



NEW BRUNSWICK RISK SHARING POOL

APRIL 2017 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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ACTUARIAL HIGHLIGHTS
RSP NEW BRUNSWICK
OPERATIONAL REPORT
APRIL 2017

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1 Summary

1.1 Valuation Schedule (Fiscal Year 2017)

The April 2017 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 2017.

NEW BRUNSWICK RISK SHARING POOL FISCAL YEAR 2017 – SCHEDULE OF VALUATIONS			
Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep. 30, 2016 (completed)	0.52% mfad: 25 bp	Oct. 2016	updated valuation (roll forward): accident year 2016 loss ratio decreased 1.3 points to 74.3%; discount rate decreased by 5 basis points; no change to selected margins for adverse deviations
Dec. 31, 2016 (completed)	1.04% mfad: 25 bp	Mar. 2017	updated valuation: accident year 2016 loss ratio decreased 3.5 points to 70.8%; accident year 2017 loss ratio decreased 2.9 points to 74.2%; discount rate increased by 52 basis points; no change to selected margins for adverse deviations
Mar. 31, 2017		May 2017	update valuation (roll forward):
Jun. 30, 2017		Aug. 2017	update valuation:
Sep. 30, 2017		Oct. 2017	update valuation (roll forward):

Under the proposed schedule for fiscal year 2017, the “off-half” valuation quarters ending March 31, 2017 and September 30, 2017 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 (there have been no changes in these descriptions since last month’s Highlights).

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 most recent valuation (December 31, 2016), 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 June 30, 2016), impacting the selection of ultimates.

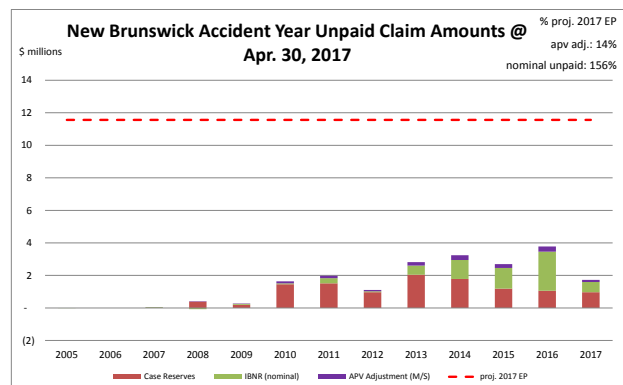
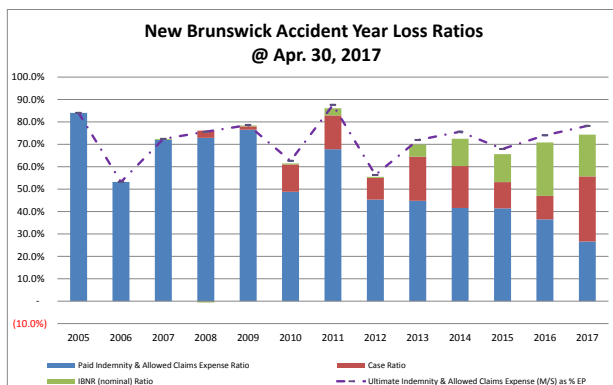
1.4 Harmonized Sales Tax

In the fiscal 2016-17 provincial budget released February 2, 2016, the New Brunswick Finance Minister announced a 2 percentage point increase in the provincial component of the harmonized sales tax (“HST”) effective July 1st, 2016 increasing the combined HST rate in the province from 13% to 15%.

An adjustment for the HST rate increase was included in the updated loss cost trend structures selected using NB PPV Industry 2016-1 data, impacting the selected a priori loss ratios, however, no specific adjustments have been made to the valuation assumptions from the most recent valuation (December 31, 2016).

1.5 Current Provision Summary

The charts immediately below show the current levels of claim liabilities¹ 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 2017 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.

¹Claim 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.

The current actuarial present value adjustments balance (\$1.6 million – see table below) represents 14% of the earned premium projected for the full year 2017 (see the upper right corner of the right chart at the bottom of the prior page). 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	11,581	58.9%
ibnr	6,463	32.9%
M/S apv adjust.	1,612	8.2%
M/S total	19,656	100.0%

The table to the left breaks down the Member Statement (M/S) claim liabilities total into component parts, showing that the majority of the claim liabilities is in case reserves for this pool. Approximately 47% of the IBNR balance relates to accident years 2016 and 2017 (see Exhibit B). Approximately 73% of the M/S claim liabilities are related to accident years 2013-2017 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)			policy liabilities (\$000s)		
	amt	%		amt	%
unearned prem	4,796	121.4%	claim	18,044	76.4%
prem def/(dpac)	(1,111)	(28.1%)	premium	3,685	15.6%
M/S apv adjust.	265	6.7%	M/S apv adjust.	1,877	8.0%
M/S total	3,950	100.0%	M/S total	23,606	100.0%

2 Activity During the Month of April 2017

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 Report².

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

Table 01 Accident Year	Earned Premium		Paid Indemnity & Allowed Claims Expense		Case increase / (decrease)		Recorded increase / (decrease)	
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	(3)	(3)	44	(61)	132	177	176	116
2015	(2)	(2)	12	(13)	79	36	91	23
2016	(11)	(11)	32	(38)	(29)	(79)	3	(117)
2017	846	(11)	211	(90)	203	49	414	(42)
TOTAL	830	(27)	299	(202)	385	183	684	(20)

(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

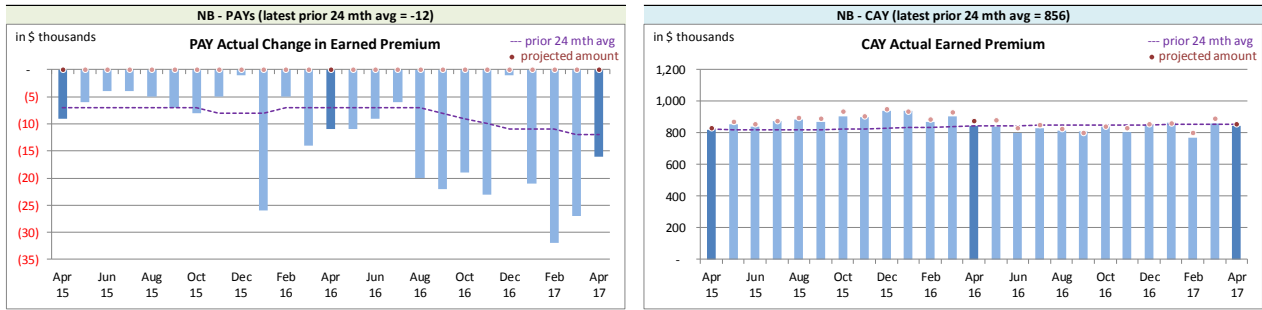
²There may be rounding differences in values in this document compared with the associated Bulletin and/or Operational Report.

sub-sections that follow.

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

The tables immediately below show actual **earned premium**³ 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.

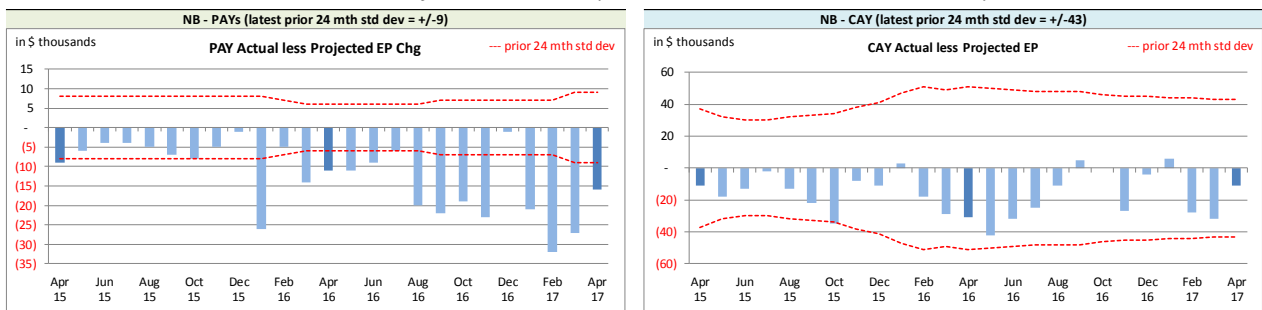
New Brunswick RSP Actual **Earned Premium** by Calendar Month



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 heightened prior accident years’ activity is related to ineligible risks being removed from the RSP based on findings of the FA internal audit team with respect to a recent audit.

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



³Premium 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.

On Latest \$ thousands		
Earned Premium	PAYs	CAY
Mthly Avg EP Chg (prior 24 mths)	(12)	856
std dev	9	43
A-P <> std dev	14	1
% <> std dev	56.0%	4.0%
norm <> std dev	31.7%	31.7%

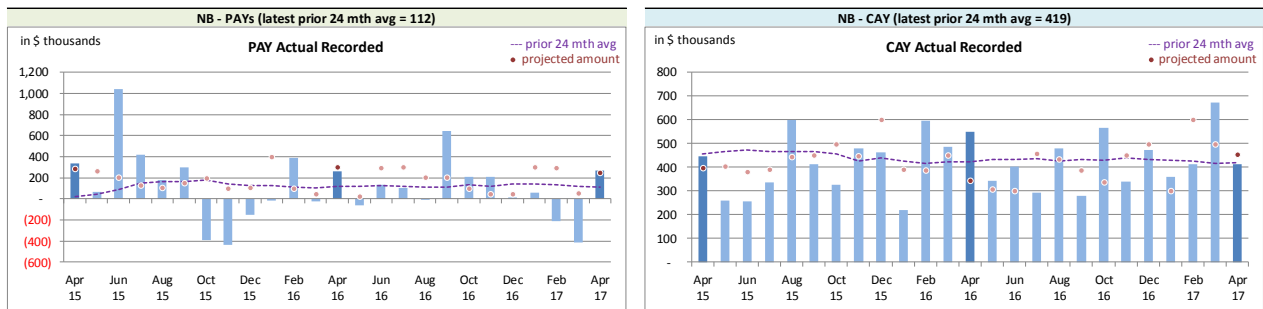
We project **earned premium** changes from known unearned premium and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years' bias⁴, with actuals generally lower than our projections. However, the magnitude is not high relative to monthly

premium, and the CAY variances are within the prior 24-month standard deviation more often than indicated by a normal distribution (see table to the left). In addition to the prior accident years' bias, the CAY has also shown bias, with actuals being generally lower than projected. Starting with the August 2016 projections, we have modified our projections processes in an attempt to account for CAY bias. Over time, we may 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

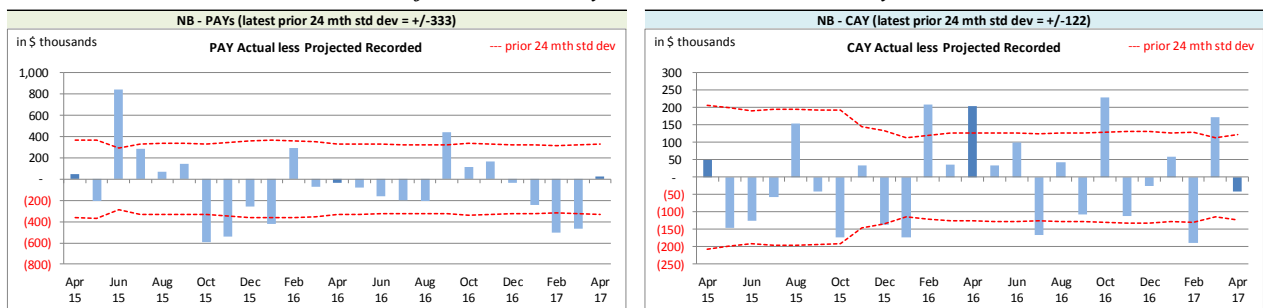
Actual **recorded** activity (**paid** and case reserve changes) over the last 25-month period are shown in the charts immediately below, including the “prior 24-month average” level.

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



⁴The 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.

On Latest \$ thousands		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	112	419
std dev	333	122
A-P <> std dev	7	8
% <> std dev	28.0%	32.0%
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

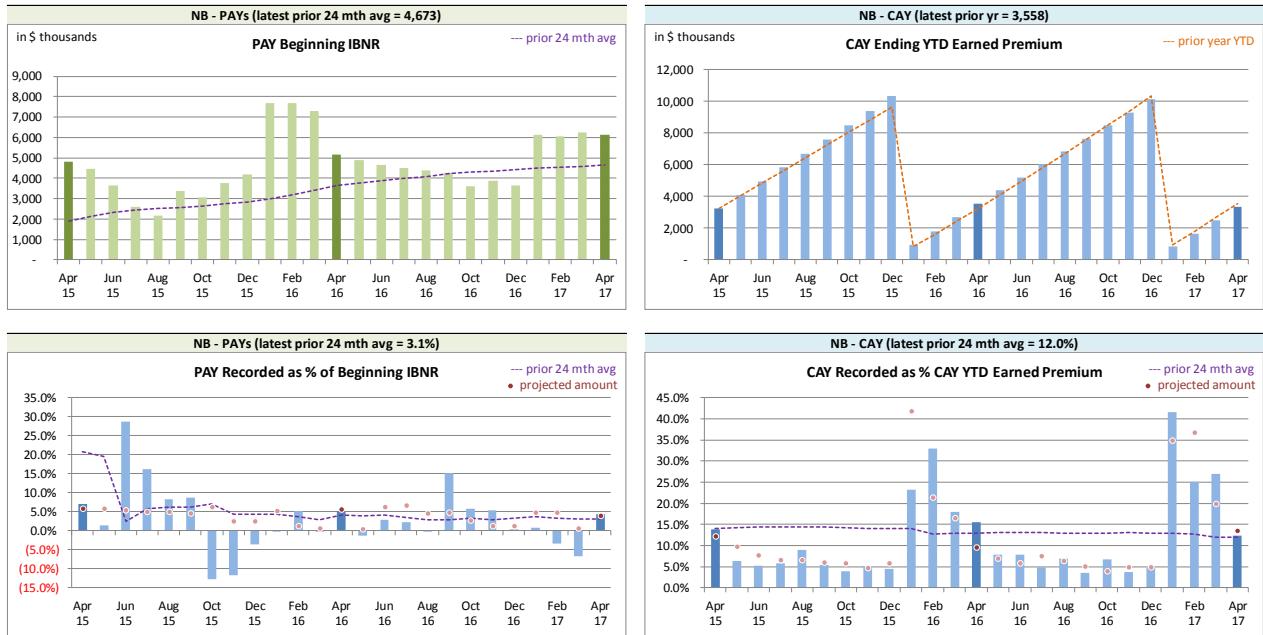
significant. The prior accident years’ (PAYs) **recorded** variances (left chart at the bottom of the prior page) have fallen outside one standard deviation of the overall period 28% of the time, indicating the projection process is little better than simply projecting from the preceding 24-month average.

The current accident year (CAY) **recorded** variances (right chart at the bottom of the prior page), with 32% outside of one standard deviation, suggests the projection process is also performing no better than projecting simply on a 24-month average. We do not see evidence of bias in the variances.

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 increase in the level of PAYs 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 influence⁵ 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:

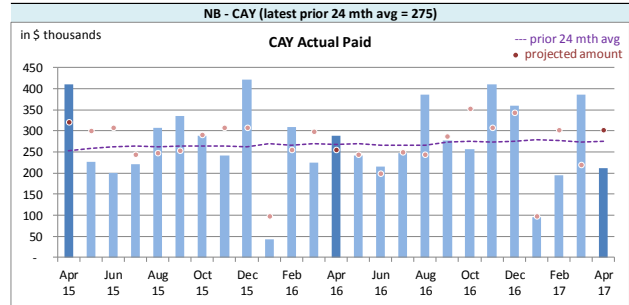
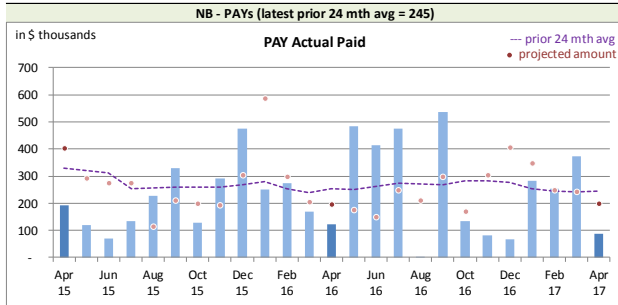
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a current accident year becomes a prior accident year (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of prior accident years’ ultimate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

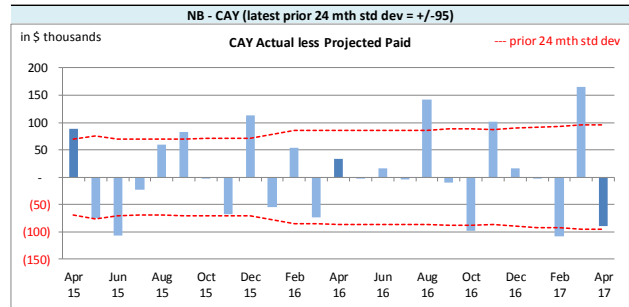
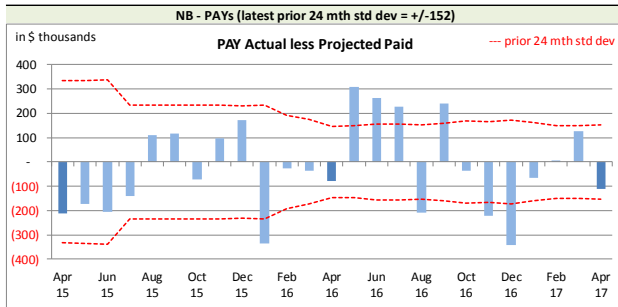
⁵Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned 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.

*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		
Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)	245	275
std dev	152	95
A-P <> std dev	8	9
% <> std dev	32.0%	36.0%
norm <> std dev	31.7%	31.7%

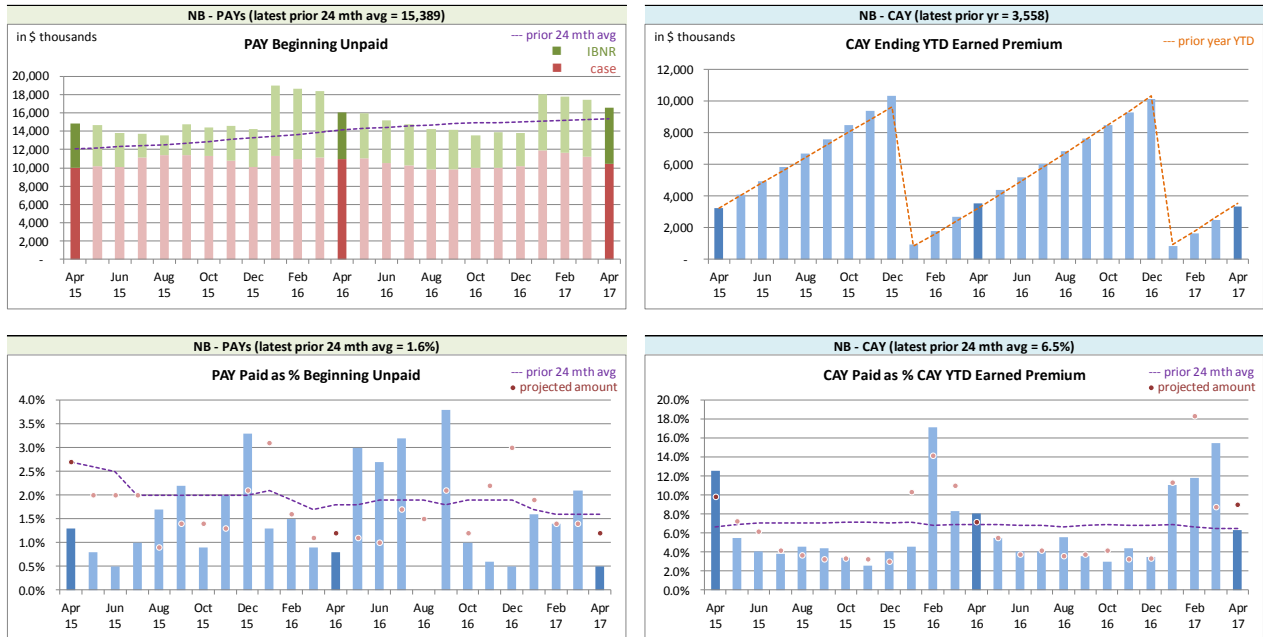
With respect to **paid** indemnity & allowed claims expense, caution must be exercised in reviewing the variances as this is a small pool, and single claim transactions that are normal course for the business may look “unusual” and generate relatively “significant” variances that in nominal value terms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

the prior accident years’ (PAYs) **paid** variances (left chart above) do not seem to indicate bias. At 32%, the percentage of months with variances outside of the experience period’s standard deviation suggests the projection process performs no better than projecting simply on average values.

The current accident year (CAY) **paid** variances (right chart above) 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 at the top of the next page related to levels influencing **paid** activity.

New Brunswick RSP Levels that influence⁶ Paid activity by Calendar Month



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

- to offset actual **paid** activity (may reduce case or IBNR or both);
- the annual switchover as a current accident year becomes a prior accident year (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of prior accident years’ ultimate (will show up as a beginning unpaid balance change one month after the valuation is implemented, i.e. the change will generally show in April, June, September, and November).

2.2 Actuarial Provisions

An “ultimate loss ratio matching method” (described in section 3) was used to determine the month’s IBNR⁷, 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 at the top of the next page summarizes variances in provisions included in the April 2017 Operational Report and the associated one-month projections from last month’s Report.

⁶Our 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.

⁷For 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: IBNR and APV Amounts (\$ thousands)

Table 02		actuarial present value adjustments							
Accident Year	IBNR		Discount Amount		Provisions for Adverse Deviations		IBNR + actuarial present value adjustments		
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	
Prior	2,173	(118)	(227)	(2)	1,146	6	3,092	(114)	
2015	1,271	(25)	(71)	-	311	2	1,511	(23)	
2016	2,398	109	(118)	(1)	436	5	2,716	113	
2017	621	34	(57)	(3)	192	9	756	40	
TOTAL	6,463	-	(473)	(6)	2,085	22	8,075	16	

The IBNR provision came in as projected last month, meaning the recorded claims activity and the earned premium variance impacts indicated in section 2.1 offset each other.

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

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

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

The table immediately below summarizes the variances in the provisions for deferred policy acquisition cost asset included in the April 2017 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.

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:	(1,111)	30	265	(8)	(846)	22
balance as % unearned premium:	(23.2%)	-	5.5%	-	(17.6%)	-
actual unearned premium:	4,796					
less projected:	(129)					

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 loss⁸ 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 expenses⁹, 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 76.4% rather than 74.2% (the valuation ultimate ratio for accident year 2017), 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	(596)	(18.4%)	(372)	(11.5%)	(968)	(29.8%)	(17)	9.5%
CAY	2,481	76.4%	135	4.2%	2,616	80.6%	663	(0.2%)
TOTAL	1,885	58.0%	(237)	(7.3%)	1,648	50.7%	646	9.2%

(“% EP” based on 2017 calendar year-to-date earned premium; ratios may not total due to rounding)

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 (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.

⁸“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).

⁹Allowed 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.

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 Mar. 2017	Actual Apr. 2017	Projected May. 2017	Projected Jun. 2017	Projected Dec. 2017
	2005		(2)	(2)	(2)	(2)	(2)
	2006		-	-	-	-	-
	2007		49	49	48	47	41
	2008		89	(51)	(49)	(48)	(43)
	2009		78	77	76	75	67
	2010		181	181	179	176	163
	2011		474	470	462	455	409
discount rate	2012		245	137	136	133	122
1.04%	2013		500	773	764	751	676
	2014		1,658	1,458	1,443	1,418	1,255
interest rate margin	2015		1,604	1,511	1,493	1,453	1,252
25 basis pts	2016		2,730	2,716	2,694	2,619	2,205
	2017		507	756	1,164	1,540	1,315
	TOTAL		8,113	8,075	8,408	8,617	7,460
	Change			(38)	333	209	

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 Mar. 2017	Actual Apr. 2017	Projected May. 2017	Projected Jun. 2017	Projected Dec. 2017
	84.0%	2005	(2)	(2)	(2)	(2)	(2)
	53.2%	2006	-	-	-	-	-
	72.4%	2007	45	45	44	43	37
	75.4%	2008	62	(78)	(76)	(74)	(68)
	78.4%	2009	56	55	54	53	47
	61.5%	2010	54	54	53	52	46
	86.1%	2011	324	320	314	308	272
	55.5%	2012	162	54	53	52	46
	69.9%	2013	288	562	556	545	483
	72.5%	2014	1,362	1,163	1,151	1,128	989
	65.5%	2015	1,364	1,271	1,258	1,220	1,059
	70.8%	2016	2,409	2,398	2,386	2,314	1,988
	74.2%	2017	407	621	994	1,328	952
		TOTAL	6,531	6,463	6,785	6,967	5,849
		Change		(68)	322	182	

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

EXHIBIT C

Premium Liabilities

TABLE EXHIBIT C

	Amounts in \$000s				
	Actual Mar. 2017	Actual Apr. 2017	Projected May. 2017	Projected Jun. 2017	Projected Dec. 2017
Premium Liabilities					
(1) unearned premium (UP)	4,663	4,796	5,088	5,477	7,501
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	82.4%	82.4%	82.4%	82.5%	83.1%
(3) expected future costs {(1) x (2)}	3,840	3,950	4,194	4,519	6,235
(4) premium deficiency / (deferred policy acquisition cost)	(823)	(846)	(894)	(958)	(1,266)
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	76.8%	76.8%	76.9%	77.0%	77.6%
(6) expected future costs {(1) x (5)}	3,581	3,685	3,912	4,215	5,817
(7) premium deficiency / (deferred policy acquisition cost)	(1,082)	(1,111)	(1,176)	(1,262)	(1,684)

EXHIBIT D
Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2017, broken down by component.

New Brunswick ending 2017		Projected Balances as at Dec. 31, 2017 (\$000s)							
		nominal values			actuarial present value adjustments (apvs)				TOTAL
Acc Yr	Case	IBNR	Total Unpaid	discount	investment PfAD	development PfAD	Total apvs		
2005	-	(2)	(2)	-	-	-	-	(2)	
2006	-	-	-	-	-	-	-	-	
2007	8	37	45	(1)	-	5	4	49	
2008	354	(68)	286	(5)	1	29	25	311	
2009	188	47	235	(4)	1	23	20	255	
2010	1,348	46	1,394	(25)	6	136	117	1,511	
2011	1,420	272	1,692	(36)	8	165	137	1,829	
2012	891	46	937	(22)	6	92	76	1,013	
2013	1,897	483	2,380	(52)	12	233	193	2,573	
2014	1,678	989	2,667	(64)	13	317	266	2,933	
2015	927	1,059	1,986	(58)	14	237	193	2,179	
2016	375	1,988	2,363	(80)	19	278	217	2,580	
PAYs (sub-total):	9,086	4,897	13,983	(347)	80	1,515	1,248	15,231	
CAY (2017)	3,331	952	4,283	(154)	34	483	363	4,646	
claims liabilities:	12,417	5,849	18,266	(501)	114	1,998	1,611	19,877	
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	development PfAD	Total apvs	TOTAL*	
premium liabilities:	7,501	(1,684)	5,817	(147)	34	531	418	6,235	
*Total may not be sum of parts, as apvs apply to future costs within UPR									
policy liabilities:			24,083	(648)	148	2,529	2,029	26,112	

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, 2017 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Accident Year	Selected Claims Development MfADs (Dec. 31, 2016)			Total
	Third Party Liability	Accident Benefits	Other Coverages	
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%	10.0%	10.0%
2013	10.0%	10.0%	10.0%	10.0%
2014	12.5%	10.0%	10.1%	12.2%
2015	12.5%	10.0%	12.5%	12.3%
2016	12.5%	10.0%	11.7%	12.2%
2017	12.4%	10.0%	6.0%	11.7%
prem liab	11.8%	10.0%	5.1%	9.7%

discount rate: 1.04%
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, 2017 from the latest valuation date (projections in exhibits A to D are also to Dec. 31, 2017, but are based on more up-to-date information). We have included both the current valuation selection (1.04%), the prior valuation assumption (0.52%) and the prior fiscal year end valuation assumption (0.52%) 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, 2017 projected Unpaid							
	0.54%	1.04%	1.54%	2.04%	2.54%	3.04%	0.52%	0.52%
2005	-	-	-	-	-	-	-	-
2006	3	3	3	3	3	3	3	3
2007	33	32	32	32	32	31	33	33
2008	201	200	198	197	195	194	201	201
2009	175	174	172	171	170	168	175	175
2010	1,134	1,124	1,114	1,105	1,096	1,087	1,134	1,134
2011	1,455	1,440	1,426	1,412	1,398	1,385	1,455	1,455
2012	774	765	757	749	741	733	774	774
2013	1,905	1,885	1,864	1,845	1,826	1,807	1,906	1,906
2014	2,518	2,488	2,459	2,431	2,404	2,378	2,519	2,519
2016	3,451	3,395	3,340	3,287	3,236	3,186	3,453	3,453
2017	5,740	5,639	5,542	5,447	5,356	5,268	5,744	5,744
Total	19,894	19,614	19,342	19,081	18,827	18,579	19,903	19,903
	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							
	0.54%	1.04%	1.54%	2.04%	2.54%	3.04%	0.52%	0.52%
Total	280	-	(272)	(533)	(787)	(1,035)	289	289
	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							
	0.54%	1.04%	1.54%	2.04%	2.54%	3.04%	0.52%	0.52%
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	3.1%	-	-	-	-	(3.1%)	3.1%	3.1%
2008	0.5%	-	(1.0%)	(1.5%)	(2.5%)	(3.0%)	0.5%	0.5%
2009	0.6%	-	(1.1%)	(1.7%)	(2.3%)	(3.4%)	0.6%	0.6%
2010	0.9%	-	(0.9%)	(1.7%)	(2.5%)	(3.3%)	0.9%	0.9%
2011	1.0%	-	(1.0%)	(1.9%)	(2.9%)	(3.8%)	1.0%	1.0%
2012	1.2%	-	(1.0%)	(2.1%)	(3.1%)	(4.2%)	1.2%	1.2%
2013	1.1%	-	(1.1%)	(2.1%)	(3.1%)	(4.1%)	1.1%	1.1%
2014	1.2%	-	(1.2%)	(2.3%)	(3.4%)	(4.4%)	1.2%	1.2%
2016	1.6%	-	(1.6%)	(3.2%)	(4.7%)	(6.2%)	1.7%	1.7%
2017	1.8%	-	(1.7%)	(3.4%)	(5.0%)	(6.6%)	1.9%	1.9%
Total	1.4%	-	(1.4%)	(2.7%)	(4.0%)	(5.3%)	1.5%	1.5%
	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	-	-	-	-	-	-	-
2007	49	(1)	1	-	-	-	49
2008	89	(1)	(139)	-	(140)	(157.3%)	(51)
2009	78	(1)	-	-	(1)	(1.3%)	77
2010	181	(2)	2	-	-	-	181
2011	474	(7)	3	-	(4)	(0.8%)	470
2012	245	(3)	(105)	-	(108)	(44.1%)	137
2013	500	(7)	280	-	273	54.6%	773
2014	1,658	(44)	(156)	-	(200)	(12.1%)	1,458
2015	1,604	(70)	(23)	-	(93)	(5.8%)	1,511
2016	2,730	(127)	113	-	(14)	(0.5%)	2,716
2017	507	209	40	-	249	49.1%	756
Grand Total	8,113	(54)	16	-	(38)	(0.5%)	8,075

EXHIBIT G

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

RSP		New Brunswick						IBNR - in \$000s	
AccountCode Desc		IBNR - Undisc							
AccYear	Values		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	
		Sum of Prior Month Actual Amount							
2005		(2)	-	-	-	-	-	(2)	
2006		-	-	-	-	-	-	-	
2007		45	(1)	1	-	-	-	45	
2008		62	(1)	(139)	-	(140)	(225.8%)	(78)	
2009		56	(1)	-	-	(1)	(1.8%)	55	
2010		54	(1)	1	-	-	-	54	
2011		324	(6)	2	-	(4)	(1.2%)	320	
2012		162	(3)	(105)	-	(108)	(66.7%)	54	
2013		288	(6)	280	-	274	95.1%	562	
2014		1,362	(41)	(158)	-	(199)	(14.6%)	1,163	
2015		1,364	(68)	(25)	-	(93)	(6.8%)	1,271	
2016		2,409	(120)	109	-	(11)	(0.5%)	2,398	
2017		407	180	34	-	214	52.6%	621	
Grand Total		6,531	(68)	-	-	(68)	(1.0%)	6,463	