



NEW BRUNSWICK RISK SHARING POOL

JULY 2020 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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ACTUARIAL HIGHLIGHTS
RSP NEW BRUNSWICK
OPERATIONAL REPORT
JULY 2020

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1 Summary

Key Points

- (a) The loss ratios currently being used include an initial assessment of the incurred impacts associated with the COVID-19 pandemic, with a further review and assessment to be included with the RSP 2020 Q2 actuarial valuation update (as at July 2020); and
- (b) The month’s Prior Accident Year recorded activities were higher than projected; the activity was reviewed and attributed to process variance.

1.1 Valuation Schedule (Fiscal Year 2020)

The July 2020 Operational Report leverages actuarial assumptions consistent with last month (that is, it does not reflect the results of an updated valuation). The following table summarizes the valuation implementations scheduled for fiscal year 2020.

NEW BRUNSWICK RISK SHARING POOL FISCAL YEAR 2020 – SCHEDULE OF VALUATIONS			
Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep 30, 2019 (completed)	1.43% mfad 25 bp	Oct. 2019	updated valuation (roll forward) : accident year 2019 loss ratio <u>increased</u> 0.6 points to 74.2%; discount rate <u>increased</u> 2 basis points; no change to selected margins for adverse deviations
Dec. 31, 2019 (completed)	1.62% mfad 25 bp	Mar. 2020	update valuation: 2019 loss ratio <u>increased</u> 3.5 points to 77.7%; accident year 2020 loss ratio <u>increased</u> 2.4 points to 75.4 %; discount rate <u>increased</u> 19 basis points; no change to selected margins for adverse deviations
Mar. 31, 2020 (completed)	0.64% mfad 25 bp	May. 2020	update valuation (partial roll-forward): accident year 2020 loss ratio <u>decreased</u> 0.9 points to 74.5%; discount rate <u>decreased</u> 98 basis points; no change to selected margins for adverse deviations
Jun. 30, 2020	% mfad -- bp	Aug. 2020	update valuation
Sep 30, 2020	% mfad -- bp	Oct. 2020	update valuation (roll-forward)

Under the proposed schedule for fiscal year 2020, the off-half valuation quarters ending March 31, 2020 and September 30, 2020 would not reflect a full valuation update of assumptions, but would rather roll-forward key assumptions from the previous valuation. However, with disruption in the insurance environment from the COVID-19 pandemic, the valuation quarter ending March 31, 2020 includes a partial update of key assumptions to reflect this impact. Other assumptions are rolled-forward from the previous valuation.

1.2 Appointed Actuary and Hybrid Actuarial Services Model

Mr. Cosimo Pantaleo of Ernst & Young LLP (EY) was appointed as Actuary by the FA Board at its February 18, 2020 meeting.

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.

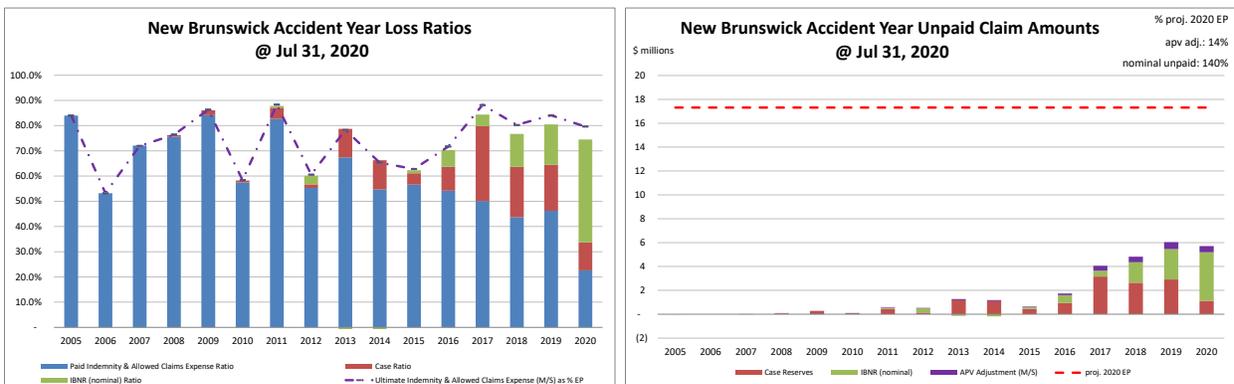
1.3 Consideration of Recent Legal Decisions and Changes in Legislation / Regulation¹

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. At the current time, there are no specific recent (i.e. within the last five years) decisions or changes for inclusion here.

1.4 Current Provision Summary

The following charts show the current levels of claim liabilities² 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 2020 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 (\$2.5 million – see the following table) represents 14% of the earned premium projected for the full year 2020 (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.

¹This url to a pdf is to a helpful guide on how bills become laws: <https://www.ola.org/sites/default/files/common/how-bills-become-law-en.pdf>.

²Claim 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	14,504	54.3%
ibnr	9,716	36.4%
M/S apv adjust.	2,470	9.3%
M/S total	26,690	100.0%

The table to the left breaks down the Member Statement (M/S) claim liabilities total into component parts, showing that the majority of the claim liabilities for this RSP is in case reserves. Approximately 68% of the IBNR balance relates to accident years 2019 and 2020 (see Exhibit B). Approximately 84% of the M/S total claim

liabilities are related to accident years 2016-2020 inclusive (i.e. the most recent 5 accident years), and approximately 2% is related to accident years 2010 and prior (i.e. prior to the most recent 10 accident years).

The following tables summarize the premium liabilities and the total policy liabilities.

premium liabilities (\$000s)

	amt	%
unearned prem	9,280	117.3%
prem def/(dpac)	(1,956)	(24.7%)
M/S apv adjust.	585	7.4%
M/S total	7,909	100.0%

policy liabilities (\$000s)

	amt	%
claim	24,220	70.0%
premium	7,324	21.2%
M/S apv adjust.	3,055	8.8%
M/S total	34,599	100.0%

2 Activity During the Month of July 2020

2.1 Recorded Premium and Claims Activity

The following table summarizes the extent to which premiums and claims amounts recorded during the month differ from projections reflected in the prior month's Operational Report³.

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	(6)	(6)	102	(27)	508	563	610	536
2018	(10)	(10)	23	(21)	69	77	92	56
2019	(9)	(9)	30	(80)	(26)	33	4	(47)
2020	1,512	30	506	70	275	15	780	86
TOTAL	1,488	6	661	(57)	825	688	1,486	631

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

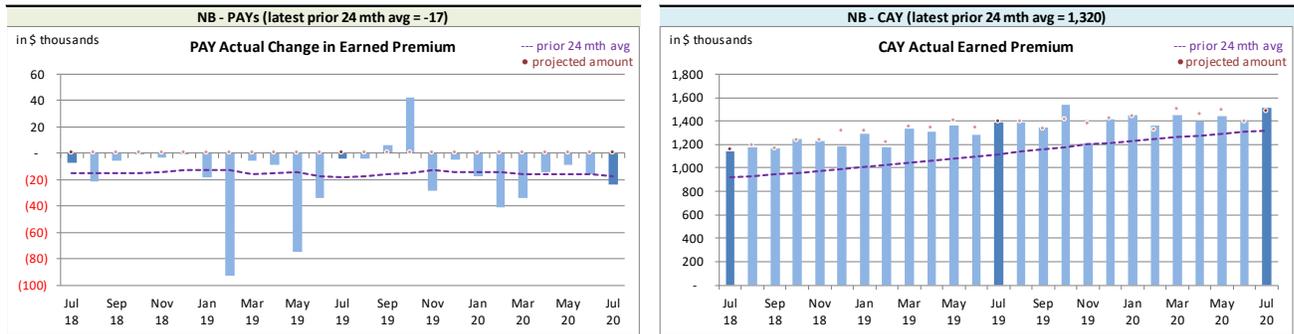
Claims transaction activity is generally volatile and changes from one month to the next are anticipated due to this natural "process variance" (i.e. random variation), and this is particularly true where volumes are low as found in this RSP. Each month, the projection variances are reviewed for signs 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.

³There may be rounding differences in values in this document compared with the associated Bulletin and/or Operational Report.

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

The following charts show actual **earned premium**⁴ 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



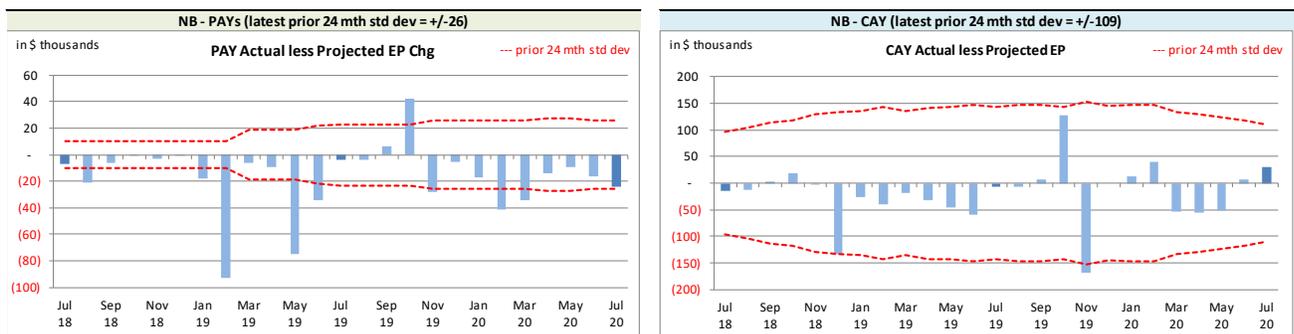
Earned premium changes during a given calendar month in relation to prior accident years tend to be at modest levels, although relatively high levels generally occur at the beginning of each year.

On Latest \$ thousands			
Earned Premium	PAYS	CAY	
Mthly Avg EP Chg (prior 24 mths)	(17)	1,320	
std dev	26	109	
A-P <> std dev	9	1	
% <> std dev	36.0%	4.0%	
norm <> std dev	31.7%	31.7%	
performance vs 24-mth avg:	no better	better	

The associated variance between the actual changes and the projections from the previous month are shown in following charts. **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



⁴Premium 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.

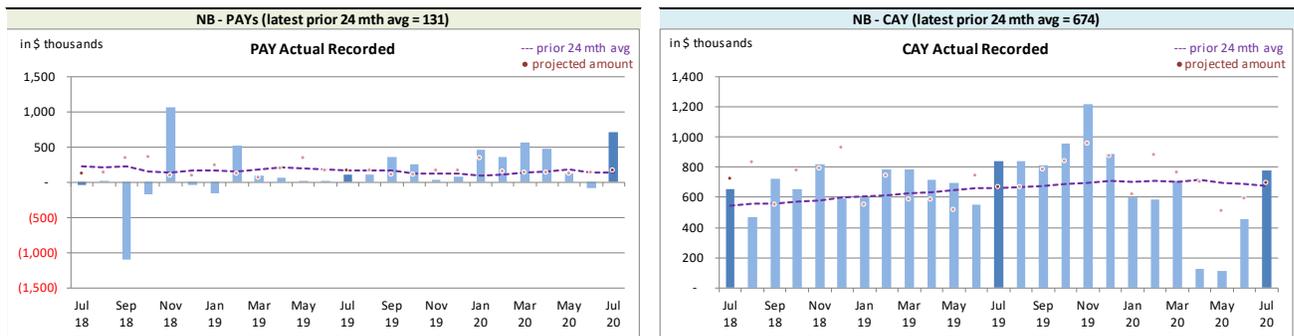
We project **earned premium** changes from known unearned premium balances and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years’ (PAYs) bias⁵, with actuals generally lower than our projections, although the magnitude is not high relative to monthly premium. However, for the CAY, bias⁶ has not been indicated. Over time, we may consider other projection approaches to address the bias issue, but it is not currently deemed as priority.

Readers will note the widening of the CAY standard deviation band, reflecting the recent and sustained volume increases and the impact as those increases are earned.

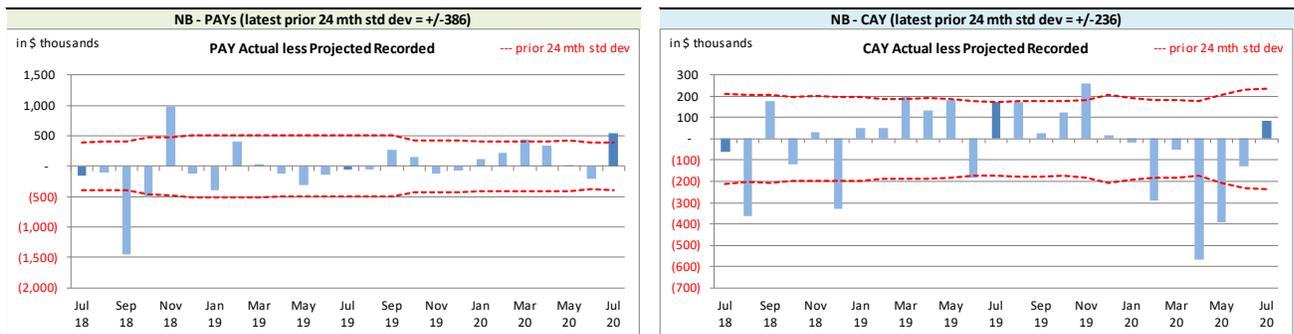
2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

The following charts 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.

New Brunswick RSP Actual Recorded by Calendar Month



Recorded activity variances from the previous month’s projections are shown in the following charts, including the “prior 24-month standard deviation” levels to show how the variances from projection compare with historical standard deviations.



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

⁵The PAYs’ variances will show bias as the projection upload forces all earned premium projections to be attributed to the CAY.

⁶We measure bias based on a 95% confidence range for a binominal distribution with trials based on the range being considered (25 in this case) and 50% probability of success. The rolling 25-month CAY variances at July 2020 has 8 months where the actual was higher than projected, and as the 95% confidence range is 8 to 17, bias continues to be indicated.

On Latest \$ thousands		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	131	674
std dev	386	236
A-P <> std dev	5	8
% <> std dev	20.0%	32.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	no better

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 in relative or overall terms. That said, 20% of the prior accident

years' (PAYs) **recorded** variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **recorded** amounts (see preceding table to the left), suggesting the projection process has performed better than simply projecting the prior 24-month average amount (assuming it follows a normal distribution). Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (11 of 25 variances are positive).

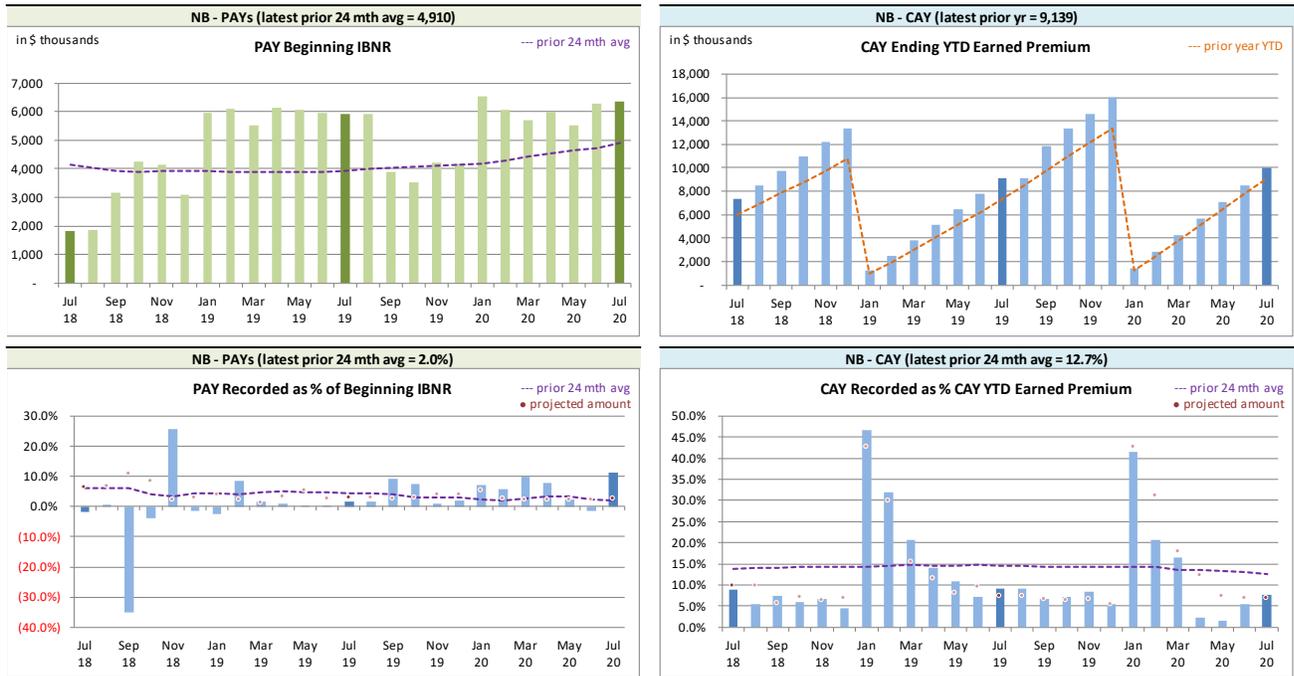
The PAY **recorded** variance was outside the one standard deviation band this month (see preceding chart on the left) the higher projected recorded activity was reviewed, and attributed to process variance.

The current accident year (CAY) **recorded** variances fell outside of one standard deviation 32% of the time over the last 25 calendar months (see preceding table on the left), suggesting the projection process has performed no better than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (14 of 25 variances are positive).

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, the following charts 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 influence⁷ Recorded activity by Calendar Month



We track PAY beginning IBNR as **recorded** activity comes out of IBNR. Changes in the PAY beginning IBNR (see upper left of the preceding group of charts) occur for several possible reasons:

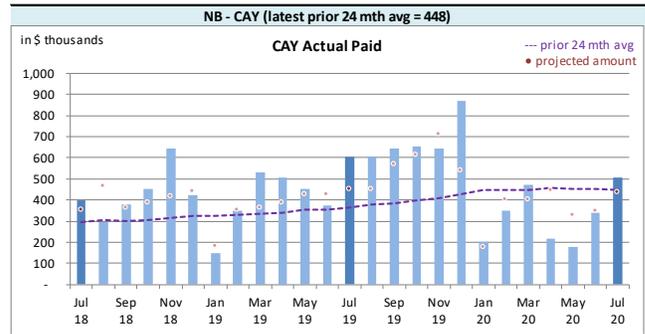
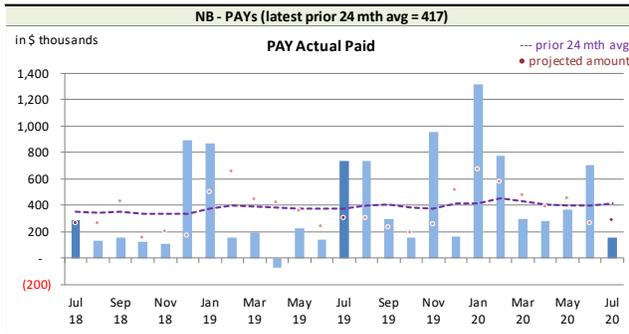
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs’ ultimates (will show up as a beginning IBNR change one 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 following charts 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.

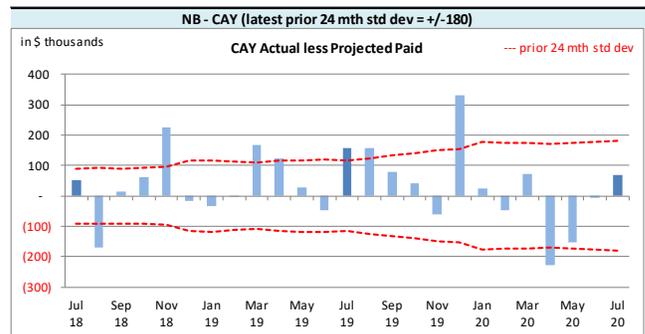
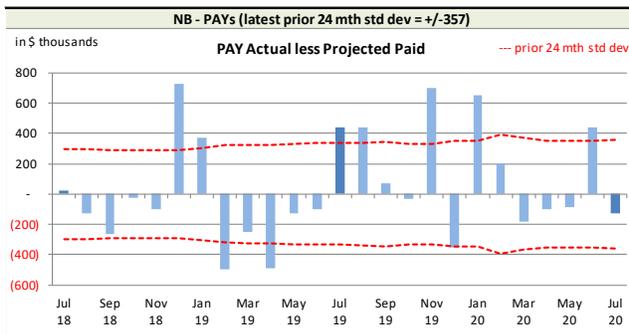
⁷Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned 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



Paid activity variances from the previous month’s projections are shown in the following charts, including the “prior 24-month standard deviation” levels 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)	417	448
std dev	357	180
A-P <> std dev	10	8
% <> std dev	40.0%	32.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	worse	no better

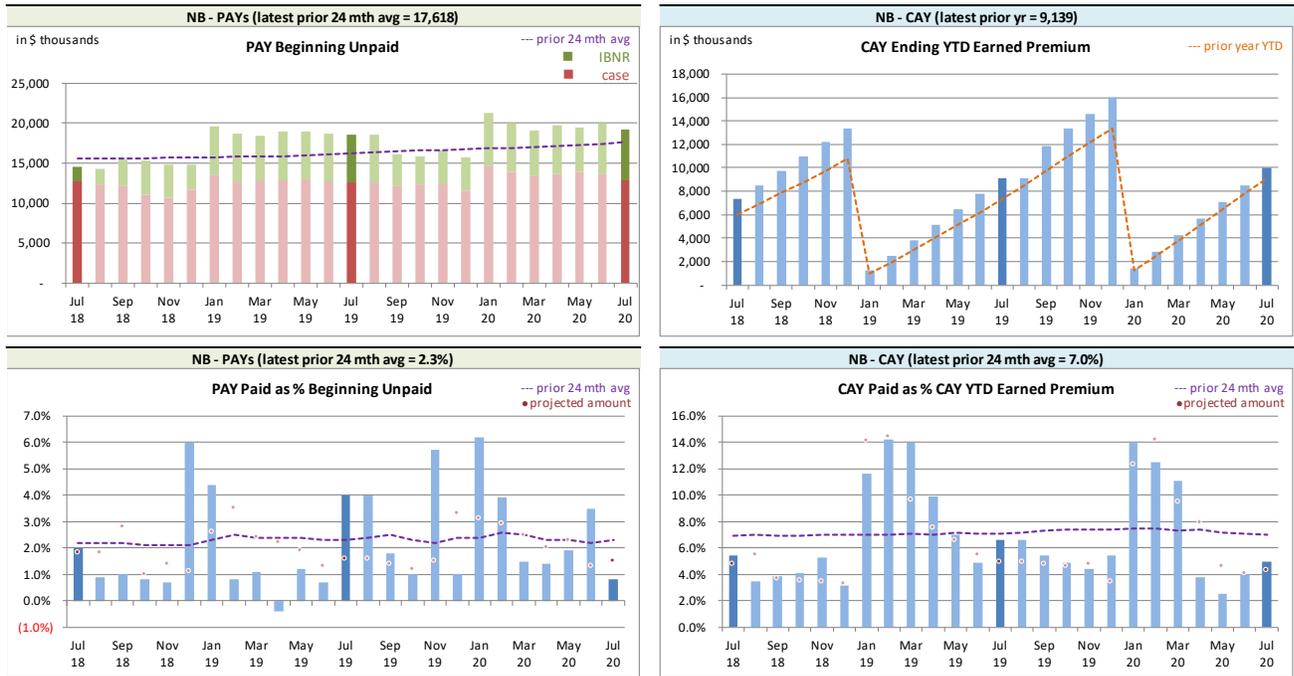
With respect to **paid** indemnity & allowed claims expense, caution must be exercised in reviewing the variances as this is a small pool, and single claim transactions that are normal course for the business may look unusual and generate relatively significant variances that in nominal value terms are not that significant in relative or overall terms. That said, 40% of the prior accident years’ (PAYs) variances

over the last 25 calendar months have fallen outside of one standard deviation of the actual **paid** amounts (see preceding table on the left), suggesting the projection process has performed worse than simply projecting the prior 24-month average amount (assuming a normal distribution). Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (10 of 25 variances are positive).

The current accident year (CAY) **paid** variances fell outside of one standard deviation 32% of the time over the last 25 calendar months (see preceding table on the left), suggesting that the projection process has performed no better than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (15 of 25 variances are positive).

We have included, for reference, the following charts related to levels influencing **paid** activity.

New Brunswick RSP Levels that influence⁸ Paid activity by Calendar Month



We track the PAY beginning unpaid balance (case and IBNR) as **paid** activity comes out of the unpaid balance. Changes in the PAY beginning unpaid balance (see upper left of the preceding group of charts) occur for several possible reasons:

- to offset actual **paid** activity (may reduce case or IBNR or both);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs’ ultimates (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 IBNR⁹, 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 following table summarizes variances in provisions included in this month’s Operational Report

⁸Our 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.

⁹For ease of discussion, “IBNR” is used in place of “provisions for incurred but not recorded (IBNR) and development”.

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	1,366	(540)	(132)	(2)	1,046	6	2,280	(536)
2018	1,717	(64)	(83)	-	548	2	2,182	(62)
2019	2,545	41	(120)	(1)	700	9	3,125	49
2020	4,088	(63)	(120)	1	631	(5)	4,599	(67)
TOTAL	9,716	(626)	(455)	(2)	2,925	12	12,186	(616)

The IBNR provision is \$0.6 million lower than projected from last month, counterbalancing the recorded claims activity and adjusting for the earned premium variance impacts indicated in section 2.1.

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

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

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

The following table summarizes the variances in the provisions for premium deficiency liability / (deferred policy acquisition cost asset) included in this month’s Operational Report and the one-month projections from last month’s Report. This RSP is in a 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:	(1,956)	(152)	585	48	(1,371)	(104)
balance as % unearned premium:	(21.1%)	0.1%	6.3%	-	(14.8%)	0.1%
actual unearned premium:	9,280					
less projected:	756					

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 loss¹⁰ 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 following table summarizes the calendar year-to-date results for indemnity & allowed claims expenses¹¹, 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 75.7% rather than 74.5% (the valuation ultimate ratio for accident year 2020), 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.)

¹⁰“Loss” here refers to indemnity and allowed claims expenses, but does not include the claims expense allowance included in member company overall expense allowances (“Expense Allowance” in the Operational Report).

¹¹Allowed 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.

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	1,678	17.0%	398	4.0%	2,076	21.1%	(35)	(4.1%)
CAY	7,462	75.7%	511	5.2%	7,973	80.9%	1,188	(0.1%)
TOTAL	9,140	92.7%	909	9.2%	10,049	101.9%	1,153	(4.4%)

("EP" based on 2020 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 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 Jun. 2020	Actual Jul. 2020	Projected Aug. 2020	Projected Sep. 2020	Projected Dec. 2020
	2005	(2)	(2)	(2)	(2)	(2)
	2006	-	-	-	-	-
	2007	(6)	(6)	(6)	(6)	(6)
	2008	12	12	12	12	12
	2009	20	20	20	19	19
	2010	16	16	16	16	16
	2011	113	113	110	109	105
	2012	415	390	381	378	367
	2013	126	(42)	(41)	(41)	(41)
	2014	(92)	(95)	(92)	(91)	(89)
discount rate	2015	272	177	175	173	168
0.64%	2016	783	801	794	775	698
	2017	1,246	896	886	878	813
interest rate margin	2018	2,286	2,182	2,160	2,139	1,962
25 basis pts	2019	3,139	3,125	3,049	2,943	2,710
	2020	4,191	4,599	4,986	5,384	3,319
	TOTAL	12,519	12,186	12,448	12,686	10,051
	Change		(333)	262	238	

Please see Exhibit G, page 1 for Components of Change during Current Month

EXHIBIT B

IBNR

TABLE EXHIBIT B

Amounts in \$000s

IBNR	Ultimate Loss Ratio	Accident Year	Actual Jun. 2020	Actual Jul. 2020	Projected Aug. 2020	Projected Sep. 2020	Projected Dec. 2020
	84.0%	2005	(2)	(2)	(2)	(2)	(2)
	53.2%	2006	-	-	-	-	-
	72.0%	2007	(7)	(7)	(7)	(7)	(7)
	76.3%	2008	4	4	4	4	4
	86.1%	2009	(4)	(4)	(4)	(4)	(4)
	58.3%	2010	8	8	8	8	8
	87.8%	2011	66	66	64	63	60
	60.2%	2012	367	345	337	334	325
	77.4%	2013	29	(139)	(136)	(135)	(132)
	64.4%	2014	(179)	(181)	(177)	(175)	(169)
	62.3%	2015	216	125	122	121	118
	70.3%	2016	641	660	653	637	567
	84.4%	2017	841	491	486	481	441
	76.8%	2018	1,817	1,717	1,700	1,683	1,533
	80.5%	2019	2,555	2,545	2,486	2,397	2,221
	74.5%	2020	3,741	4,088	4,412	4,753	2,602
		TOTAL	10,093	9,716	9,946	10,158	7,565
		Change		(377)	230	212	

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

EXHIBIT C
Premium Liabilities

TABLE EXHIBIT C

	Amounts in \$000s				
	Actual Jun. 2020	Actual Jul. 2020	Projected Aug. 2020	Projected Sep. 2020	Projected Dec. 2020
Premium Liabilities					
(1) unearned premium (UP)	8,646	9,280	9,383	9,826	9,286
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	84.6%	85.2%	85.8%	86.4%	88.7%
(3) expected future costs {(1) x (2)}	7,318	7,909	8,050	8,494	8,233
(4) premium deficiency / (deferred policy acquisition cost)	(1,328)	(1,371)	(1,333)	(1,332)	(1,053)
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	78.4%	78.9%	79.4%	80.0%	82.1%
(6) expected future costs {(1) x (5)}	6,776	7,324	7,454	7,864	7,623
(7) premium deficiency / (deferred policy acquisition cost)	(1,870)	(1,956)	(1,929)	(1,962)	(1,663)

EXHIBIT D
Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2020, broken down by component.

New Brunswick ending 2020		Projected Balances as at Dec. 31, 2020 (\$000s)									
Acc Yr	nominal values			actuarial present value adjustments (apvs)						TOTAL	
	Case	IBNR	Total Unpaid	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs		
2005	-	(2)	(2)	-	-	-	-	-	-	(2)	
2006	-	-	-	-	-	-	-	-	-	-	
2007	-	(7)	(7)	-	-	1	-	1	1	(6)	
2008	73	4	77	-	-	8	-	8	8	85	
2009	242	(4)	238	(1)	-	24	-	24	23	261	
2010	79	8	87	(1)	-	9	-	9	8	95	
2011	424	60	484	(5)	2	48	-	48	45	529	
2012	136	325	461	(5)	2	46	(1)	45	42	503	
2013	1,113	(132)	981	(10)	4	98	(1)	97	91	1,072	
2014	1,041	(169)	872	(9)	3	87	(1)	86	80	952	
2015	434	118	552	(7)	3	55	(1)	54	50	602	
2016	909	567	1,476	(24)	9	148	(2)	146	131	1,607	
2017	2,926	441	3,367	(61)	24	417	(8)	409	372	3,739	
2018	2,485	1,533	4,018	(76)	28	486	(9)	477	429	4,447	
2019	2,373	2,221	4,594	(101)	41	561	(12)	549	489	5,083	
PAYs (sub-total):	12,235	4,963	17,198	(300)	116	1,988	(35)	1,953	1,769	18,967	
CAY (2020)	4,685	2,602	7,287	(168)	66	838	(19)	819	717	8,004	
claims liabilities:	16,920	7,565	24,485	(468)	182	2,826	(54)	2,772	2,486	26,971	
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*	
premium liabilities:	9,286	(1,663)	7,623	(111)	44	687	(10)	677	610	8,233	
*Total may not be sum of parts, as apvs apply to future costs within UPR											
policy liabilities:			32,108	(579)	226	3,513	(64)	3,449	3,096	35,204	

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, 2020 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Selected Claims Development MfADs (Mar. 31,
2020)

Accident Year	Third Party Liability Margins	Accident Benefits Margins	Other Coverages Margins	Total Margins
2005	10.0%	10.0%	10.0%	10.0%
2006	10.0%	10.0%	10.0%	10.0%
2007	10.0%	10.0%	10.0%	10.0%
2008	10.0%	10.0%	10.0%	10.0%
2009	10.0%	10.0%	10.0%	10.0%
2010	10.0%	10.0%	10.0%	10.0%
2011	10.0%	10.0%	10.0%	10.0%
2012	10.0%	10.0%	10.0%	10.0%
2013	10.0%	10.0%	10.0%	10.0%
2014	10.0%	10.0%	10.0%	10.0%
2015	10.0%	10.0%	10.0%	10.0%
2016	10.0%	10.0%	8.1%	10.0%
2017	12.5%	10.0%	11.5%	12.4%
2018	12.5%	10.0%	12.5%	12.1%
2019	12.5%	10.0%	11.1%	12.2%
2020	12.3%	10.0%	5.5%	11.5%
2021	11.7%	10.0%	5.1%	9.3%
<u>prem liab</u>	<u>11.7%</u>	<u>10.0%</u>	<u>5.1%</u>	<u>9.3%</u>

discount rate: 0.64%
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, 2020 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2020, and are based on more up-to-date information). We have included the most recent valuation selection (0.64%), the prior valuation assumption (1.62%) and the prior fiscal year end valuation assumption (1.43%) 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, 2020 projected Unpaid							
	0.00%	0.14%	0.64%	1.14%	1.64%	2.14%	1.62%	1.43%
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-
2008	57	57	57	57	56	56	56	56
2009	205	205	204	203	202	201	202	202
2010	67	67	67	67	66	66	66	66
2011	371	371	368	366	363	360	363	364
2012	641	641	637	631	626	620	626	628
2013	778	778	773	767	762	756	762	764
2014	926	926	920	913	905	898	906	908
2015	535	534	530	524	519	514	519	521
2016	1,546	1,546	1,530	1,512	1,494	1,476	1,494	1,501
2017	3,718	3,716	3,675	3,624	3,575	3,528	3,577	3,596
2018	4,296	4,295	4,242	4,179	4,117	4,057	4,119	4,143
2019	5,925	5,922	5,840	5,740	5,643	5,550	5,647	5,683
2020	8,882	8,877	8,749	8,594	8,444	8,299	8,450	8,506
Total	27,947	27,935	27,592	27,177	26,772	26,381	26,787	26,938
	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							
	0.00%	0.14%	0.64%	1.14%	1.64%	2.14%	1.62%	1.43%
Total	355	343	-	(415)	(820)	(1,211)	(805)	(654)
	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							
	0.00%	0.14%	0.64%	1.14%	1.64%	2.14%	1.62%	1.43%
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-
2008	-	-	-	-	(1.8%)	(1.8%)	(1.8%)	(1.8%)
2009	0.5%	0.5%	-	(0.5%)	(1.0%)	(1.5%)	(1.0%)	(1.0%)
2010	-	-	-	-	(1.5%)	(1.5%)	(1.5%)	(1.5%)
2011	0.8%	0.8%	-	(0.5%)	(1.4%)	(2.2%)	(1.4%)	(1.1%)
2012	0.6%	0.6%	-	(0.9%)	(1.7%)	(2.7%)	(1.7%)	(1.4%)
2013	0.6%	0.6%	-	(0.8%)	(1.4%)	(2.2%)	(1.4%)	(1.2%)
2014	0.7%	0.7%	-	(0.8%)	(1.6%)	(2.4%)	(1.5%)	(1.3%)
2015	0.9%	0.8%	-	(1.1%)	(2.1%)	(3.0%)	(2.1%)	(1.7%)
2016	1.0%	1.0%	-	(1.2%)	(2.4%)	(3.5%)	(2.4%)	(1.9%)
2017	1.2%	1.1%	-	(1.4%)	(2.7%)	(4.0%)	(2.7%)	(2.1%)
2018	1.3%	1.2%	-	(1.5%)	(2.9%)	(4.4%)	(2.9%)	(2.3%)
2019	1.5%	1.4%	-	(1.7%)	(3.4%)	(5.0%)	(3.3%)	(2.7%)
2020	1.5%	1.5%	-	(1.8%)	(3.5%)	(5.1%)	(3.4%)	(2.8%)
Total	1.3%	1.2%	-	(1.5%)	(3.0%)	(4.4%)	(2.9%)	(2.4%)
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

EXHIBIT G

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

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

M/S IBNR - in \$000s

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
2005	(2)	-	-	-	-	-	(2)
2006	-	-	-	-	-	-	-
2007	(6)	-	-	-	-	-	(6)
2008	12	-	-	-	-	-	12
2009	20	-	-	-	-	-	20
2010	16	-	-	-	-	-	16
2011	113	(1)	1	-	-	-	113
2012	415	(7)	(18)	-	(25)	(6.0%)	390
2013	126	(1)	(167)	-	(168)	(133.3%)	(42)
2014	(92)	2	(5)	-	(3)	3.3%	(95)
2015	272	(3)	(92)	-	(95)	(34.9%)	177
2016	783	(52)	70	-	18	2.3%	801
2017	1,246	(25)	(325)	-	(350)	(28.1%)	896
2018	2,286	(42)	(62)	-	(104)	(4.5%)	2,182
2019	3,139	(63)	49	-	(14)	(0.4%)	3,125
2020	4,191	475	(67)	-	408	9.7%	4,599
Grand Total	12,519	283	(616)	-	(333)	(2.7%)	12,186

EXHIBIT G

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

RSP		New Brunswick						IBNR - in \$000s
AccountCode Desc		IBNR - Undiscounted						
AccYear	Values							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	Sum of Total Change	Sum of % Total Change		
2005	(2)	-	-	-	-	-	(2)	
2006	-	-	-	-	-	-	-	
2007	(7)	-	-	-	-	-	(7)	
2008	4	-	-	-	-	-	4	
2009	(4)	-	-	-	-	-	(4)	
2010	8	-	-	-	-	-	8	
2011	66	(1)	1	-	-	-	66	
2012	367	(6)	(16)	-	(22)	(6.0%)	345	
2013	29	-	(168)	-	(168)	(579.3%)	(139)	
2014	(179)	3	(5)	-	(2)	1.1%	(181)	
2015	216	(3)	(88)	-	(91)	(42.1%)	125	
2016	641	(50)	69	-	19	3.0%	660	
2017	841	(17)	(333)	-	(350)	(41.6%)	491	
2018	1,817	(36)	(64)	-	(100)	(5.5%)	1,717	
2019	2,555	(51)	41	-	(10)	(0.4%)	2,545	
2020	3,741	410	(63)	-	347	9.3%	4,088	
Grand Total	10,093	249	(626)	-	(377)	(3.7%)	9,716	