016 (\$000s)							
	nominal values			actuarial present value adjustments (apvs)				TOTAL
	Case	IBNR	Total Unpaid	discount	investment PFAD	development PFAD	Total apvs	
Acc Yr								
2005	-	(2)	(2)	-	-	-	-	(2)
2006	-	11	11	-	-	1	1	12
2007	2	29	31	-	-	3	3	34
2008	196	46	242	(2)	1	24	23	265
2009	196	70	266	(3)	1	27	25	291
2010	1,425	51	1,476	(18)	7	146	135	1,611
2011	1,906	142	2,048	(25)	10	203	188	2,236
2012	835	(403)	432	(5)	2	42	39	471
2013	1,527	544	2,071	(27)	12	204	189	2,260
2014	1,976	984	2,960	(44)	18	353	327	3,287
2015	1,155	1,901	3,056	(58)	24	369	335	3,391
PAYs (sub-total):	9,218	3,373	12,591	(182)	75	1,372	1,265	13,856
CAY (2016)	2,000	1,923	3,923	(78)	35	450	407	4,330
<b>claims liabilities:</b>	<b>11,218</b>	<b>5,296</b>	<b>16,514</b>	<b>(260)</b>	<b>110</b>	<b>1,822</b>	<b>1,672</b>	<b>18,186</b>
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PFAD	development PFAD	Total apvs	TOTAL *
<b>premium liabilities:</b>	5,282	(1,062)	4,220	(57)	24	390	357	4,577
*Total may not be sum of parts, as apvs apply to future costs within UPR								
<b>policy liabilities:</b>	<b>20,734</b>			<b>(317)</b>	<b>134</b>	<b>2,212</b>	<b>2,029</b>	<b>22,763</b>

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, 2016 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Selected Claims Development MfADs (Jun. 30, 2016)				
Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
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%	5.0%	10.0%
2011	10.0%	10.0%	10.0%	10.0%
2012	10.0%	10.0%	6.7%	10.0%
2013	10.0%	10.0%	10.0%	10.0%
2014	12.5%	10.0%	10.8%	12.1%
2015	12.5%	10.0%	12.5%	12.3%
2016	12.4%	10.0%	6.0%	11.7%
2017	12.5%	10.0%	12.5%	12.5%
prem liab	11.9%	10.0%	5.1%	9.7%

discount rate:           0.57%  
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, 2016 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2016 and based on more up-to-date information). We have included both the current valuation selection (0.57%), the prior valuation assumption (0.63%) and the prior fiscal year end valuation assumption (0.73%) 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, 2016 projected Unpaid							
	0.07%	0.57%	1.07%	1.57%	2.07%	2.57%	0.63%	0.73%
2005	-	-	-	-	-	-	-	-
2006	8	8	8	8	8	8	8	8
2007	50	50	50	49	49	49	50	50
2008	230	228	226	225	223	221	228	228
2009	263	261	259	256	254	252	261	260
2010	1,445	1,435	1,420	1,406	1,392	1,378	1,433	1,430
2011	1,892	1,879	1,859	1,839	1,820	1,802	1,876	1,872
2012	823	817	808	800	792	784	816	814
2013	2,442	2,422	2,395	2,368	2,341	2,315	2,419	2,413
2014	3,422	3,390	3,344	3,300	3,257	3,214	3,384	3,375
2015	3,710	3,667	3,607	3,548	3,491	3,435	3,660	3,647
2016	4,721	4,664	4,583	4,505	4,429	4,356	4,654	4,638
Total	19,006	18,821	18,559	18,304	18,056	17,814	18,789	18,735
	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	curr + 200bp	prior val assumption	prior fyr end assumption

AY	Dollar Impact Relative to Valuation Assumption							
	0.07%	0.57%	1.07%	1.57%	2.07%	2.57%	0.63%	0.73%
Total	185	-	(262)	(517)	(765)	(1,007)	(32)	(86)
	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	curr + 200bp	prior val assumption	prior fyr end assumption

AY	Percentage Impact Relative to Valuation Assumption							
	0.07%	0.57%	1.07%	1.57%	2.07%	2.57%	0.63%	0.73%
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	-	-	-	(2.0%)	(2.0%)	(2.0%)	-	-
2008	0.9%	-	(0.9%)	(1.3%)	(2.2%)	(3.1%)	-	-
2009	0.8%	-	(0.8%)	(1.9%)	(2.7%)	(3.4%)	-	(0.4%)
2010	0.7%	-	(1.0%)	(2.0%)	(3.0%)	(4.0%)	(0.1%)	(0.3%)
2011	0.7%	-	(1.1%)	(2.1%)	(3.1%)	(4.1%)	(0.2%)	(0.4%)
2012	0.7%	-	(1.1%)	(2.1%)	(3.1%)	(4.0%)	(0.1%)	(0.4%)
2013	0.8%	-	(1.1%)	(2.2%)	(3.3%)	(4.4%)	(0.1%)	(0.4%)
2014	0.9%	-	(1.4%)	(2.7%)	(3.9%)	(5.2%)	(0.2%)	(0.4%)
2015	1.2%	-	(1.6%)	(3.2%)	(4.8%)	(6.3%)	(0.2%)	(0.5%)
2016	1.2%	-	(1.7%)	(3.4%)	(5.0%)	(6.6%)	(0.2%)	(0.6%)
Total	1.0%	-	(1.4%)	(2.7%)	(4.1%)	(5.4%)	(0.2%)	(0.5%)
	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	curr + 200bp	prior val assumption	prior fyr end assumption

EXHIBIT G

Page 1 of 2

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

RSP **New Brunswick**  
AccountCode Desc **IBNR - Discour**

M/S IBNR - in \$000s

AccYear	Values				Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation			
2005	(2)	-	-	-	-	-	(2)
2006	12	(1)	1	-	-	-	12
2007	35	(2)	2	-	-	-	35
2008	74	(3)	3	-	-	-	74
2009	99	(4)	4	-	-	-	99
2010	197	(4)	3	-	(1)	(0.5%)	196
2011	353	(10)	8	-	(2)	(0.6%)	351
2012	312	(13)	(686)	-	(699)	(224.0%)	(387)
2013	772	(34)	52	-	18	2.3%	790
2014	1,431	(51)	20	-	(31)	(2.2%)	1,400
2015	2,391	(117)	113	-	(4)	(0.2%)	2,387
2016	2,135	255	113	-	368	17.2%	2,503
<b>Grand Total</b>	<b>7,809</b>	<b>16</b>	<b>(367)</b>	<b>-</b>	<b>(351)</b>	<b>(4.5%)</b>	<b>7,458</b>

EXHIBIT G

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

RSP **New Brunswick**  
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			
2005	(2)	-	-	-	-	-	(2)
2006	11	(1)	1	-	-	-	11
2007	32	(2)	2	-	-	-	32
2008	49	(2)	2	-	-	-	49
2009	73	(4)	4	-	-	-	73
2010	54	(3)	3	-	-	-	54
2011	153	(8)	6	-	(2)	(1.3%)	151
2012	231	(12)	(647)	-	(659)	(285.3%)	(428)
2013	563	(28)	51	-	23	4.1%	586
2014	1,070	(43)	18	-	(25)	(2.3%)	1,045
2015	2,021	(101)	101	-	-	-	2,021
2016	1,802	221	112	-	333	18.5%	2,135
<b>Grand Total</b>	<b>6,057</b>	<b>17</b>	<b>(347)</b>	<b>-</b>	<b>(330)</b>	<b>(5.4%)</b>	<b>5,727</b>