



NEW BRUNSWICK RISK SHARING POOL

NOVEMBER 2019 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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ACTUARIAL HIGHLIGHTS**RSP NEW BRUNSWICK****OPERATIONAL REPORT****NOVEMBER 2019**

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1 Summary

Key Points

(a) The month’s activities were generally aligned with projections from last month.

1.1 Valuation Schedule (Fiscal Year 2019)

The November 2019 Operational Report leverages actuarial assumptions consistent with last month (that is, it does not reflect the results of an updated valuation). The table below summarizes the implemented valuations for fiscal year 2019.

NEW BRUNSWICK RISK SHARING POOL FISCAL YEAR 2019 – SCHEDULE OF VALUATIONS			
Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep. 30, 2018 (completed)	2.29% mfad 25 bp	Oct. 2018	updated valuation (roll forward): accident year 2018 loss ratio <u>increased</u> 0.5 points to 74.7%; discount rate <u>increased</u> 42 basis points; no change to selected margins for adverse deviations
Dec. 31, 2018 (completed)	1.93% mfad 25 bp	Mar. 2019	updated valuation: accident year 2019 loss ratio <u>increased</u> 0.9 points to 75.5%; discount rate <u>decreased</u> 36 basis points; no change to selected margins for adverse deviations
Mar. 31, 2019 (completed)	1.44% mfad 25 bp	May 2019	updated valuation (roll forward): accident year 2019 loss ratio <u>increased</u> 1.0 points to 76.5%; discount rate <u>decreased</u> 49 basis points; no change to selected margins for adverse deviations
Jun. 30, 2019 (completed)	1.41% mfad 25 bp	Aug. 2019	updated valuation: accident year 2019 loss ratio <u>decreased</u> 2.9 points to 73.6%; discount rate <u>decreased</u> 3 basis points; selected margins for adverse deviations were updated
Sep. 30, 2019 (completed)	1.43% mfad 25 bp	Oct. 2019	update 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

Under the proposed schedule for fiscal year 2019, the “off-half” valuation quarters ending March 31, 2019 and September 30, 2019 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

Mr. Cosimo Pantaleo of Ernst & Young LLP (EY) has assumed the Appointed Actuary’s role effective as of October 24, 2019, from Liam McFarlane (the Appointed Actuary from June 1, 2013), due to Mr. McFarlane’s departure from EY.

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 decisions or changes for inclusion here.

1.4 Harmonized Sales Tax

There have been no changes in these descriptions since last month’s Highlights other than updated valuation reference.

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 1, 2016** increasing the combined HST rate in the province from 13% to 15%.

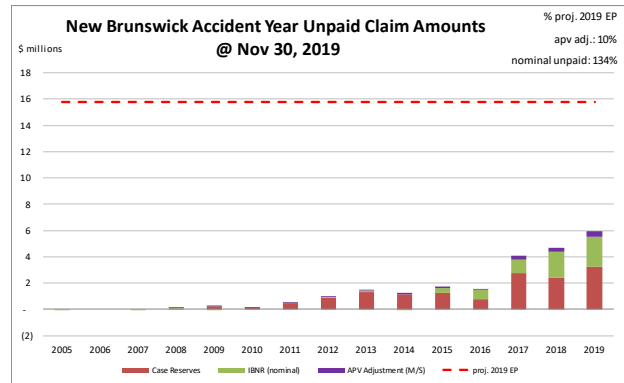
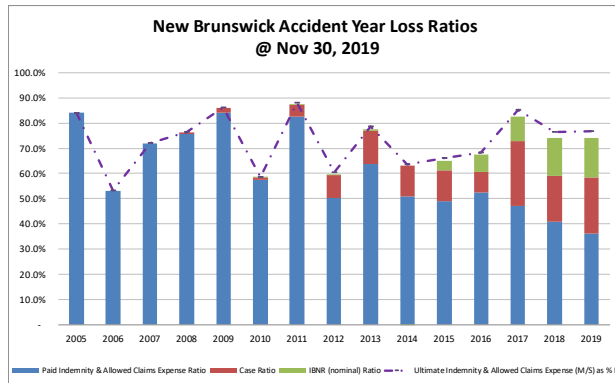
No explicit adjustments have been made to the valuation assumptions from the **most recent** valuation (September 30, 2019), on the basis that current estimates have implicitly incorporated the impact.

1.5 Current Provision Summary

The charts at the top of the next page 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 2019 full year earned premium (the red hash-mark line) to provide some perspective.

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.



"M/S" refers to "Member Statement" values – that is, actuarial present value adjustments at the selected discount rate.

The current actuarial present value adjustments balance (\$1.6 million – see table below) represents 10% of the earned premium projected for the full year 2019 (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	14,748	64.7%
ibnr	6,473	28.4%
M/S apv adjust.	1,567	6.9%
M/S total	22,788	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 66% of the IBNR balance relates to accident years 2018 and 2019 (see Exhibit B). Approximately 79% of the M/S claim liabilities

are related to accident years 2015-2019 inclusive (i.e. the most recent 5 accident years), and 2% is related to accident years 2009 and prior (i.e. prior to the most recent 10 accident years).

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

premium liabilities (\$000s)

	amt	%
unearned prem	9,114	124.6%
prem def/(dpac)	(2,209)	(30.2%)
M/S apv adjust.	412	5.6%
M/S total	7,317	100.0%

policy liabilities (\$000s)

	amt	%
claim	21,221	70.5%
premium	6,905	22.9%
M/S apv adjust.	1,979	6.6%
M/S total	30,105	100.0%

2 Activity During the Month of November 2019

2.1 Recorded Premium and Claims Activity

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

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

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	(2)	(2)	845	762	(704)	(655)	141	107
2017	(4)	(4)	97	58	(209)	(198)	(111)	(139)
2018	(22)	(22)	11	(121)	(3)	29	8	(92)
2019	1,210	(169)	646	(62)	569	320	1,214	258
TOTAL	1,182	(198)	1,598	637	(346)	(503)	1,252	134

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

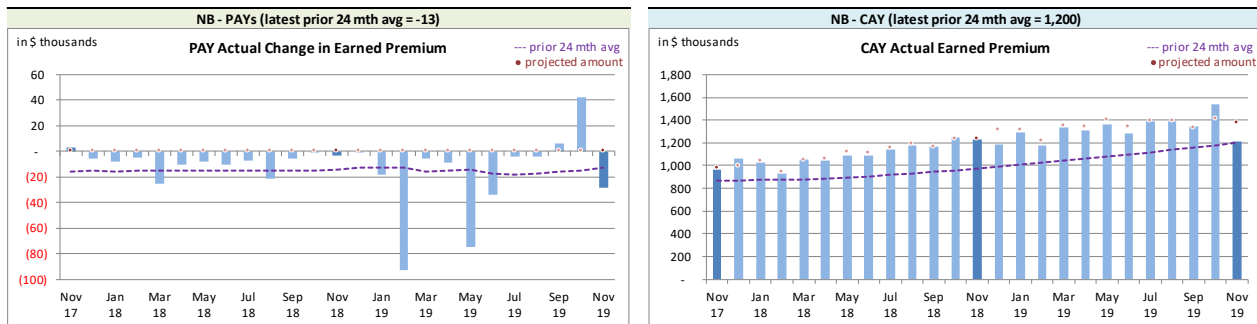
It is unusual to see actual earned premium transactions affecting prior accident years by this time in the calendar year – the prior accident years changes in the month reflect activity undertaken by a member reflecting recent audit findings.

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.

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

The charts below 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



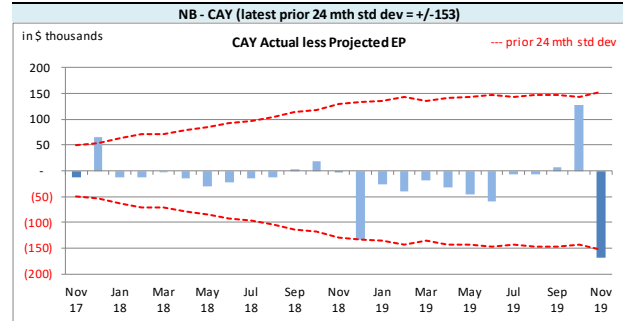
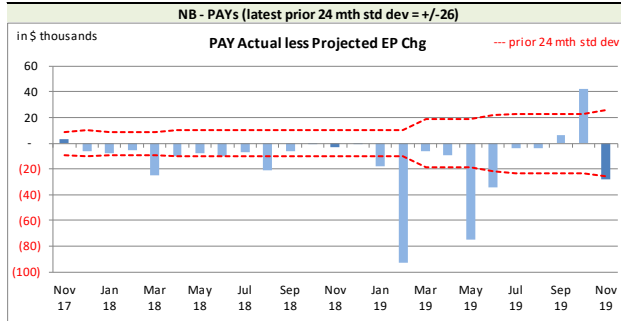
Earned premium changes during a given calendar month in relation to prior accident years tend to be at modest levels, although relatively high levels generally occur at the beginning of each year.

The associated variance between the actual changes and the projections from the previous month are shown in the charts at the top of the next page. **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

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.

mean that the actual less projection variance will equal the actual **earned premium** change in relation to prior accident years.

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



On Latest \$ thousands		
Earned Premium	PAYS	CAY
Mthly Avg EP Chg (prior 24 mths)	(13)	1,200
std dev	26	153
A-P <> std dev	8	2
% <> std dev	32.0%	8.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	no better	better

We project **earned premium** changes from known unearned premium and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years’ (PAYS) bias⁵, with actuals generally lower than our projections, although the magnitude is not high relative to monthly premium. In addition to the PAYS’ bias,

the CAY has also shown bias⁶, with actuals being generally lower than projected, and we have modified our projections processes in response. Over time, we may consider other projection approaches to narrow monthly variance levels further, but it is not currently deemed a 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.

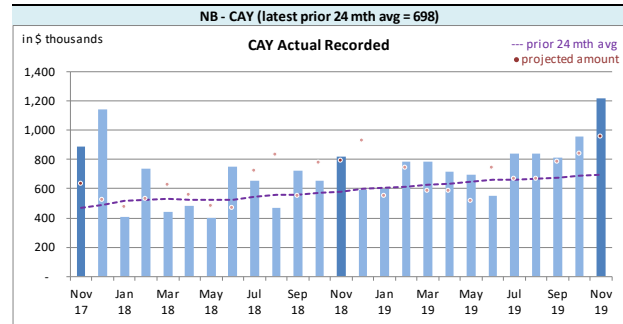
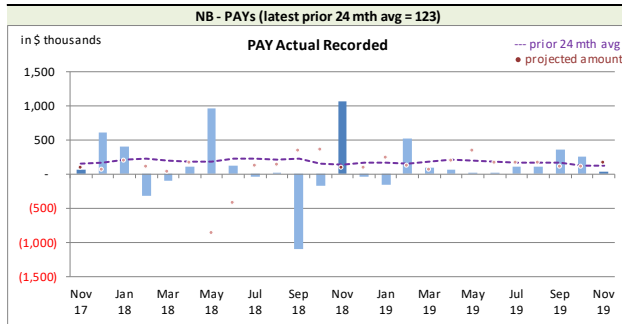
2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

The charts at the top of the next page show actual **recorded** activity (**paid** and case reserve changes), in each of the most recent 25 calendar months, along with a “prior 24-month average” to show how each month’s actual compares with the average amount of the preceding 24 calendar months.

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

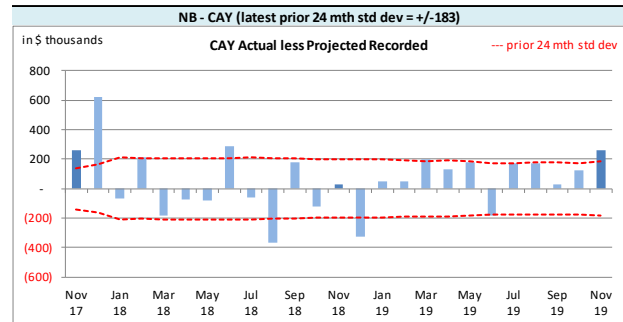
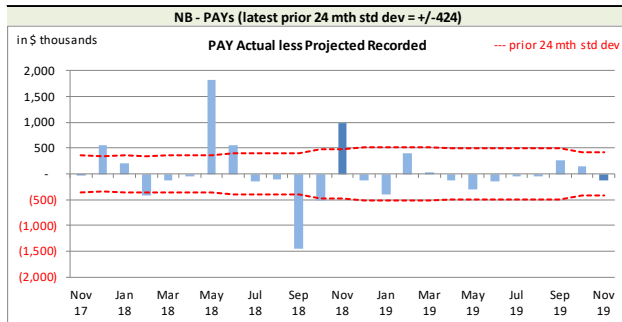
⁶We measure bias based on a 95% confidence range for a binominal distribution with trials based on the range being considered (25 in this case) and 50% probability of success. The rolling 25-month CAY variances at November 2019 has only 5 months where the actual was higher than projected, and as the 95% confidence range is 8 to 17, bias continues to be indicated.

New Brunswick RSP Actual Recorded by Calendar Month



Recorded activity variances from the previous month’s projections are shown in the charts below, 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)	123	698	
std dev	424	183	
A-P <> std dev	7	9	
% <> std dev	28.0%	36.0%	
norm <> std dev	31.7%	31.7%	
performance vs 24-mth avg:	no 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, 28% 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 table above), suggesting the projection process has performed no 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 (9 of 25 variances are positive).

The current accident year (CAY) **recorded** variances fell outside of one standard deviation 36% of the time over the last 25 calendar months (see table above), 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 (16 of 25 variances are positive).

The CAY **recorded** variances were outside of the one standard deviation band this month (see right chart above). The activity was reviewed and attributed to process variance.

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 below related to levels influencing **recorded** activity. Note in particular the increase in the level of PAY beginning IBNR over the months. Part of this will be as a response to valuations and showing up as a beginning IBNR change one month after the valuation is implemented (i.e. April, June, September, and November).

New Brunswick RSP Levels that 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 chart above) occur for several possible reasons:

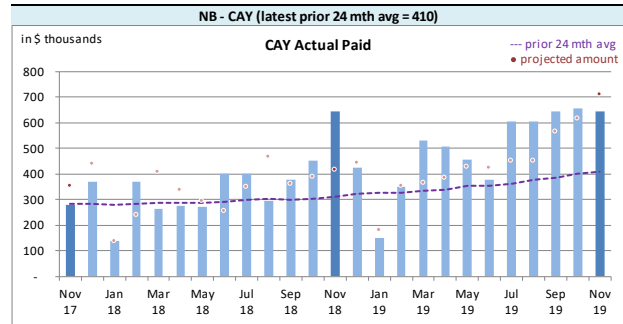
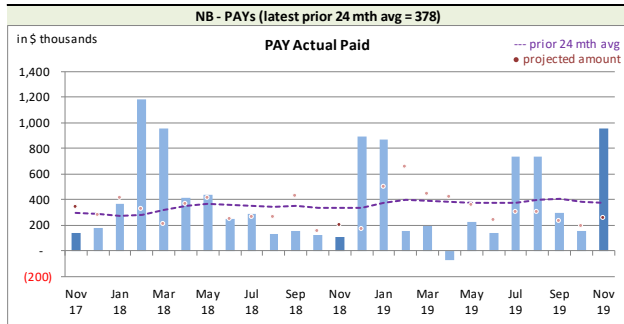
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs’ ultimates (will show up as a beginning IBNR change one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

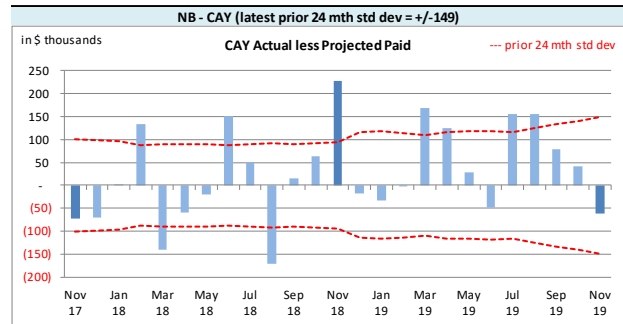
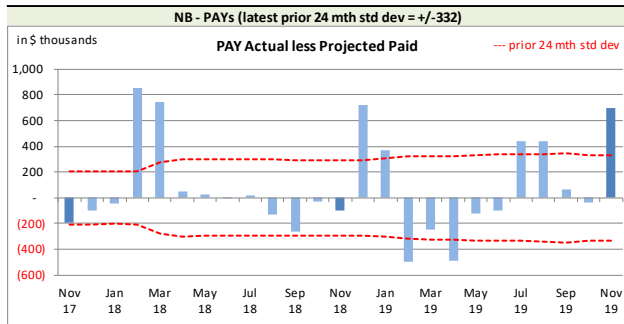
⁷Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned 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 charts below, 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)	378	410
std dev	332	149
A-P <> std dev	9	9
% <> std dev	36.0%	36.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	no better	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, 36% of the prior accident years’ (PAYs)

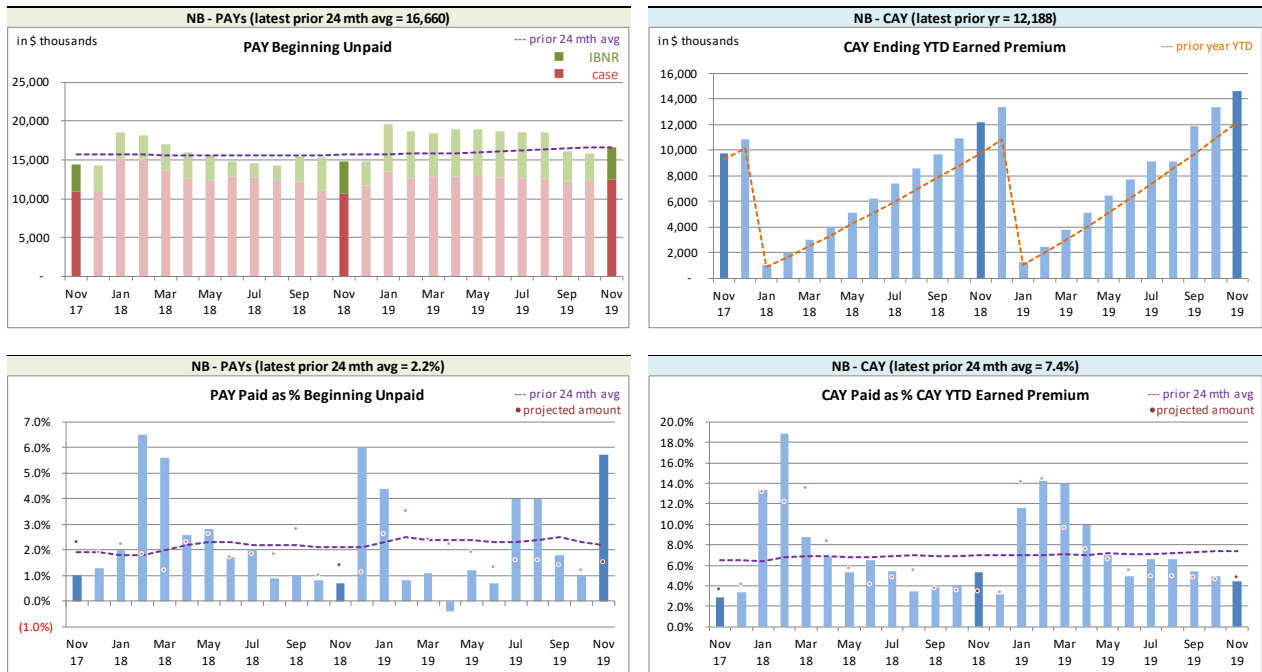
variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **paid** amounts (see table on the left above), suggesting the projection process has performed no better than simply projecting the prior 24-month average amount (assuming a normal distribution). Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (11 of 25 variances are positive).

The PAYs **paid** variances were outside of the one standard deviation band this month (see left chart above). The activity was reviewed and attributed to process variance.

The current accident year (CAY) **paid** variances fell outside of one standard deviation 36% of the time over the last 25 calendar months (see table above), 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 (14 of 25 variances are positive).

We have included, for reference, additional charts below 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 chart above) 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.

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”.

The table below summarizes variances in provisions included in this month’s Operational Report and the associated one-month projections from last month’s Report.

New Brunswick RSP Actual vs Projected Summary: IBNR and APV Amounts (\$ thousands)

Table 02

Accident Year	IBNR		actuarial present value adjustments				IBNR + actuarial present value adjustments	
	Actual	Actual less Projected	Discount Amount		Provisions for Adverse Deviations		Actual	Actual less Projected
			Actual	Actual less Projected	Actual	Actual less Projected		
Prior	1,157	(109)	(211)	19	767	(76)	1,713	(166)
2017	1,038	136	(170)	3	472	(7)	1,340	132
2018	1,967	75	(210)	(5)	540	14	2,297	84
2019	2,311	(385)	(272)	3	651	(7)	2,690	(389)
TOTAL	6,473	(283)	(863)	20	2,430	(76)	8,040	(339)

The IBNR provision is \$0.3 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 table at the top of the next page summarizes the variances in the provisions for premium deficiency liability / (deferred policy acquisition cost asset) included in 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:	(2,209)	(46)	412	6	(1,797)	(40)
balance as % unearned premium:	(24.2%)	-	4.5%	-	(19.7%)	-
actual unearned premium:	9,114					
less projected:	177					

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 table at the top of the next page 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 75.4% rather than 74.2% (the valuation ultimate ratio for accident year 2019), 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	438	3.0%	192	1.3%	630	4.4%	(94)
CAY	10,833	75.4%	379	2.6%	11,212	78.0%	914	(0.1%)
TOTAL	11,271	78.4%	571	4.0%	11,842	82.4%	821	(1.2%)

("EP" based on 2019 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 Oct. 2019	Actual Nov. 2019	Projected Dec. 2019	Projected Jan. 2020	Projected Dec. 2020
	2005	(2)	(2)	(2)	(2)	(2)
	2006	-	-	-	-	-
	2007	(4)	(4)	(4)	(4)	(4)
	2008	11	11	11	12	10
	2009	16	16	16	18	14
	2010	29	29	29	29	25
	2011	69	49	49	49	42
	2012	124	103	102	100	84
	2013	245	181	179	179	149
discount rate	2014	131	65	64	66	55
1.43%	2015	485	483	464	461	376
	2016	816	782	753	744	556
interest rate margin	2017	1,238	1,340	1,281	1,291	983
25 basis pts	2018	2,323	2,297	2,200	2,065	1,550
	2019	2,990	2,690	2,910	2,718	2,132
	2020	-	-	-	497	2,905
TOTAL		8,471	8,040	8,052	8,223	8,875
Change			(431)	12	171	

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 Oct. 2019	Actual Nov. 2019	Projected Dec. 2019	Projected Jan. 2020	Projected Dec. 2020
	84.0%	2005	(2)	(2)	(2)	(2)	(2)
	53.2%	2006	-	-	-	-	-
	72.0%	2007	(4)	(4)	(4)	(4)	(4)
	76.3%	2008	4	4	4	4	4
	86.1%	2009	(4)	(4)	(4)	(4)	(4)
	58.4%	2010	20	20	20	20	18
	87.5%	2011	31	11	11	11	10
	59.7%	2012	49	28	28	27	23
	77.5%	2013	71	71	70	69	55
	62.8%	2014	46	(20)	(20)	(20)	(18)
	64.9%	2015	369	366	351	344	278
	67.4%	2016	720	687	660	640	471
	82.5%	2017	930	1,038	996	986	735
	74.1%	2018	1,992	1,967	1,888	1,756	1,294
	74.2%	2019	2,628	2,311	2,496	2,321	1,837
	73.0%	2020	-	-	-	436	2,452
	TOTAL		6,850	6,473	6,494	6,584	7,149
	Change			(377)	21	90	

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

EXHIBIT C

Premium Liabilities

TABLE EXHIBIT C	Amounts in \$000s				
	Actual Oct. 2019	Actual Nov. 2019	Projected Dec. 2019	Projected Jan. 2020	Projected Dec. 2020
Premium Liabilities					
(1) unearned premium (UP)	9,219	9,114	8,675	8,185	8,091
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	80.5%	80.3%	80.1%	80.1%	82.2%
(3) expected future costs {(1) x (2)}	7,419	7,317	6,952	6,558	6,653
(4) premium deficiency / (deferred policy acquisition cost)	(1,800)	(1,797)	(1,723)	(1,627)	(1,438)
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	75.9%	75.8%	75.6%	75.6%	77.6%
(6) expected future costs {(1) x (5)}	7,000	6,905	6,559	6,188	6,277
(7) premium deficiency / (deferred policy acquisition cost)	(2,219)	(2,209)	(2,116)	(1,997)	(1,814)

EXHIBIT D

Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2019, broken down by component.

New Brunswick ending 2019		Projected Balances as at Dec. 31, 2019 (\$000s)									
Acc Yr	nominal values			actuarial present value adjustments (apvs)						Total apvs	TOTAL
	Case	IBNR	Total Unpaid	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD			
2005	-	(2)	(2)	-	-	-	-	-	-	(2)	
2006	-	-	-	-	-	-	-	-	-	-	
2007	-	(4)	(4)	-	-	-	-	-	-	(4)	
2008	77	4	81	(1)	-	8	-	8	7	88	
2009	251	(4)	247	(5)	1	25	(1)	24	20	267	
2010	90	20	110	(2)	-	11	-	11	9	119	
2011	465	11	476	(11)	2	48	(1)	47	38	514	
2012	905	28	933	(20)	3	93	(2)	91	74	1,007	
2013	1,327	70	1,397	(34)	6	140	(3)	137	109	1,506	
2014	1,147	(20)	1,127	(32)	6	113	(3)	110	84	1,211	
2015	1,232	351	1,583	(48)	8	158	(5)	153	113	1,696	
2016	796	660	1,456	(57)	10	146	(6)	140	93	1,549	
2017	2,601	996	3,597	(162)	25	442	(20)	422	285	3,882	
2018	2,271	1,888	4,159	(200)	33	503	(24)	479	312	4,471	
PAYs (sub-total):	11,162	3,998	15,160	(572)	94	1,687	(65)	1,622	1,144	16,304	
CAY (2019)	3,565	2,496	6,061	(297)	48	697	(34)	663	414	6,475	
claims liabilities:	14,727	6,494	21,221	(869)	142	2,384	(99)	2,285	1,558	22,779	
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*	
premium liabilities:	8,675	(2,116)	6,559	(203)	32	583	(19)	564	393	6,952	
policy liabilities:			27,780	(1,072)	174	2,967	(118)	2,849	1,951	29,731	

*Total may not be sum of parts, as apvs apply to future costs within UPR

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, 2019 from the valuation), followed by the selected discount rate and the associated margin for investment income.

Selected Claims Development MfADs (Sep. 30,
2019)

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%	8.7%	10.0%
2017	12.5%	10.0%	10.7%	12.3%
2018	12.5%	10.0%	12.5%	12.1%
2019	12.3%	10.0%	5.6%	11.5%
2020	11.7%	10.0%	5.1%	9.2%
<u>prem liab</u>	<u>11.7%</u>	<u>10.0%</u>	<u>5.1%</u>	<u>9.2%</u>

discount rate: 1.43%
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, 2019 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2019, and are based on more up-to-date information). We have included the most recent valuation selection (1.43%), the prior valuation assumption (1.41%) and the prior fiscal year end valuation assumption (2.29%) 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, 2019 projected Unpaid							
	0.43%	0.93%	1.43%	1.93%	2.43%	2.93%	1.41%	2.29%
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-
2008	79	78	78	77	77	76	78	77
2009	225	223	222	220	219	217	222	219
2010	109	108	107	106	106	105	107	106
2011	469	465	462	458	454	451	462	455
2012	876	870	863	857	851	845	864	853
2013	2,244	2,225	2,206	2,188	2,170	2,153	2,207	2,175
2014	1,153	1,141	1,130	1,120	1,109	1,099	1,131	1,112
2015	1,636	1,619	1,602	1,585	1,569	1,553	1,602	1,573
2016	1,565	1,543	1,522	1,502	1,481	1,462	1,523	1,487
2017	4,157	4,089	4,024	3,960	3,898	3,838	4,026	3,915
2018	4,691	4,610	4,532	4,456	4,383	4,312	4,535	4,403
2019	6,850	6,728	6,612	6,498	6,388	6,283	6,616	6,419
Total	24,054	23,699	23,360	23,027	22,705	22,394	23,373	22,794
	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							
	0.43%	0.93%	1.43%	1.93%	2.43%	2.93%	1.41%	2.29%
Total	694	339	-	(333)	(655)	(966)	13	(566)
	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							
	0.43%	0.93%	1.43%	1.93%	2.43%	2.93%	1.41%	2.29%
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-
2008	1.3%	-	-	(1.3%)	(1.3%)	(2.6%)	-	(1.3%)
2009	1.4%	0.5%	-	(0.9%)	(1.4%)	(2.3%)	-	(1.4%)
2010	1.9%	0.9%	-	(0.9%)	(0.9%)	(1.9%)	-	(0.9%)
2011	1.5%	0.6%	-	(0.9%)	(1.7%)	(2.4%)	-	(1.5%)
2012	1.5%	0.8%	-	(0.7%)	(1.4%)	(2.1%)	0.1%	(1.2%)
2013	1.7%	0.9%	-	(0.8%)	(1.6%)	(2.4%)	0.0%	(1.4%)
2014	2.0%	1.0%	-	(0.9%)	(1.9%)	(2.7%)	0.1%	(1.6%)
2015	2.1%	1.1%	-	(1.1%)	(2.1%)	(3.1%)	-	(1.8%)
2016	2.8%	1.4%	-	(1.3%)	(2.7%)	(3.9%)	0.1%	(2.3%)
2017	3.3%	1.6%	-	(1.6%)	(3.1%)	(4.6%)	0.0%	(2.7%)
2018	3.5%	1.7%	-	(1.7%)	(3.3%)	(4.9%)	0.1%	(2.8%)
2019	3.6%	1.8%	-	(1.7%)	(3.4%)	(5.0%)	0.1%	(2.9%)
Total	3.0%	1.5%	-	(1.4%)	(2.8%)	(4.1%)	0.1%	(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 Brunswi**
AccountCode Desc **IBNR - Discou**

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	(4)	-	-	-	-	-	(4)
2008	11	-	-	-	-	-	11
2009	16	-	-	-	-	-	16
2010	29	-	-	-	-	-	29
2011	69	-	(20)	-	(20)	(29.0%)	49
2012	124	(1)	(20)	-	(21)	(16.9%)	103
2013	245	(3)	(61)	-	(64)	(26.1%)	181
2014	131	(1)	(65)	-	(66)	(50.4%)	65
2015	485	(12)	10	-	(2)	(0.4%)	483
2016	816	(24)	(10)	-	(34)	(4.2%)	782
2017	1,238	(30)	132	-	102	8.2%	1,340
2018	2,323	(110)	84	-	(26)	(1.1%)	2,297
2019	2,990	89	(389)	-	(300)	(10.0%)	2,690
Grand Total	8,471	(92)	(339)	-	(431)	(5.1%)	8,040

EXHIBIT G

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

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

IBNR - in \$000s

AccYear	Values				Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation			
2005	(2)	-	-	-	-	-	(2)
2006	-	-	-	-	-	-	-
2007	(4)	-	-	-	-	-	(4)
2008	4	-	-	-	-	-	4
2009	(4)	-	-	-	-	-	(4)
2010	20	-	-	-	-	-	20
2011	31	-	(20)	-	(20)	(64.5%)	11
2012	49	-	(21)	-	(21)	(42.9%)	28
2013	71	(1)	1	-	-	-	71
2014	46	-	(66)	-	(66)	(143.5%)	(20)
2015	369	(11)	8	-	(3)	(0.8%)	366
2016	720	(22)	(11)	-	(33)	(4.6%)	687
2017	930	(28)	136	-	108	11.6%	1,038
2018	1,992	(100)	75	-	(25)	(1.3%)	1,967
2019	2,628	68	(385)	-	(317)	(12.1%)	2,311
Grand Total	6,850	(94)	(283)	-	(377)	(5.5%)	6,473