

NEW BRUNSWICK RISK SHARING POOL

AUGUST 2021 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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ACTUARIAL HIGHLIGHTS

RSP NEW BRUNSWICK

OPERATIONAL REPORT

AUGUST 2021

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1 Summary

- 1) Recorded activities since last valuation implementation were significantly lower than projected, primarily driven by the activity in the month of August; this activity was reviewed and attributed to the reserving methodology change of one member company group.
- 2) Note to members: this is the quarterly Actuarial Highlights we will release going forward to replace the monthly Actuarial Highlights. The next report will be available for reporting month October 2021 in November 2021, in line with the valuation implementation schedule. Please contact us with any questions or concerns in regards to this matter.

1.1 Valuation Schedule (Fiscal Year 2021)

The August 2021 Operational Report incorporates the results of an updated valuation (as at March 31, 2021) – the impact of the implementation of the valuation is discussed in section 1.2. The following table summarizes the valuation implementations scheduled for fiscal year 2021.

NEW BRUNSWICK RISK SHARING POOL FISCAL YEAR 2021 – SCHEDULE OF VALUATIONS			
Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep 30, 2020 (completed)	0.22% mfad ¹ 25 bp	Oct. 2020	update valuation (roll-forward): ; accident year 2020 loss ratio <u>decreased</u> 0.1 points to 65.2%; discount rate <u>decreased</u> 3 basis points; no change to selected margins for adverse deviations
Dec. 31, 2020 (completed)	0.26% mfad 25 bp	Mar. 2021	update valuation: accident year 2020 loss ratio <u>decreased</u> 6.0 points to 59.2% and accident year 2021 loss ratio <u>decreased</u> 6.5 points to 70.1%;; discount rate <u>increased</u> 4 basis points; no change to selected margins for adverse deviations
Mar. 31, 2021 (completed)	0.78% mfad 25 bp	May. 2021	update valuation (roll-forward): accident year 2021 loss ratio <u>decreased</u> 0.6 points to 69.5%; discount rate <u>increased</u> 52 basis points; no change to selected margins for adverse deviations
Jun. 30, 2021 (completed)	0.76% mfad 25 bp	Aug. 2021	update valuation: accident year 2021 loss ratio <u>decreased</u> 4.4 points to 65.1%; discount rate <u>decreased</u> by 2 basis points; selected margins for adverse deviation were updated
Sep. 30, 2021	% mfad -- bp	Oct. 2021	update valuation (roll-forward):

¹ The selected interest rate margin is limited to reducing the selected discount rate to 0%; the approach is that if the net impact is negative, the discount rate will be capped at 0%.

Under the proposed schedule for fiscal year 2021, the off-half valuation quarters ending March 31, 2021 and September 30, 2021 would not reflect a full valuation update of assumptions, but would rather roll-forward key assumptions from the previous valuation.

1.2 New Valuation

A valuation of the New Brunswick Risk Sharing Pool (“RSP”) as at June 30, 2021 has been completed since last month’s Operational Report and the results of that valuation have been incorporated into this month’s Report. The valuation was completed by the Facility Association’s internal actuarial group in conjunction with, and approved by, the Appointed Actuary, under the hybrid model for actuarial services.

The valuation implementation impact is summarized in the following two tables, where the abbreviations PAYs refers to prior accident years, CAY refers to the current accident year (2021), and “Prem Def” refers to premium deficiency / deferred acquisition costs impacts.

Summary of Impact (\$000s) of Implementing Result of Valuation as at Jun. 31, 2021²

NB	unfav / (fav) for the month and ytd					
	IMPACT in \$000s from changes in:					
	ults & payout patterns			dsct rate	margins	TOTAL
	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	
	[1]	[2]	[3]	[4]	[5]	[6]
PAYs	(36)	3	(33)	14	(98)	(117)
CAY	(612)	(55)	(667)	5	-	(662)
Prem Def	176	19	195	6	-	201
TOTAL	(472)	(33)	(505)	25	(98)	(578)

As indicated in the preceding table, the incorporation of the new valuation had an estimated **\$0.6 million favourable impact** on the month’s net result from operations, subtracting an estimated 5.5 points (see following table) from the **year-to-date Combined Operating Ratio** to end at **91.8%**.

²In these tables, “PAYs” refers to prior accident years, “CAY” refers to the current accident year, and “Prem Def” refers to the provision for premium deficiency or the deferred policy acquisition asset (as applicable). “Nominal” refers to changes excluding any actuarial present value adjustments, whereas “apv adj.” refers to actuarial present value adjustments.

The columns under the heading “ults & payout patterns” reflect the impact of changes in the valuation selected ultimates and claims payment patterns (i.e. based on unchanged selection of discount rates and margins for adverse deviation). The column “dsct rate” reflects the impact of the change in the selected discount rate and the column “margins” reflects the impact of any changes in selected margins for adverse deviations.

Summary of Impact (% YTD EP) of Implementing Result of Valuation as at Jun. 31, 2021

NB	ytd EP 10,563 (actual)					
	IMPACT unfav / (fav) as % ytd EP from changes in:					
	ults & payout patterns			dsct rate	margins	
	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL
	[1]	[2]	[3]	[4]	[5]	[6]
PAYs	(0.3%)	-	(0.3%)	0.1%	(0.9%)	(1.1%)
CAY	(5.8%)	(0.5%)	(6.3%)	-	-	(6.3%)
Prem Def	1.7%	0.2%	1.8%	0.1%	-	1.9%
TOTAL	(4.5%)	(0.3%)	(4.8%)	0.2%	(0.9%)	(5.5%)

The impact of the **nominal changes** is shown in column [1] of the two preceding summary tables. The change in the selected nominal ultimates was **favourable by \$0.5 million** overall. This reflects the impact attributable to the changes in the selected ultimate loss ratios (i.e. for each accident year, it is the product of life-to-date earned premium for the accident year and the change in the selected ultimate loss ratio).

The **PAYs** overall showed a **\$36 thousand favourable** nominal variance or less than 0.2 % of the PAYs nominal unpaid balance of \$21.2 million determined at the end of last month (July 2021), as favourable impacts of a member case reserving change was offset by a matching adjustment to IBNR to result in little overall change this quarter.

The CAY and premium deficiency impacts are a result of the change in the selected loss ratio for accident year **2021** (decreased 4.4 points to 65.1%). This change is driven by the reduced expected loss ratios due to COVID-19 assumption update, as well as lower than expected claims costs year to date, as claims frequency continues to be reduced as a result of the ongoing COVID-19 pandemic.

The impacts related to actuarial present value (“apv”) adjustments are split into the impact prior to any change in the selected discount rate and selected margins for adverse deviations or “MfADs” (at the level they were selected i.e. coverage and accident half-year), the impact of then updating the discount rate, and finally the impact of any changes to the MfADs (at the level they were selected). The changes in actuarial present value adjustments are shown in the preceding summary tables in columns [2], [4], and [5].

Column [2] recognizes that changing the nominal selections also changed the unpaid estimates (including changes to the relative mix by government line, which has an impact on the weighted-average MfADs). It also reflects the fact that we updated the projected emergence of claims payments, resulting in a change in the projected cash flows. These changes generated a favourable change of \$33 thousand in the actuarial present value adjustments, prior to any changes in the selected discount rate and/or MfADs.

Updated projected cash flows were reviewed against the selected risk-free yield curve, derived from Government of Canada benchmark bond yields monthly series using values for March 2021. Column [4] accounts for the change in the **discount rate** selected (decreased 2 basis point to **0.76%**), indicating an unfavourable impact of \$25 thousand. The impact *related only to claims liabilities* (i.e. PAYs plus CAY) was \$19 thousand at August 2021 – this compares to the \$17 thousand change one would estimate as the impact by interpolation using the interest rate sensitivity table provided in last

month's Actuarial Highlights.

Column [5] accounts for any changes to selected MfADs. The selected **investment rate MfAD** was **left unchanged at 25 basis points**. The selected **claims development MfADs** at the coverage and accident year level were updated. As per our usual practice, development margins are reviewed with the June 30 valuation, and MfADs have been rolled forward to apply lower MfADs to older years as they become more stable. The claims development MfAD update has a favourable impact of \$98 thousand on PAYs.

Consideration was given to recent legal decisions and changes in legislation / regulation as outlined in section 1.4.

1.3 Appointed Actuary and Hybrid Actuarial Services Model

The Annual General Meeting of the members of Facility Association ("FA") appointed Mr. Cosimo Pantaleo as the Appointed Actuary at its meeting on March 4, 2021.

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.

1.4 Consideration of Recent Legal Decisions and Changes in Legislation / Regulation

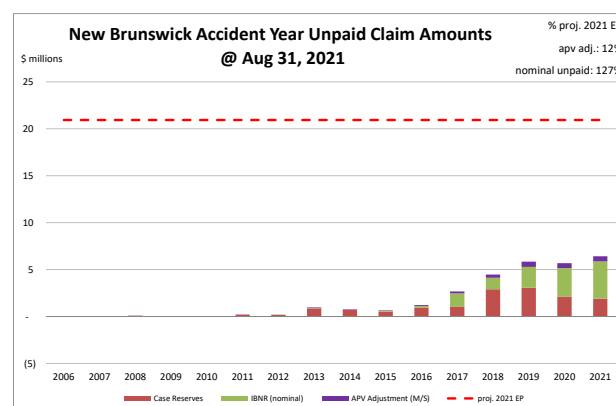
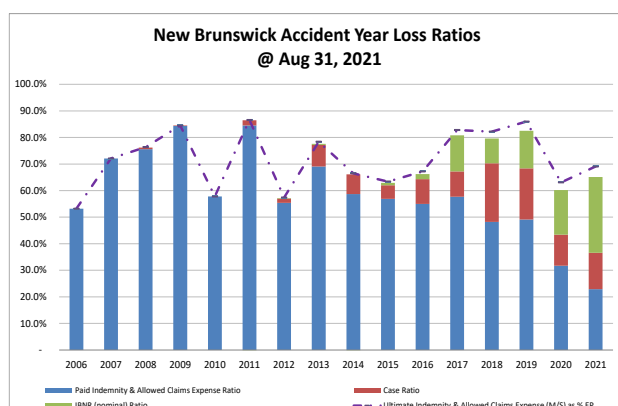
There have been no changes in these descriptions since last Highlights.

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.

1.5 Current Provision Summary

The following charts show the current levels of claim liabilities³ 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 2021 full year earned premium (the red hash-mark line) to provide some perspective.

³Claim 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.



"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 12% of the earned premium projected for the full year 2021 (see the upper right corner of the right chart above). If our current estimates of the nominal unpaid amounts prove to match actual claims payments, the actuarial present value adjustments will be released into the net operating result over future periods.

claim liabilities (\$000s)

	amt	%
case	14,441	49.5%
ibnr	12,225	41.9%
M/S apv adjust.	2,530	8.7%
M/S total	29,196	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 57% of the IBNR balance relates to accident years 2020 and 2021 (see Exhibit B).

Approximately 86% of the M/S total claim liabilities are related to accident years 2017-2021 inclusive (i.e. the most recent 5 accident years), and approximately 2% is related to accident years 2011 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	12,180	120.5%
prem def/(dpac)	(2,809)	(27.8%)
M/S apv adjust.	736	7.3%
M/S total	10,107	100.0%

policy liabilities (\$000s)

	amt	%
claim	26,666	67.8%
premium	9,371	23.8%
M/S apv adjust.	3,266	8.3%
M/S total	39,303	100.0%

2 Activity since previous valuation implementation

2.1 Recorded Premium and Claims Activity

The following table summarizes the extent to which premiums and claims amounts recorded since the prior implementation differ from the prior projection.

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

AY Group	Share Year	Share Month	Actual Earned Premium (000s)	Actual minus Projected Earned Premium (000s)	Actual Paid Claims (000s)	Actual minus Projected Paid Claims (000s)	Actual Recorded Claims (000s)	Actual minus Projected Recorded Claims (000s)
PAY	2021	April	(13)	(13)	130	(294)	500	342
		May	(26)	(26)	667	201	(2,059)	(2,228)
PAY Total			(39)	(39)	797	(93)	(1,559)	(1,886)
CAY	2021	April	1,715	108	493	29	718	(25)
		May	1,779	78	341	(119)	464	(164)
CAY Total			3,494	186	834	(90)	1,182	(189)
Grand Total			3,455	147	1,631	(183)	(377)	(2,075)

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

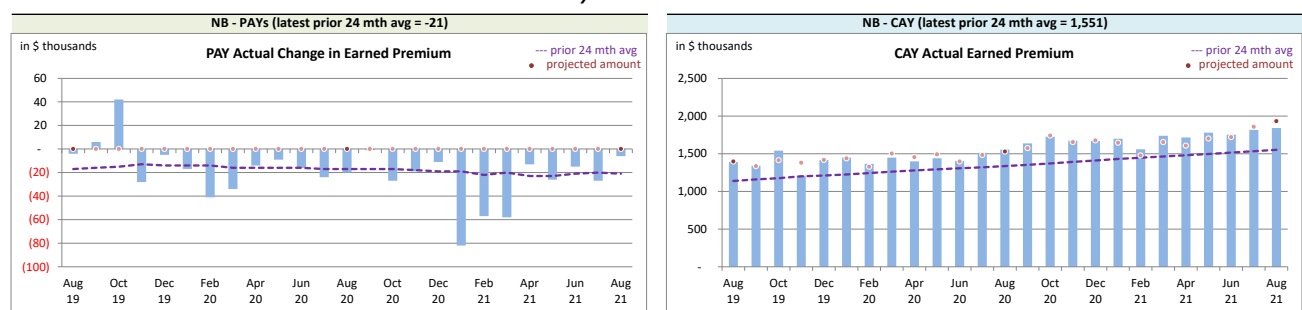
Claims transaction activity is generally volatile and changes from one month to the next are anticipated due to this natural “process variance” (i.e. random variation), and this is particularly true where volumes are low as found in this RSP. Each month, the projection variances are reviewed for signs of projection bias and to identify potential ways to reduce the level of the variance. The variances are also reviewed as part of the quarterly valuation process, as an indicator of changes in the claims development process or potential bias in ultimate claims estimates.

More detailed analysis and commentary on actual vs. projected for the most recent reporting months is provided below.

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.

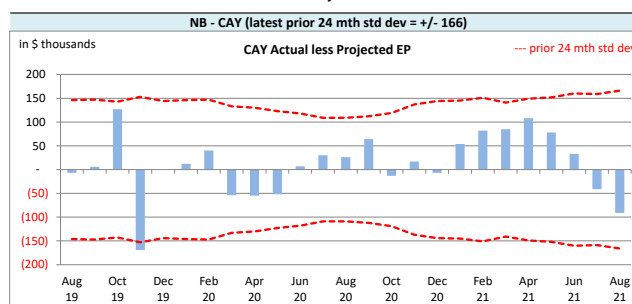
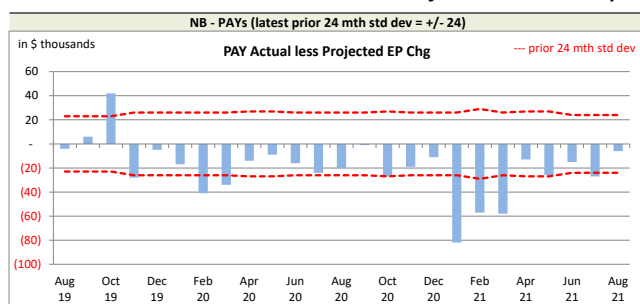
The associated variance between the actual changes and the projections from the previous month are shown in following charts. **Earned premium** change projections are all attributed to the current

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.

On Latest \$ thousands		
Earned Premium	PAYs	CAY
Mthly Avg EP Chg (prior 24 mths)	(21)	1,551
std dev	24	166
A-P <> std dev	8	1
% <> std dev	32.0%	4.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	no better	better

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



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.

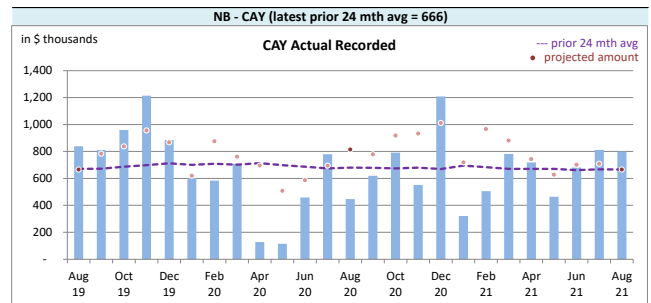
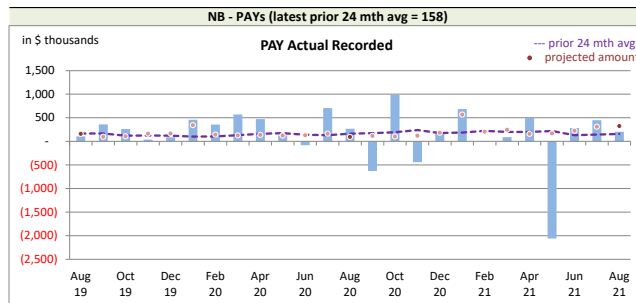
2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

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.

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

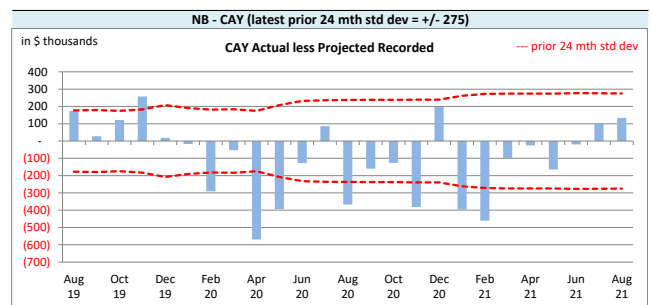
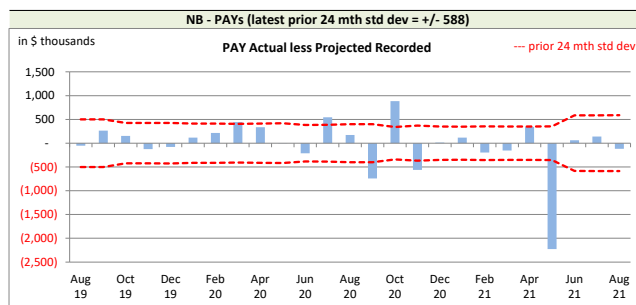
⁶For the binomial distribution with 25 trials and an assumed 50% success probability, the 95% confidence range is 8 to 17 successes. That is, favourable or unfavourable counts of 0 to 7 or 18 to 25 out of 25 outcomes would suggest bias.

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



On Latest \$ thousands			
	Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)		158	666
std dev		588	275
A-P <> std dev		6	8
% <> std dev		24.0%	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, 24% 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 (15 of 25 variances are positive).

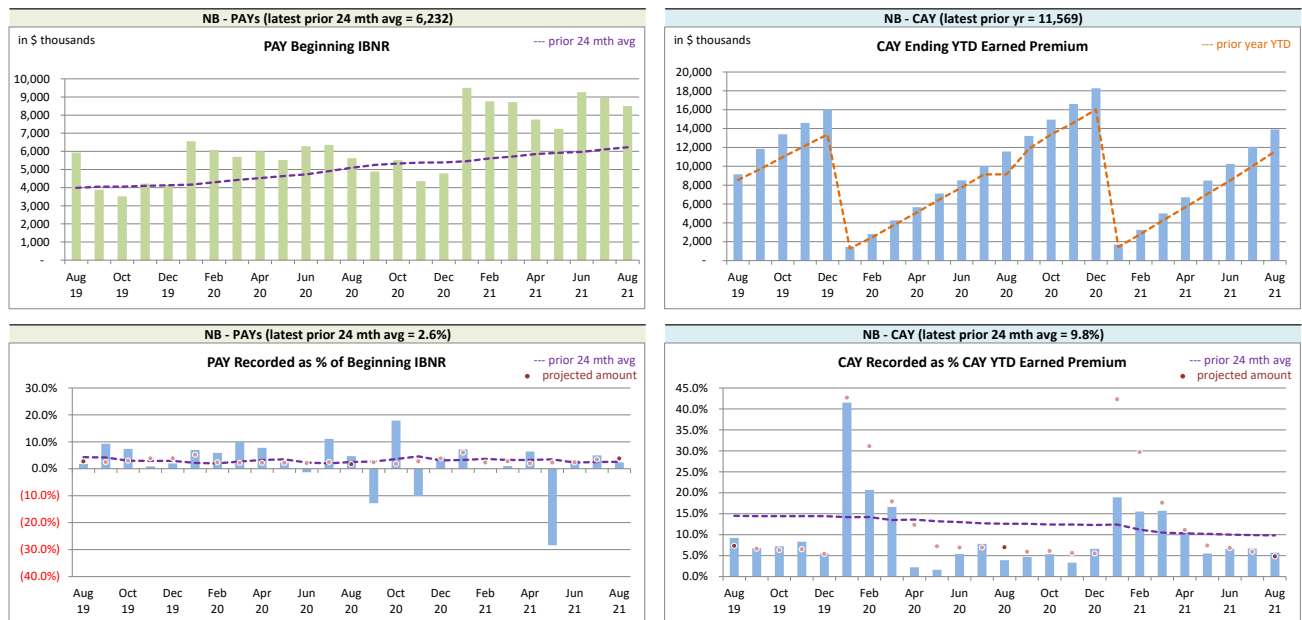
The current accident year (CAY) **recorded** variances fell outside of one standard deviation 32% of the time over the last 25 calendar months (see preceding table on the left), suggesting the projection process has performed no better than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (9 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:

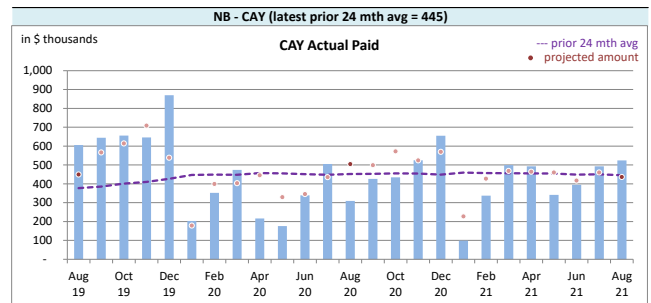
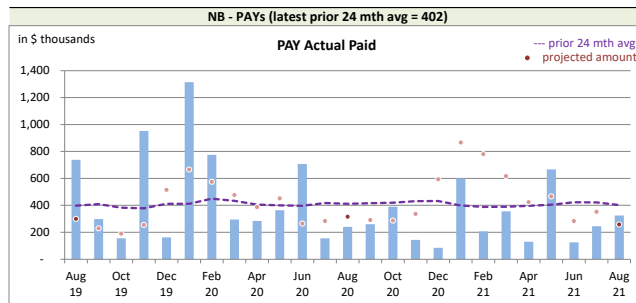
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs' ultimates (will show up as a beginning IBNR change one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

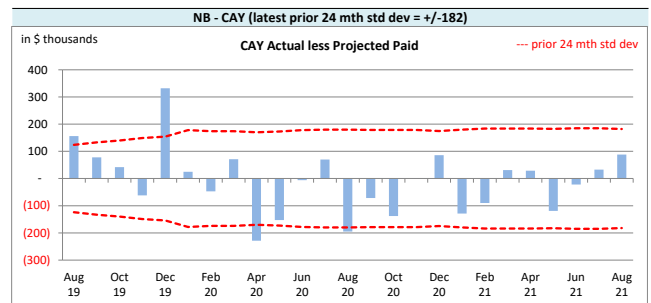
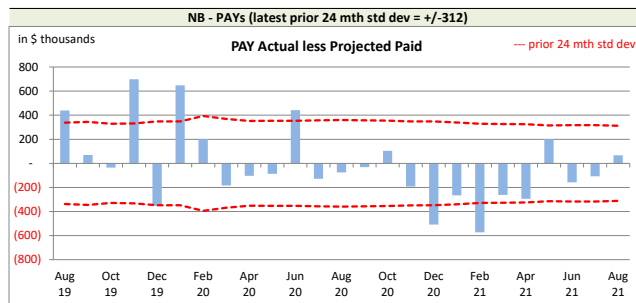
⁷Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned 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)		402	445
std dev		312	182
A-P <> std dev		7	4
% <> std dev		28.0%	16.0%
norm <> std dev		31.7%	31.7%
performance vs 24-mth avg:		no better	better

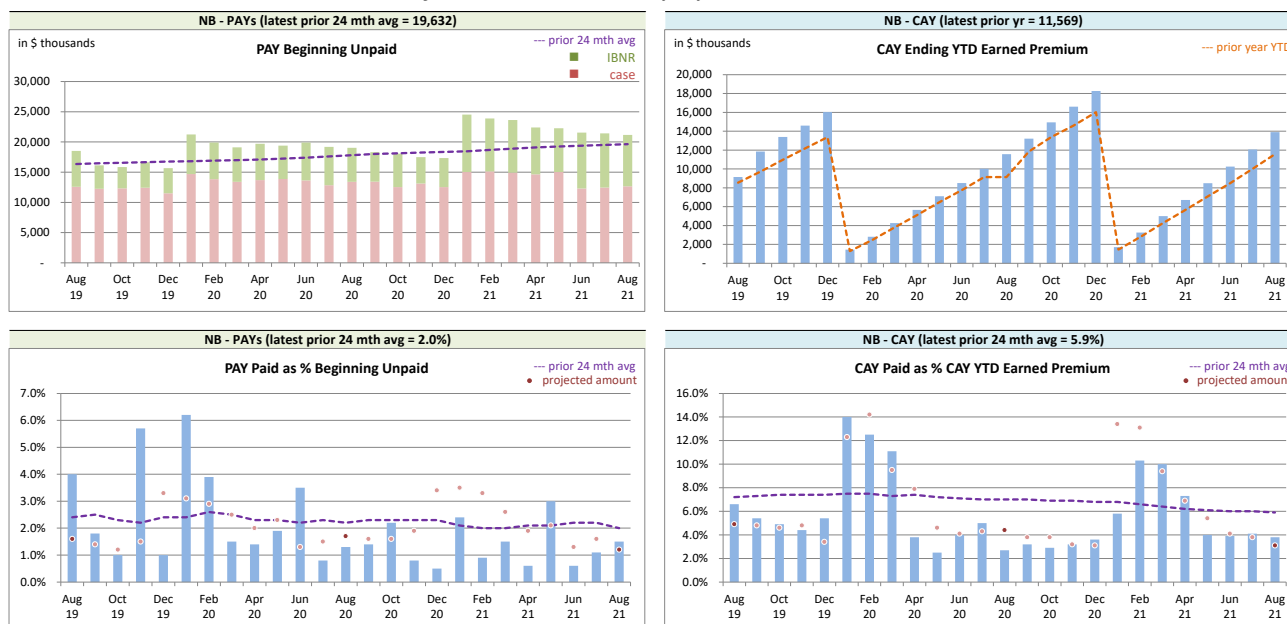
With respect to **paid** indemnity & allowed claims expense, caution must be exercised in reviewing the variances as this is a small pool, and single claim transactions that are normal course for the business may look unusual and generate relatively significant variances that in nominal value terms are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

That said, 28% 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 no better 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 (9 of 25 variances are positive).

The current accident year (CAY) **paid** variances fell outside of one standard deviation 16% of the time over the last 25 calendar months (see preceding table on the left), suggesting that the projection process has performed 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 (13 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.

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

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".

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)

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 66.5% rather than 65.1% (the valuation ultimate ratio for accident year 2021), 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	(1,081)	(7.9%)	(760)	(5.6%)	(1,841)	(13.5%)	(153)	0.8%
CAY	9,047	66.5%	552	4.1%	9,599	70.5%	689	(5.1%)
TOTAL	7,966	58.5%	(208)	(1.5%)	7,758	57.0%	536	(4.3%)

(“% EP” based on 2021 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

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.

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, and due to the impact of valuation implementation.

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, and due to the impact of valuation implementation.

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

IBNR + M/S actuarial present
value adjustments

discount rate

0.76%

interest rate margin

25 basis pts

Amounts in \$000s								
Accident Year	Actual Jul. 2021	Actual Aug. 2021	Projected Sep. 2021	Projected Oct. 2021	Projected Nov. 2021	Projected Dec. 2021	Projected Jan. 2022	Projected Dec. 2021
2006	-	-	-	-	-	-	-	-
2007	6	6	6	6	6	6	6	6
2008	12	12	12	12	12	12	12	12
2009	6	6	6	6	6	6	6	6
2010	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
2011	104	6	6	5	5	5	5	5
2012	19	41	40	40	40	40	39	40
2013	112	125	123	122	121	120	115	120
2014	317	49	48	47	47	46	45	46
2015	32	141	138	137	135	133	130	133
2016	443	289	284	281	278	276	270	276
2017	1,912	1,657	1,641	1,583	1,540	1,479	1,448	1,479
2018	1,395	1,570	1,556	1,506	1,468	1,409	1,354	1,409
2019	2,595	2,783	2,732	2,660	2,592	2,490	2,436	2,490
2020	3,648	3,557	3,480	3,436	3,327	3,195	2,994	3,195
2021	4,627	4,517	5,302	6,026	4,929	4,061	3,791	4,061
TOTAL	15,224	14,755	15,370	15,863	14,502	13,274	13,494	13,274
Change		(469)	615	493	(1,361)	(1,228)	220	

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

EXHIBIT B

IBNR

TABLE EXHIBIT B

	Amounts in \$000s									
Ultimate Loss Ratio	Accident Year	Actual Jul. 2021	Actual Aug. 2021	Projected Sep. 2021	Projected Oct. 2021	Projected Nov. 2021	Projected Dec. 2021	Projected Jan. 2022	Projected Dec. 2021	
53.2%	2006	-	-	-	-	-	-	-	-	
72.1%	2007	5	5	5	5	5	5	5	5	
76.3%	2008	4	4	4	4	4	4	4	4	
84.5%	2009	3	3	3	3	3	3	3	3	
57.8%	2010	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	
86.4%	2011	78	(12)	(12)	(12)	(12)	(12)	(12)	(12)	
57.2%	2012	4	24	24	24	24	24	23	24	
77.6%	2013	33	44	43	43	43	43	42	43	
65.9%	2014	235	(13)	(13)	(13)	(13)	(13)	(13)	(13)	
62.9%	2015	(13)	87	85	84	83	82	80	82	
66.2%	2016	332	192	188	186	184	182	178	182	
80.8%	2017	1,688	1,446	1,432	1,376	1,335	1,282	1,253	1,282	
79.6%	2018	958	1,225	1,213	1,167	1,132	1,087	1,028	1,087	
82.5%	2019	2,062	2,226	2,181	2,116	2,053	1,971	1,914	1,971	
60.2%	2020	3,120	3,033	2,972	2,942	2,854	2,740	2,548	2,740	
65.1%	2021	4,096	3,965	4,665	5,306	4,127	3,177	2,955	3,177	
	TOTAL	12,601	12,225	12,786	13,227	11,818	10,571	10,723	10,571	
	Change		(376)	561	441	(1,409)	(1,247)	152		

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

EXHIBIT C

Premium Liabilities

TABLE EXHIBIT C

	Amounts in \$000s							
Premium Liabilities	Actual Jul. 2021	Actual Aug. 2021	Projected Sep. 2021	Projected Oct. 2021	Projected Nov. 2021	Projected Dec. 2021	Projected Jan. 2022	Projected Dec. 2021
(1) unearned premium (UP)	11,576	12,180	12,355	12,369	11,791	11,030	11,803	11,030
FOR MEMBER SHARING								
(2) expected future costs ratio {% of (1)}	80.5%	83.0%	85.3%	87.7%	90.4%	93.5%	93.6%	93.5%
(3) expected future costs {(1) x (2)}	9,320	10,107	10,540	10,854	10,660	10,314	11,044	10,314
(4) premium deficiency / (deferred policy acquisition cost)	(2,256)	(2,073)	(1,815)	(1,515)	(1,131)	(716)	(759)	(716)
Excluding Actuarial Present Value Adjustments								
(5) expected future costs ratio {% of (1)}	74.7%	76.9%	79.1%	81.4%	83.8%	86.7%	86.7%	86.7%
(6) expected future costs {(1) x (5)}	8,651	9,371	9,774	10,065	9,883	9,562	10,237	9,562
(7) premium deficiency / (deferred policy acquisition cost)	(2,925)	(2,809)	(2,581)	(2,304)	(1,908)	(1,468)	(1,566)	(1,468)

EXHIBIT D

Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2021, broken down by component.

New Brunswick ending 2021				Projected Balances as at Dec. 31, 2021 (\$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	
2006	-	-	-	-	-	-	-	-	-	-
2007	-	5	5	-	-	1	-	1	1	6
2008	74	4	78	-	-	8	-	8	8	86
2009	28	3	31	-	-	3	-	3	3	34
2010	-	(2)	(2)	-	-	-	-	-	-	(2)
2011	192	(12)	180	(2)	1	18	-	18	17	197
2012	153	24	177	(3)	1	18	-	18	16	193
2013	806	43	849	(10)	3	85	(1)	84	77	926
2014	674	(13)	661	(9)	3	66	(1)	65	59	720
2015	501	82	583	(9)	3	58	(1)	57	51	634
2016	885	182	1,067	(17)	6	107	(2)	105	94	1,161
2017	1,010	1,282	2,292	(42)	14	229	(4)	225	197	2,489
2018	2,754	1,087	3,841	(80)	26	384	(8)	376	322	4,163
2019	2,951	1,971	4,922	(116)	38	611	(14)	597	519	5,441
2020	1,728	2,740	4,468	(116)	38	547	(14)	533	455	4,923
PAYs (sub-total):	11,756	7,394	19,150	(404)	133	2,135	(45)	2,090	1,819	20,969
CAY (2021)	6,217	3,177	9,394	(253)	82	1,084	(29)	1,055	884	10,278
claims liabilities:	17,973	10,571	28,544	(657)	215	3,219	(74)	3,145	2,703	31,247
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	11,030	(1,468)	9,562	(177)	57	889	(17)	872	752	10,314
*Total may not be sum of parts, as apvs apply to future costs within UPR										
policy liabilities:			38,106	(834)	272	4,108	(91)	4,017	3,455	41,561

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, 2021 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Accident Year	Selected Claims Development MfADs			
	Third Party Liability	Accident Benefits	Other Coverages	Total
	Margins	Margins	Margins	Margins
2004	10.0%	10.0%	10.0%	10.0%
2005	10.0%	10.0%	10.0%	10.0%
2006	10.0%	10.0%	10.0%	10.0%
2007	10.0%	10.0%	10.0%	10.0%
2008	10.0%	10.0%	10.0%	10.0%
2009	10.0%	10.0%	10.0%	10.0%
2010	10.0%	10.0%	10.0%	10.0%
2011	10.0%	10.0%	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%	10.0%	10.0%
2017	10.0%	10.0%	10.0%	10.0%
2018	10.0%	10.0%	5.0%	10.0%
2019	12.5%	10.0%	10.9%	12.4%
2020	12.5%	10.0%	12.5%	12.3%
2021	12.3%	10.0%	5.5%	11.5%
2022	11.8%	10.0%	5.1%	9.6%
prem liab	11.8%	10.0%	5.1%	9.6%

discount rate: 0.76%
margin (basis points): 25

*prem liabilities as at 2021m06

EXHIBIT F

Interest Rate Sensitivity

The tables below present sensitivity to the member statement claims liability as projected to Dec. 31, 2021 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2021, and are based on more up-to-date information). We have included the most recent valuation selection (0.76%), the prior valuation assumption (0.78%) and the prior fiscal year end valuation assumption (0.22%) for comparative purposes. A 25 basis point margin for investment return adverse deviation is used in all scenarios presented.

Actuarial Present Value of Provisions at Various Discount Rates - Dec. 31, 2021 projected Unpaid								
AY	0.00%	0.26%	0.76%	1.26%	1.76%	2.26%	0.78%	0.22%
2004 & prior	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-
2008	43	43	43	43	43	42	43	43
2009	20	20	20	20	20	20	20	20
2010	1	1	1	1	1	1	1	1
2011	142	142	141	140	139	138	141	142
2012	180	180	178	176	174	173	178	180
2013	730	730	724	719	713	708	724	730
2014	616	616	610	605	600	595	610	616
2015	574	573	568	562	557	552	568	573
2016	1,031	1,030	1,019	1,008	997	987	1,019	1,031
2017	2,365	2,363	2,334	2,306	2,278	2,252	2,333	2,363
2018	4,392	4,388	4,327	4,268	4,211	4,155	4,325	4,389
2019	5,372	5,365	5,282	5,201	5,122	5,045	5,279	5,368
2020	5,706	5,699	5,600	5,505	5,413	5,323	5,597	5,701
2021	8,360	8,349	8,199	8,054	7,914	7,778	8,193	8,353
Total	29,531	29,498	29,046	28,608	28,182	27,768	29,029	29,510
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

Dollar Impact Relative to Valuation Assumption								
AY	0.00%	0.26%	0.76%	1.26%	1.76%	2.26%	0.78%	0.22%
Total	485	452	-	(439)	(865)	(1,278)	(18)	464
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

Percentage Impact Relative to Valuation Assumption								
AY	0.00%	0.26%	0.76%	1.26%	1.76%	2.26%	0.78%	0.22%
2004 & prior	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2005	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2006	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2007	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2008	0.1%	0.1%	0.0%	-0.1%	-0.3%	-0.4%	0.0%	0.1%
2009	0.3%	0.3%	0.0%	-0.2%	-0.5%	-0.7%	0.0%	0.3%
2010	0.5%	0.5%	0.0%	-0.5%	-1.0%	-1.5%	0.0%	0.5%
2011	0.8%	0.8%	0.0%	-0.7%	-1.5%	-2.2%	0.0%	0.8%
2012	1.1%	1.0%	0.0%	-1.0%	-2.0%	-3.0%	0.0%	1.1%
2013	0.8%	0.8%	0.0%	-0.8%	-1.5%	-2.2%	0.0%	0.8%
2014	1.0%	0.9%	0.0%	-0.9%	-1.7%	-2.6%	0.0%	0.9%
2015	1.0%	1.0%	0.0%	-1.0%	-1.9%	-2.8%	0.0%	1.0%
2016	1.2%	1.1%	0.0%	-1.1%	-2.1%	-3.1%	0.0%	1.1%
2017	1.3%	1.2%	0.0%	-1.2%	-2.4%	-3.5%	0.0%	1.3%
2018	1.5%	1.4%	0.0%	-1.4%	-2.7%	-4.0%	-0.1%	1.4%
2019	1.7%	1.6%	0.0%	-1.5%	-3.0%	-4.5%	-0.1%	1.6%
2020	1.9%	1.8%	0.0%	-1.7%	-3.4%	-5.0%	-0.1%	1.8%
2021	2.0%	1.8%	0.0%	-1.8%	-3.5%	-5.1%	-0.1%	1.9%
Total	1.7%	1.6%	0.0%	-1.5%	-3.0%	-4.4%	-0.1%	1.6%
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

EXHIBIT G

Page 1 of 2

Components of Member Statement IBNR (i.e. “Discounted”) Change
(June 2021 to August 2021)

RSP New Brunswick
AccountCode Desc IBNR - Discounted

M/S IBNR - in \$000s

AccYear	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation	Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
prior	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-
2005	(2)	-	-	-	-	-	(2)
2006	-	-	-	-	-	-	-
2007	6	-	-	-	-	-	6
2008	12	-	-	-	-	-	12
2009	6	-	-	-	-	-	6
2010	(2)	-	-	-	-	-	(2)
2011	71	(11)	44	(98)	(65)	(91.5%)	6
2012	19	(3)	3	22	22	115.8%	41
2013	113	(8)	7	13	12	10.6%	125
2014	330	(34)	(7)	(240)	(281)	(85.2%)	49
2015	36	(2)	(3)	110	105	291.7%	141
2016	466	(49)	24	(152)	(177)	(38.0%)	289
2017	1,905	(138)	73	(183)	(248)	(13.0%)	1,657
2018	1,529	(101)	(98)	240	41	2.7%	1,570
2019	2,899	(280)	(83)	247	(116)	(4.0%)	2,783
2020	4,005	(326)	(46)	(76)	(448)	(11.2%)	3,557
2021	3,492	1,989	(302)	(662)	1,025	29.4%	4,517
Grand Total	14,885	1,037	(388)	(779)	(130)	(0.9%)	14,755

EXHIBIT G

Page 2 of 2

Components of IBNR (i.e. “Undiscounted”) Change
(June 2021 to August 2021)

RSP New Brunswick
AccountCode Desc IBNR - Undiscounted

IBNR - in \$000s

AccYear	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation	Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
prior	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-
2005	(2)	-	-	-	-	-	(2)
2006	-	-	-	-	-	-	-
2007	5	-	-	-	-	-	5
2008	4	-	-	-	-	-	4
2009	3	-	-	-	-	-	3
2010	(2)	-	-	-	-	-	(2)
2011	44	(9)	43	(90)	(56)	(127.3%)	(12)
2012	4	-	-	20	20	500.0%	24
2013	33	(5)	5	11	11	33.3%	44
2014	247	(31)	(9)	(220)	(260)	(105.3%)	(13)
2015	(9)	1	(6)	101	96	(1,066.7%)	87
2016	355	(45)	21	(139)	(163)	(45.9%)	192
2017	1,680	(130)	66	(170)	(234)	(13.9%)	1,446
2018	1,091	(82)	(86)	302	134	12.3%	1,225
2019	2,363	(263)	(96)	222	(137)	(5.8%)	2,226
2020	3,446	(291)	(49)	(73)	(413)	(12.0%)	3,033
2021	3,109	1,756	(288)	(612)	856	27.5%	3,965
Grand Total	12,371	901	(399)	(648)	(146)	(1.2%)	12,225