ALBERTA NON-GRID RISK SHARING POOL

MARCH 2022 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

Related Bulletin: F2022-026_AB_RSP_March_2022_Operational_Report

For your convenience, bookmarks have been added to this document. To view them, please click on the BOOKMARK tab at the left.

Should you require any further information, please call Philippe Gosselin, VP Actuarial & CRO at (416) 863-1750 x4968.

FACILITY ASSOCIATION

ACTUARIAL HIGHLIGHTS

RSP ALBERTA NON-GRID

OPERATIONAL REPORT

MARCH 2022

TABLE OF CONTENTS

1 Summary

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 May 2022 in July 2022, 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 2022)

The March 2022 Operational Report incorporates the results of an updated valuation (as at December 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.

ALBERTA NON-GRID RISK SHARING POOL FISCAL YEAR 2021 – SCHEDULE OF VALUATIONS			
Valuation Date	**Discount Rate (per annum)**	**Operational Report**	**Description of Changes**
Sep 30, 2021 (completed)	0.81% mfad[1] 25 bp	Oct. 2021	update valuation (roll-forward): accident year 2021 loss ratio decreased 0.8 points to 80.9%; discount rate increased 8 basis points; no change to selected margins for adverse deviation
Dec. 31, 2021 (completed)	1.05% mfad 25 bp	Mar. 2022	update valuation:): accident year 2021 loss ratio decreased 2.2 points to 78.7% and accident year 2022 loss ratio increased 1.8 points to 100.2%; discount rate increased 24 basis points; no change to selected margins for adverse deviations
Mar. 31, 2022	% mfad -- bp	May. 2022	update valuation (roll-forward):
Jun. 30, 2022	% mfad - bp	Aug. 2022	update valuation:
Sep. 30, 2022	% mfad -- bp	Oct. 2022	update valuation (roll-forward):

Under the proposed schedule for fiscal year 2022, the off-half valuation quarters ending March 31, 2022 and September 30, 2022 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 Alberta Non-Grid Risk Sharing Pool ("RSP") as at December 31, 2021 has been

[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%.

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 (2022), and "Prem Def" refers to premium deficiency / deferred acquisition costs impacts.

Summary of Impact ($000s) of Implementing Result of Valuation as at Dec. 31, 2021[2]

AB Non-Grid	unfav / (fav) for the month and ytd					
	IMPACT in $000s 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	(3,194)	378	(2,816)	(1,180)	-	(3,996)
CAY	709	127	836	(222)	-	614
Prem Def	1,341	82	1,423	(389)	-	1,034
TOTAL	(1,144)	587	(557)	(1,791)	-	(2,348)

As indicated in the preceding table, the incorporation of the new valuation had an estimated ***$2.3 million favourable impact*** on the month's net result from operations, subtracting an estimated 5.9 points (see following table) to the **year-to-date Combined Operating Ratio** to end at **115.2%**. The favourable valuation impact is driven by the reduction in prior year nominal ultimate losses and the increase in discounting, partially offset by increases in the current year ultimate loss ratio estimate.

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

AB Non-Grid	ytd EP 39,959 (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	(8.0%)	0.9%	(7.0%)	(3.0%)	-	(10.0%)
CAY	1.8%	0.3%	2.1%	(0.6%)	-	1.5%
Prem Def	3.4%	0.2%	3.6%	(1.0%)	-	2.6%
TOTAL	(2.9%)	1.5%	(1.4%)	(4.5%)	-	(5.9%)

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 $1.1 million** overall. This reflects the impact attributable to the changes in the selected ultimate loss ratios (i.e. for each accident year,

[2]In 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.

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 **$3.2 million favourable** nominal variance or 1.7% of the PAYs nominal unpaid balance of $185.4 million determined at the end of last month (February 2022), relatively unchanged since the prior valuation.

The CAY and premium deficiency impacts are a result of the change in the selected loss ratio for accident year **2022** (increased 1.6 points to 100.2%). This change is a result of the valuation expected loss ratio update, which incorporates updated loss and premium trends and updated prior year ultimate loss ratios.

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 had 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 $0.6 million 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 December 2021. Column [4] accounts for the change in the **discount rate** selected (Increased 24 basis points to **1.05%**), indicating a favourable impact of $1.8 million. The impact related only to claims liability (i.e. PAYs plus CAY) was $1.4 million at March 2022 – this compares to the $1.3 million change one would estimate as the impact by interpolation using the interest rate sensitivity table provided last quarter's actuarial Highlights.

Column [5] accounts for any changes to selected MfADs. The selected **investment rate MfAD** was **left unchanged at 25 basis points** and the selected **claims development MfADs** at the coverage and accident year level were also left unchanged (as per our usual practice, development margins are reviewed with the June 30 valuation).

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, other than updated references to reflect the new valuation.

Consideration and assessment of potential impacts of legal decisions and changes in legislation / regulation constitutes a regular part of the valuation process. Descriptions of some of the more recent (i.e. within the last five years) changes are provided below.

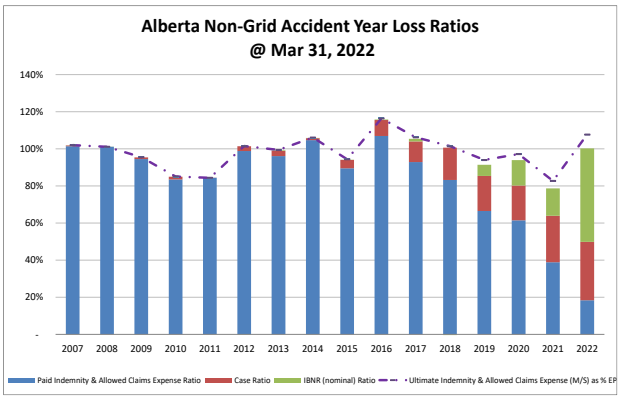
In the **Alberta Treasury Board and Finance Notice 04-2018** (Clarification of Minor Injury Regulation), dated **October 17, 2018**, the Alberta Superintendent of Insurance advised that clarifying amendments have been made to the definition of minor injuries under the Minor Injury Regulation (MIR). Consideration of these changes were included in the industry trend analysis supporting the calculation of our valuation expected loss ratios.

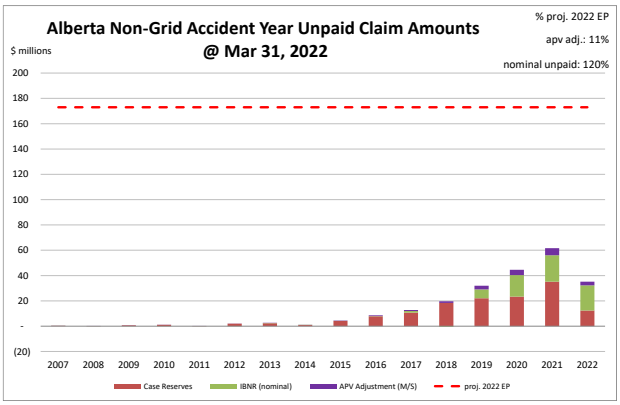
Amendments to the **Alberta Automobile Accident Insurance Benefits Regulation, Diagnostic and Treatment Protocols Regulation, and Minor Injury Regulation** came into force effective November 1, 2020, amending definitions and various benefit maximums defined in these regulations. **Alberta Bill 41** (Insurance (Enhancing Driver Affordability and Care) Amendment Act, 2020) **received royal assent on December 9, 2020**. Bill 41 amends the Insurance Act to: 1) control the use of expert witnesses in Court of Queen's Bench proceedings where damages for bodily injury or death arising from use or operation of a motor vehicle as defined in the Traffic Safety Act are claimed; 2) introduce direct compensation for property damage (DCPD) into the province; 3) amend the calculation of pre-judgment interest on damages awarded for bodily injury or death arising directly or indirectly form the use or operation of an automobile; and 4) amend provisions regarding the regulation of auto insurance rates by the Alberta Automobile Insurance Rate Board. Consideration of these changes were included in the industry trend analysis supporting the calculation of our valuation expected loss ratios. There is an estimated 20% reduction to loss costs for Bodily Injury claims in Alberta, as well as an estimated 8% increase in accident benefits loss costs, effective Jan. 1, 2021, which have been reflected in our estimates.

1.5 Current Provision Summary

The following charts show the current levels of claim liabilities[3] 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.

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





"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 ($19.5 million – see the following table) represents 11% of the earned premium projected for the full year 2022 (see the upper right corner of the preceding chart on the right). 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	141,061	62.2%
ibnr	66,282	29.2%
M/S apv adjust.	19,415	8.6%
M/S total	226,758	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 61% of the IBNR balance relates to accident years 2021 and 2022 (see Exhibit B). Approximately 85% of the M/S total claim liabilities are related to accident years 2018-2022 inclusive (i.e. the most recent 5 accident years), and approximately 2% is related to accident years 2012 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	74,983	92.1%
prem def/(dpac)	680	0.8%
M/S apv adjust.	5,722	7.0%
M/S total	81,385	100.0%

policy liabilities ($000s)

	amt	%
claim	207,343	67.3%
premium	75,663	24.6%
M/S apv adjust.	25,137	8.2%
M/S total	308,143	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.

Alberta Non-Grid 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	November	(22)	(22)	3,129	135	3,446	2,468
		December	(8)	(8)	2,847	(972)	2,456	948
	2022	January	(165)	(165)	8,254	5,403	7,416	4,528
		February	(105)	(105)	7,420	3,301	4,288	1,470
		March	(54)	(54)	7,056	1,498	2,578	(940)
PAY Total			**(354)**	**(354)**	**28,706**	**9,365**	**20,184**	**8,474**
CAY	2021	November	12,876	(160)	5,250	2,790	8,050	(97)
		December	13,611	112	5,269	1,182	13,011	4,338
	2022	January	13,710	(486)	454	(244)	4,925	734
		February	12,233	(772)	2,188	539	6,446	(222)
		March	13,462	(1,052)	4,604	2,270	8,301	3,230
CAY Total			**65,892**	**(2,358)**	**17,765**	**6,537**	**40,733**	**7,983**
Grand Total			**65,538**	**(2,712)**	**46,471**	**15,902**	**60,917**	**16,457**

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

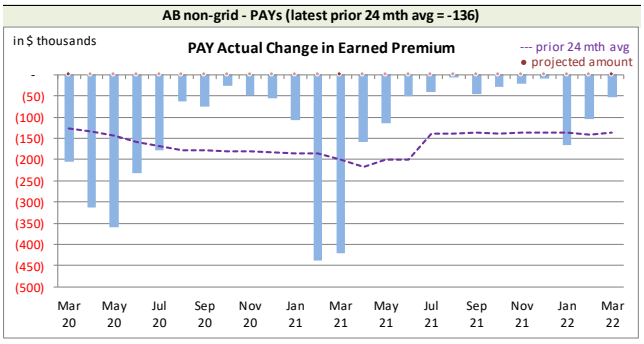
Claims transaction activity is generally volatile and changes from one month to the next are anticipated due to this natural "process variance" (i.e. random variation). Each month, the projection variances are reviewed for signs of projection bias and to identify potential ways to reduce the level of 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.

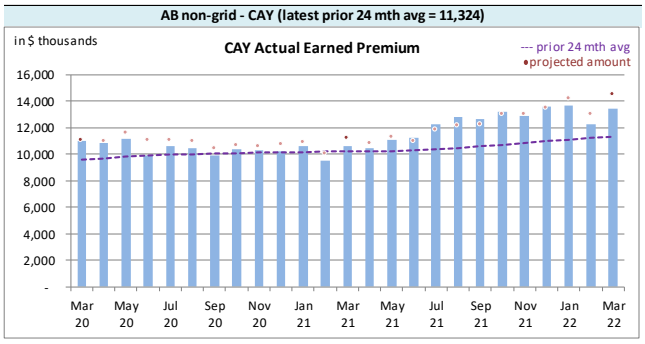
More detailed analysis and commentary on actual vs. projected for the most recent reporting months is provided below.

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.

*Alberta non-Grid RSP Actual **Earned Premium** by Calendar Month*



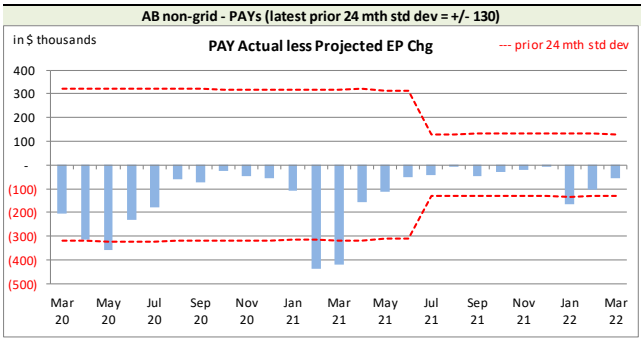


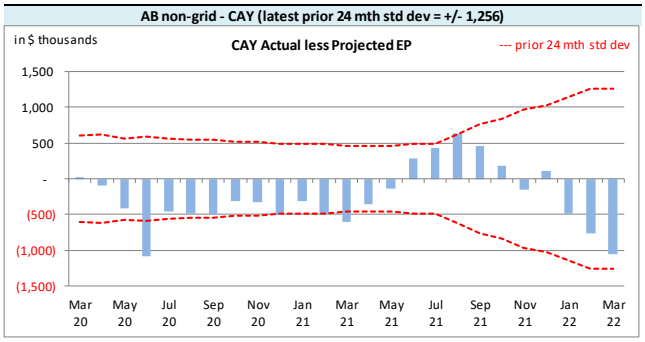
[4]Premium is earned on a daily basis based on the transaction term measured in days. As a result, months with 31 days earned relatively more than those with 30 days, and February earns the least.

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 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.

*Alberta non-Grid 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)	(136)	11,324
std dev	130	1,256
A-P <> std dev	4	4
% <> std dev	16.0%	16.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	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) bias[5], with actuals generally lower than projected, although the magnitude is not high relative to monthly premium. In addition to the PAYs' bias, the CAY has also shown bias[6], with actuals being generally lower than projected, and while we modified our projections processes in response, bias still exists. Over time, we may consider other projection approaches to address the bias issue, but it is not currently deemed as priority.

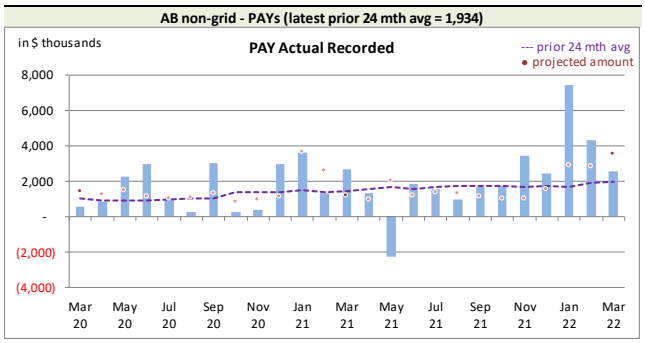
2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

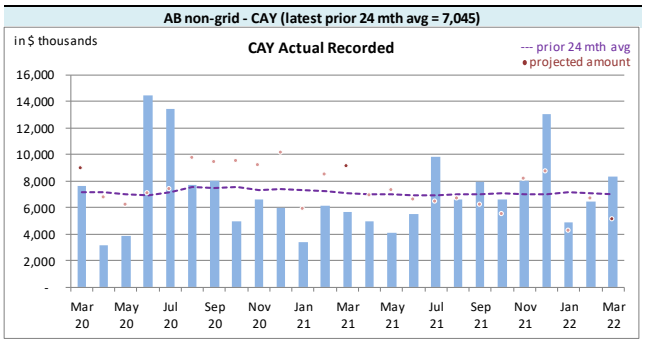
The following charts show actual **recorded** activity (**paid** and case reserve changes), in each of the most recent 25 calendar months, along with a "prior 24-month average" to show how each month's actual compares with the average amount of the preceding 24 calendar months.

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

[6]We 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 March 2022 had only 3 months where the actuals was higher than projected, and as the 95% confidence range is 8 to 17, bias continues to be indicated.

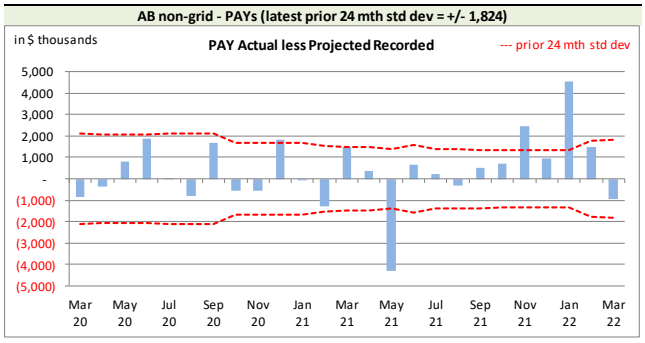
*Alberta non-Grid RSP Actual **Recorded** by Calendar Month*

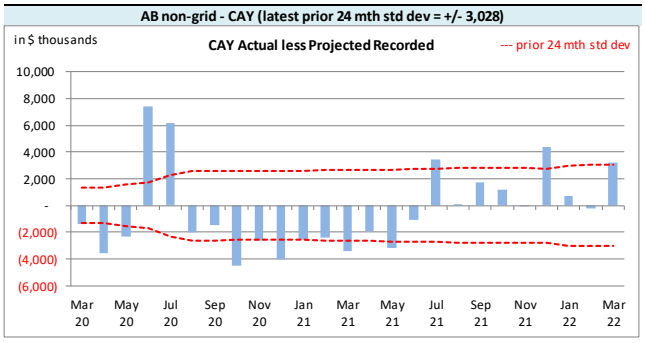




Recorded activity variances from the previous month's projections are shown in the following charts, including the "prior 24-month standard deviation" levels to show how the variances from projection compare with historical standard deviations.

*Alberta non-Grid RSP Actual vs Projected Summary: **Recorded** Variances by Calendar Month*





On Latest $ thousands		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	1,934	7,045
std dev	1,824	3,028
A-P <> std dev	5	13
% <> std dev	20.0%	52.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	worse

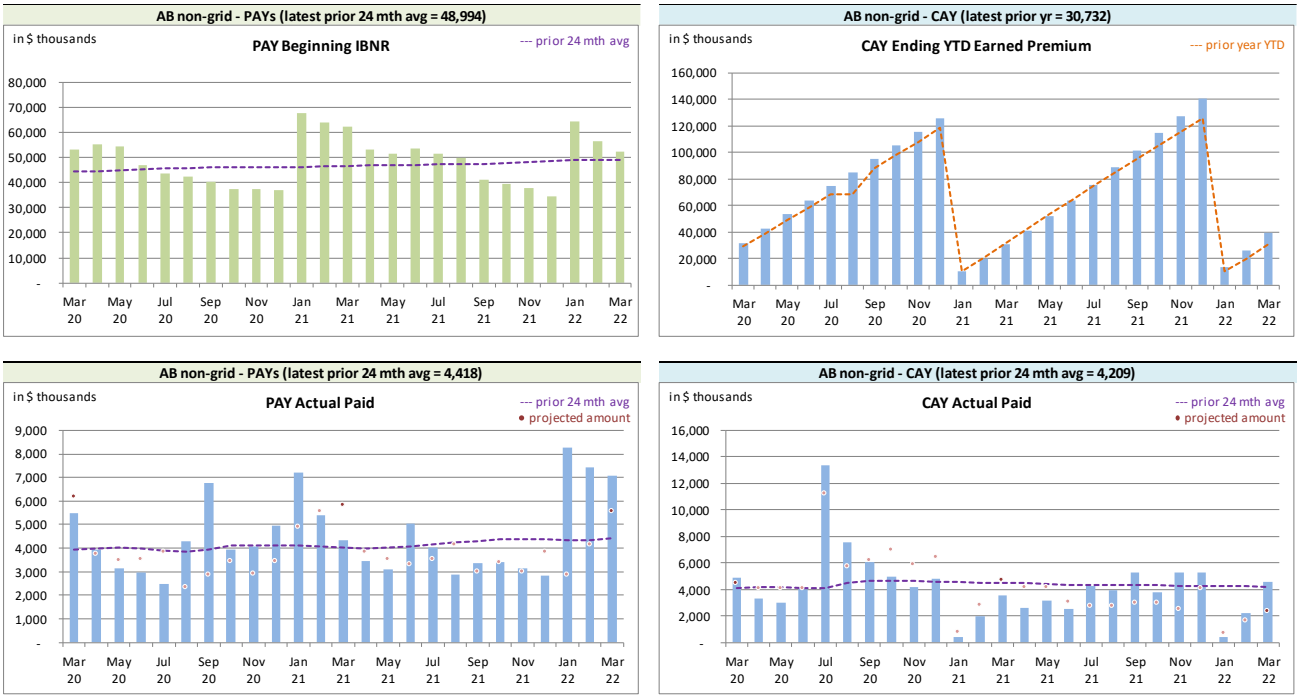
With respect to **recorded** indemnity & allowed claims expense activity, 20% of the prior accident years' (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **recorded** amounts (see table on left), suggesting the projection process has performed 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 52% of the time over the last 25 calendar months (see the preceding table on the left), suggesting that the projection process has performed worse 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.

Alberta non-Grid RSP Levels that influence[7] ***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:

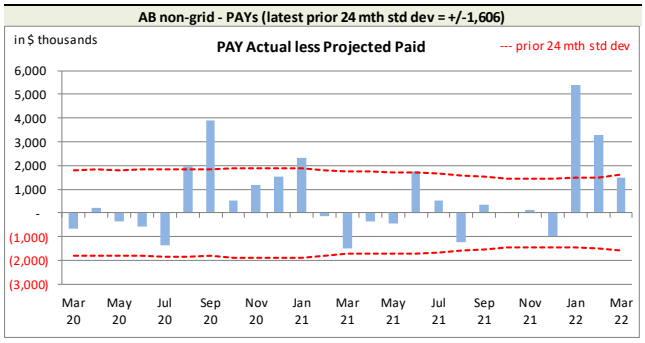
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a CAY becomes a PAY(occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs' ultimates (will show up as a beginning IBNR change one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

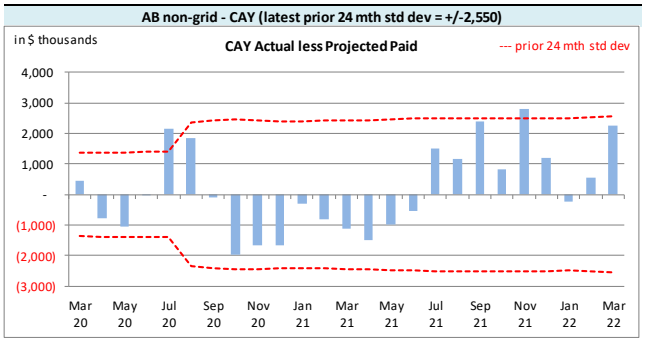
2.1.c AvsP: Paid Indemnity & Allowed Claims Expense

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.

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

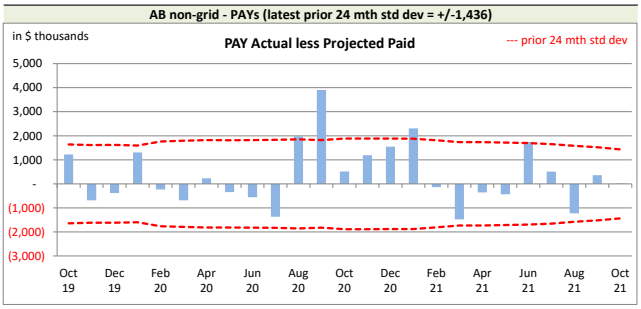
*Alberta non-Grid RSP Actual **Paid** activity by Calendar Month*

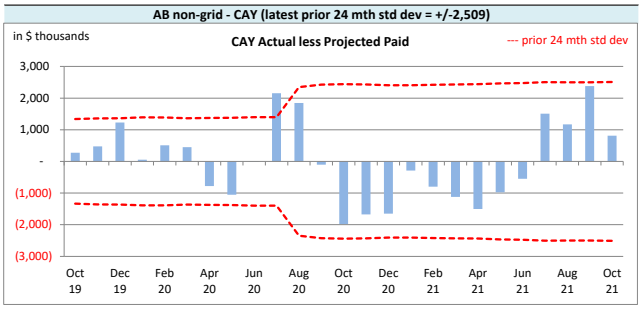




Paid activity variances from the previous month's projections are shown in the following charts, including the "prior 24-month standard deviation" levels to show how the variances from projection compare with historical standard deviations.

*Alberta non-Grid RSP Actual vs Projected Summary: **Paid** Variances by Calendar Month*





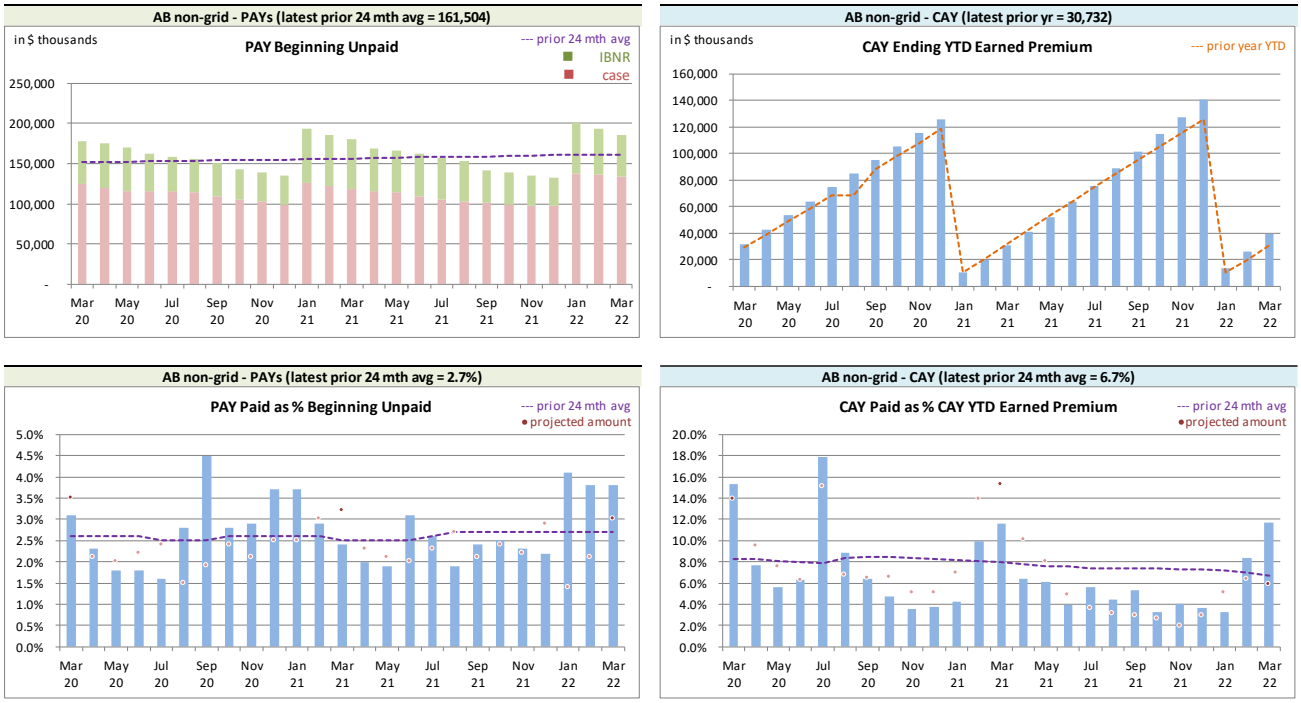
With respect to **paid** indemnity & allowed claims expense, 24% of the prior accident years' (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **paid** amounts (see table on left), suggesting the projection process has performed better than 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 lagging 24-month basis (15 of 25 variances are positive).

On Latest $ thousands		
Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)	4,418	4,209
std dev	1,606	2,550
A-P <> std dev	6	2
% <> std dev	24.0%	8.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	better

The current accident year (CAY) **paid** variances fell outside of one standard deviation 8% of the time over the last 25 calendar months (see the preceding table), suggesting 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 (11 of 25 variances are positive).

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

Alberta non-Grid RSP Levels that influence[8] ***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) is used to determine the month's IBNR[9], and factors are 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 projections and actuals were based on the applicable valuation.

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

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

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)

3 Ultimate Loss Ratio Matching Method

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

(a) Earned premium to-date
(b) Ultimate loss[10] 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 expenses[11], including IBNR.

In calculating the amounts as percentages of earned premium, the calendar year-to-date earned premium has been used, which includes 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 101.0% rather than 100.2% (the valuation ultimate ratio for accident year 2022), 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 Alberta Non-Grid RSP Summary of Operations due to rounding.)

Alberta Non-Grid 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	(3,463)	(8.9%)	(2,959)	(7.6%)	(6,422)	(16.4%)	(4,699)	(9.7%)
CAY	39,484	101.0%	2,953	7.6%	42,437	108.6%	14,697	0.5%
TOTAL	36,021	92.2%	(6)	-	36,015	92.2%	9,997	(9.1%)

("% EP" based on 2021 calendar year-to-date earned premium; ratios may not total 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).

[11]Allowed claims expenses are first party legal and other expenses as listed in the RSP Claims Guide. Claims expenses paid through the member company expense allowance are NOT included in this analysis.

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, and due 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 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 Alberta Non-Grid 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

discount rate 1.05%

interest rate margin 25 basis pts

Accident Year	Actual Feb. 2022	Actual Mar. 2022	Projected Apr. 2022	Projected May. 2022	Projected Jun. 2022	Projected Jul. 2022	Projected Aug. 2022	Projected Dec. 2022
2006	83	83	79	73	67	63	62	46
2007	101	101	98	92	85	81	79	62
2008	72	72	69	64	58	55	54	40
2009	42	36	36	36	36	35	35	31
2010	83	79	75	74	72	71	69	61
2011	54	(33)	(32)	(29)	(26)	(24)	(23)	(18)
2012	217	96	95	93	94	93	91	84
2013	333	397	384	361	339	322	315	252
2014	255	272	264	245	227	214	210	162
2015	461	345	335	321	307	296	290	243
2016	1,626	829	805	767	731	701	685	571
2017	2,337	2,187	2,115	1,987	1,853	1,765	1,723	1,363
2018	1,319	777	767	780	804	809	798	788
2019	9,966	9,938	9,435	8,954	8,596	8,240	7,977	6,131
2020	22,793	21,182	19,762	18,783	17,803	17,234	16,408	13,275
2021	30,412	26,516	24,620	24,309	23,989	23,708	23,457	21,435
2022	16,370	22,765	33,057	40,363	47,013	53,693	60,037	82,179
TOTAL	86,579	85,697	92,018	97,324	102,095	107,400	112,310	126,739
Change		(882)	6,321	5,306	4,771	5,305	4,910	

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 Feb. 2022	Actual Mar. 2022	Projected Apr. 2022	Projected May. 2022	Projected Jun. 2022	Projected Jul. 2022	Projected Aug. 2022	Projected Dec. 2022
87.0%	2006	75	75	72	66	60	56	55	40
101.9%	2007	65	65	63	58	52	49	48	35
101.1%	2008	69	69	66	61	55	52	51	37
95.4%	2009	(22)	(22)	(21)	(19)	(17)	(16)	(16)	(12)
85.0%	2010	(13)	(11)	(11)	(10)	(9)	(8)	(8)	(6)
84.4%	2011	44	(35)	(34)	(31)	(28)	(26)	(25)	(19)
101.3%	2012	40	(52)	(50)	(46)	(42)	(39)	(38)	(28)
99.2%	2013	120	217	209	192	174	163	159	116
106.0%	2014	162	201	194	178	161	151	148	108
94.1%	2015	99	85	82	75	68	64	63	45
115.8%	2016	867	253	244	224	202	189	185	135
105.3%	2017	1,364	1,306	1,258	1,157	1,046	981	958	697
100.1%	2018	(294)	(596)	(574)	(528)	(477)	(447)	(437)	(317)
91.4%	2019	6,887	6,948	6,496	6,061	5,758	5,470	5,240	3,686
93.9%	2020	18,292	17,035	15,672	14,763	13,848	13,377	12,601	9,825
78.7%	2021	24,491	20,891	19,220	19,028	18,819	18,631	18,445	16,732
100.2%	2022	14,158	19,812	29,039	35,301	40,936	46,543	51,793	69,451
	TOTAL	66,445	66,282	71,965	76,567	80,640	85,222	89,253	100,548
	Change		(163)	5,683	4,602	4,073	4,582	4,031	

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 Feb. 2022	Actual Mar. 2022	Projected Apr. 2022	Projected May. 2022	Projected Jun. 2022	Projected Jul. 2022	Projected Aug. 2022	Projected Dec. 2022
(1) unearned premium (UP)	77,041	74,983	76,585	80,248	88,347	95,715	103,029	112,186
FOR MEMBER SHARING								
(2) expected future costs ratio {% of (1)}	107.0%	108.5%	108.8%	109.2%	109.7%	110.1%	110.6%	112.8%
(3) expected future costs {(1) x (2)}	82,433	81,385	83,331	87,603	96,887	105,418	113,991	126,575
(4) premium deficiency / (deferred policy acquisition cost)	5,392	6,402	6,746	7,355	8,540	9,703	10,962	14,389
Excluding Actuarial Present Value Adjustments								
(5) expected future costs ratio {% of (1)}	99.0%	100.9%	101.2%	101.5%	102.0%	102.4%	102.9%	104.9%
(6) expected future costs {(1) x (5)}	76,249	75,663	77,473	81,444	90,073	98,006	105,976	117,673
(7) premium deficiency / (deferred policy acquisition cost)	(792)	680	888	1,196	1,726	2,291	2,947	5,487

EXHIBIT D

Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2022, broken down by component.

Alberta non-Grid	Projected Balances as at Dec. 31, 2022 ($000s)									
ending 2022	nominal values			actuarial present value adjustments (apvs)						
Acc Yr	Case	IBNR	Total Unpaid	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL
2006	17	40	57	-	-	6	-	6	6	63
2007	243	35	278	(1)	-	28	-	28	27	305
2008	(12)	37	25	-	-	3	-	3	3	28
2009	500	(12)	488	(6)	1	49	(1)	48	43	531
2010	806	(6)	800	(15)	3	80	(1)	79	67	867
2011	43	(19)	24	(1)	-	2	-	2	1	25
2012	1,489	(28)	1,461	(39)	9	146	(4)	142	112	1,573
2013	1,756	116	1,872	(59)	14	187	(6)	181	136	2,008
2014	698	108	806	(31)	7	81	(3)	78	54	860
2015	3,073	45	3,118	(132)	31	312	(13)	299	198	3,316
2016	5,925	135	6,060	(195)	45	605	(19)	586	436	6,496
2017	8,336	697	9,033	(273)	63	903	(27)	876	666	9,699
2018	14,595	(317)	14,278	(372)	86	1,428	(37)	1,391	1,105	15,383
2019	20,041	3,686	23,727	(550)	128	2,935	(68)	2,867	2,445	26,172
2020	23,761	9,825	33,586	(838)	195	4,198	(105)	4,093	3,450	37,036
2021	30,131	16,732	46,863	(1,293)	300	5,858	(162)	5,696	4,703	51,566
PAYs (sub-total):	111,486	31,097	142,583	(3,805)	882	16,832	(446)	16,386	13,463	156,046
CAY (2022)	69,451	69,451	138,902	(3,790)	880	16,077	(439)	15,638	12,728	151,630
claims liabilities:	180,937	100,548	281,485	(7,595)	1,762	32,909	(885)	32,024	26,191	307,676
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	112,186	5,487	117,673	(2,442)	568	11,006	(230)	10,776	8,902	126,575
										*Total may not be sum of parts, as apvs apply to future costs within UPR
policy liabilities:			**399,158**	**(10,037)**	**2,330**	**43,915**	**(1,115)**	**42,800**	**35,093**	**434,251**

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, 2022 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%	5.0%	10.0%
2015	10.0%	10.0%	9.8%	10.0%
2016	10.0%	10.0%	9.5%	10.0%
2017	10.0%	10.0%	9.9%	10.0%
2018	10.0%	10.0%	10.0%	10.0%
2019	12.5%	10.0%	8.4%	12.4%
2020	12.5%	10.0%	12.5%	12.5%
2021	12.4%	10.0%	12.5%	12.5%
2022	12.1%	10.0%	7.1%	11.6%
prem liab	11.8%	10.0%	5.1%	9.4%

discount rate:	1.05%
margin (basis points):	25

*prem liabilities as at 2021m12

EXHIBIT F

Interest Rate Sensitivity

The tables below present sensitivity to the member statement claims liability as projected to Dec. 31, 2022 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2022, and are based on more up-to-date information). We have included the most recent valuation selection (1.09%), the prior valuation assumption (0.81%) 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, 2022 projected Unpaid							
AY	0.05%	0.55%	1.05%	1.55%	2.05%	2.55%	0.81%	0.22%
2004 & prior	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	110	110	110	110	110	110	110	110
2008	-	-	-	-	-	-	-	-
2009	501	500	497	494	491	489	498	501
2010	918	913	905	897	889	882	909	918
2011	61	61	60	59	59	58	60	61
2012	1,818	1,803	1,780	1,758	1,736	1,714	1,791	1,817
2013	2,447	2,423	2,386	2,350	2,315	2,281	2,403	2,445
2014	1,018	1,006	987	969	952	935	996	1,017
2015	2,662	2,627	2,574	2,522	2,472	2,423	2,599	2,660
2016	7,520	7,445	7,330	7,219	7,112	7,008	7,385	7,517
2017	7,820	7,746	7,634	7,526	7,421	7,320	7,688	7,816
2018	14,274	14,158	13,981	13,811	13,645	13,486	14,066	14,268
2019	23,935	23,761	23,497	23,242	22,995	22,755	23,623	23,925
2020	34,455	34,186	33,778	33,383	32,999	32,626	33,972	34,440
2021	48,373	47,955	47,323	46,710	46,114	45,536	47,624	48,348
2022	118,466	117,446	115,901	114,403	112,950	111,539	116,637	118,407
Total	264,378	262,140	258,745	255,454	252,261	249,162	260,362	264,251
	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	0.05%	0.55%	1.05%	1.55%	2.05%	2.55%	0.81%	0.22%
Total	5,633	3,395	-	(3,292)	(6,485)	(9,583)	1,616	5,506
	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	0.05%	0.55%	1.05%	1.55%	2.05%	2.55%	0.81%	0.22%
2004 & prior	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2004	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	0.2%	0.1%	0.0%	-0.1%	-0.2%	-0.4%	0.1%	0.2%
2008	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2009	0.9%	0.5%	0.0%	-0.5%	-1.1%	-1.6%	0.3%	0.9%
2010	1.4%	0.9%	0.0%	-0.9%	-1.7%	-2.5%	0.4%	1.4%
2011	1.9%	1.1%	0.0%	-1.1%	-2.2%	-3.2%	0.5%	1.8%
2012	2.1%	1.3%	0.0%	-1.3%	-2.5%	-3.7%	0.6%	2.1%
2013	2.5%	1.5%	0.0%	-1.5%	-3.0%	-4.4%	0.7%	2.5%
2014	3.1%	1.9%	0.0%	-1.8%	-3.6%	-5.3%	0.9%	3.0%
2015	3.4%	2.1%	0.0%	-2.0%	-4.0%	-5.8%	1.0%	3.4%
2016	2.6%	1.6%	0.0%	-1.5%	-3.0%	-4.4%	0.7%	2.5%
2017	2.4%	1.5%	0.0%	-1.4%	-2.8%	-4.1%	0.7%	2.4%
2018	2.1%	1.3%	0.0%	-1.2%	-2.4%	-3.5%	0.6%	2.1%
2019	1.9%	1.1%	0.0%	-1.1%	-2.1%	-3.2%	0.5%	1.8%
2020	2.0%	1.2%	0.0%	-1.2%	-2.3%	-3.4%	0.6%	2.0%
2021	2.2%	1.3%	0.0%	-1.3%	-2.6%	-3.8%	0.6%	2.2%
2022	2.2%	1.3%	0.0%	-1.3%	-2.5%	-3.8%	0.6%	2.2%
Total	2.2%	1.3%	0.0%	-1.3%	-2.5%	-3.7%	0.6%	2.1%
	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

(November 2021 to March 2022)

RSP **Alberta Non-Grid**
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	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-
2004	42	(8)	8	-	-	-	42
2005	13	-	-	-	-	-	13
2006	83	(23)	23	-	-	-	83
2007	100	(25)	26	-	1	1.0%	101
2008	71	(17)	18	-	1	1.4%	72
2009	35	(3)	3	(6)	(6)	(17.1%)	36
2010	22	(9)	71	(6)	56	254.5%	79
2011	49	(11)	16	(87)	(82)	(167.3%)	(33)
2012	229	(37)	5	(106)	(138)	(60.3%)	96
2013	382	(72)	124	(32)	20	5.2%	397
2014	568	(96)	(179)	(22)	(297)	(52.3%)	272
2015	948	(119)	(505)	5	(619)	(65.3%)	345
2016	1,942	(370)	(292)	(470)	(1,132)	(58.3%)	829
2017	2,790	(487)	114	(181)	(554)	(19.9%)	2,187
2018	5,295	(638)	(3,873)	(6)	(4,517)	(85.3%)	777
2019	12,436	(2,399)	(872)	773	(2,498)	(20.1%)	9,938
2020	26,014	(3,791)	(369)	(752)	(4,912)	(18.9%)	21,182
2021	37,737	663	(8,677)	(3,106)	(11,120)	(29.5%)	26,543
2022	-	28,631	(6,480)	614	22,765	-	22,765
Grand Total	**88,756**	**21,189**	**(20,839)**	**(3,382)**	**(3,032)**	**(3.4%)**	**85,724**

EXHIBIT G

Components of IBNR (i.e. "Undiscounted") Change

(November 2021 to March 2022)

RSP **Alberta Non-Grid**
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	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-
2004	36	(8)	8	-	-	-	36
2005	5	-	-	-	-	-	5
2006	75	(18)	18	-	-	-	75
2007	64	(16)	17	-	1	1.6%	65
2008	68	(17)	18	-	1	1.5%	69
2009	(22)	6	(6)	-	-	-	(22)
2010	(73)	8	54	-	62	(84.9%)	(11)
2011	39	(10)	15	(79)	(74)	(189.7%)	(35)
2012	25	(10)	10	(77)	(77)	(308.0%)	(52)
2013	153	(33)	97	-	64	41.8%	217
2014	460	(78)	(181)	-	(259)	(56.3%)	201
2015	596	(62)	(539)	90	(511)	(85.7%)	85
2016	1,101	(234)	(254)	(360)	(848)	(77.0%)	253
2017	1,681	(336)	57	(96)	(375)	(22.3%)	1,306
2018	3,384	(422)	(3,663)	105	(3,980)	(117.6%)	(596)
2019	8,991	(2,095)	(765)	817	(2,043)	(22.7%)	6,948
2020	21,348	(3,437)	(378)	(498)	(4,313)	(20.2%)	17,035
2021	31,848	(301)	(7,560)	(3,096)	(10,957)	(34.4%)	20,891
2022	-	25,117	(6,014)	709	19,812	-	19,812
Grand Total	**69,779**	**18,054**	**(19,066)**	**(2,485)**	**(3,497)**	**(5.0%)**	**66,282**