ALBERTA NON-GRID RISK SHARING POOL

MAY 2021 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

Related Bulletin: F2021-044_AB_RSP_May_2021_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

MAY 2021

TABLE OF CONTENTS

1 Summary

1) Recorded activities since last valuation implementation were significantly lower than projected, primarily driven by the activity in the month of May; 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 August 2021 in September 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 May 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.

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, 2020 (completed)	0.22% mfad[1] 25 bp	Oct. 2020	update valuation (roll-forward): accident year 2020 loss ratio decreased 1.7 points to 98.1%; discount rate decreased 4 basis points; no change to selected margins for adverse deviations
Dec. 31, 2020 (completed)	0.25% mfad 25 bp	Mar. 2021	update valuation:): accident year 2020 loss ratio decreased 2.6 points to 95.5% and accident year 2021 loss ratio decreased 8.2 points to 89.3%; discount rate increased 3 basis points; no change to selected margins for adverse deviations
Mar. 31, 2021 (completed)	0.73% mfad 25 bp	May 2021	update valuation (roll-forward): accident year 2021 loss ratio decreased 1.2 points to 88.1%; discount rate increased 48 basis points; no change to selected margins for adverse deviations
Jun. 30, 2021	% mfad -- bp	Aug. 2021	update valuation:
Sep. 30, 2021	% mfad -- bp	Oct. 2021	update valuation (roll-forward):

Under the proposed schedule for fiscal year 2021, the off-half valuation quarters ending

[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%.

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 Alberta Non-Grid Risk Sharing Pool ("RSP") as at March 31, 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 Mar. 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 [1]	apv adj. [2]	sub-tot [3]	apv adj. [4]	apv adj. [5]	TOTAL [6]
PAYs	(365)	(18)	(383)	(2,264)	-	(2,647)
CAY	(627)	(72)	(699)	(492)	-	(1,191)
Prem Def	(671)	864	193	(746)	-	(553)
TOTAL	(1,663)	774	(889)	(3,502)	-	(4,391)

As indicated in the preceding table, the incorporation of the new valuation had an estimated ***$4.4 million favourable impact*** on the month's net result from operations, subtracting an estimated 5.5 points (see following table) to the **year-to-date Combined Operating Ratio** to end at **96.9%**.

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

AB Non-Grid	ytd EP 79,688 (actual)					
	IMPACT unfav / (fav) as % ytd EP from changes in:					
	ults & payout patterns			dsct rate	margins	
	Nominal [1]	apv adj. [2]	sub-tot [3]	apv adj. [4]	apv adj. [5]	TOTAL [6]
PAYs	(0.5%)	-	(0.5%)	(2.8%)	-	(3.3%)
CAY	(0.8%)	(0.1%)	(0.9%)	(0.6%)	-	(1.5%)
Prem Def	(0.8%)	1.1%	0.2%	(0.9%)	-	(0.7%)
TOTAL	(2.1%)	1.0%	(1.1%)	(4.4%)	-	(5.5%)

The impact of the **nominal changes** is shown in column [1] of the two preceding summary tables.

[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.

The change in the selected nominal ultimates was **favourable by $1.7 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 **$0.4 million favourable** nominal variance or 0.2% of the PAYs nominal unpaid balance of $165.6 million determined at the end of last month (April 2021), driven by favourable claims development. While the valuation implementation impact does differ from the valuation changes themselves (as they apply to different periods), the main driver of PAY change was from Third Party Liability - Bodily Injury claims for accident year 2019 & prior. The table below summarizes the movements for 2020 & prior by government line:

Alberta Non-Grid RSP - valuation changes in selected ultimate
(favourable) / unfavourable **during Quarter**

Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2016 & Prior	(389)	(63)	(10)	(462)
2017	(768)	(2)	13	(757)
2018	(404)	(9)	(66)	(479)
2019	(384)	169	196	(19)
2020	(38)	275	11	248
TOTAL	**(1,983)**	**370**	**144**	**(1,469)**

The CAY and premium deficiency impacts are a result of the change in the selected loss ratio for accident year **2021** (decreased 1.2 points to 88.1%). This change is driven by 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 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 an unfavourable change of $0.8 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 March 2021. Column [4] accounts for the change in the **discount rate** selected (increased 48 basis points to **0.73%**), indicating a favourable impact of $3.5 million. The impact *related only to claims liabilities* (i.e. PAYs

plus CAY) was $2.6 million at May 2021 – this compares to the $1.9 million 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** 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).

Consideration was given to recent legal decisions and changes in legislation / regulation as noted above and 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, 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.

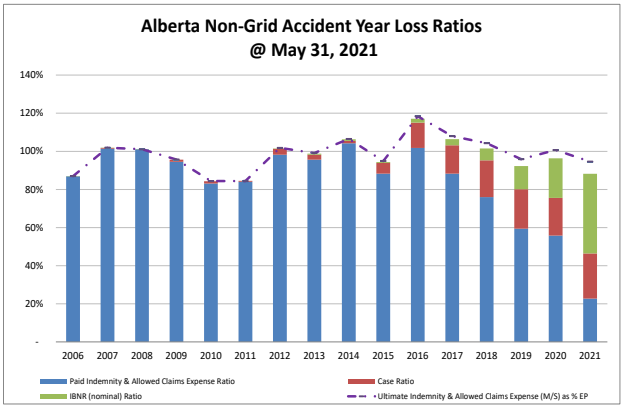
In the **Alberta Treasury Board and Finance Notice 04-2018** (Clarification of Minor Injury Regulation), dated **May 17, 2018**, the Alberta Superintendent of Insurance advised that clarifying amendments have been made to the definition of minor injuries under the Minor Injury Regulation (MIR). With the **most recent** valuation March 31, 2021), consideration of changes in the definition of minor injuries under the MIR, were included with the updated industry trend analysis (completed using industry data as at June 30, 2020).

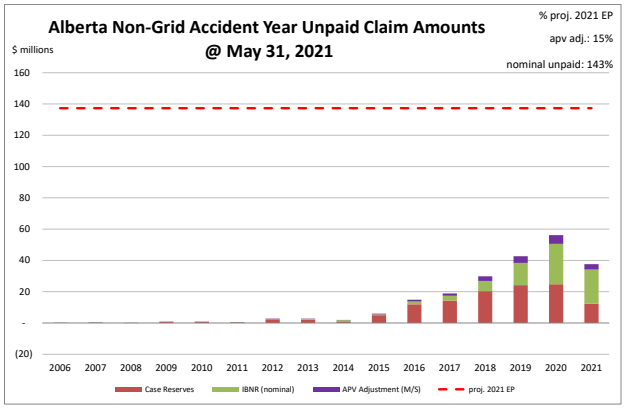
Amendments to the **Alberta Automobile Accident Insurance Benefits Regulation, Diagnostic and Treatment Protocols Regulation, and Minor Injury Regulation** came into force effective November 1, 2020, amending definitions and various benefit maximums defined in these regulations. **Alberta Bill 41** (Insurance (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 With the **most recent** valuation (March 31, 2021), consideration of changes were included with the updated industry trend analysis (completed using industry data as at June 30, 2020). 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.





"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 ($20.1 million – see the following table) represents 15% of the earned premium projected for the full year 2021 (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	120,950	55.9%
ibnr	75,286	34.8%
M/S apv adjust.	20,128	9.3%
M/S total	216,364	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 63% 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

[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.

approximately 1% 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	69,461	102.4%
prem def/(dpac)	(6,855)	(10.1%)
M/S apv adjust.	5,195	7.7%
M/S total	67,801	100.0%

policy liabilities ($000s)

	amt	%
claim	196,236	69.1%
premium	62,606	22.0%
M/S apv adjust.	25,323	8.9%
M/S total	284,165	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 during 2021 Q1 differ from projections at the end of 2020 Q4.

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	April	(158)	(158)	3,466	(359)	1,320	372
		May	(114)	(114)	3,083	(431)	(2,285)	(4,295)
PAY Total			(272)	(272)	6,549	(790)	(965)	(3,923)
CAY	2021	April	10,423	(363)	2,639	(1,502)	4,965	(1,923)
		May	11,110	(145)	3,193	(974)	4,083	(3,160)
CAY Total			21,533	(508)	5,832	(2,476)	9,048	(5,083)
Grand Total			21,261	(780)	12,381	(3,266)	8,083	(9,006)

(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.

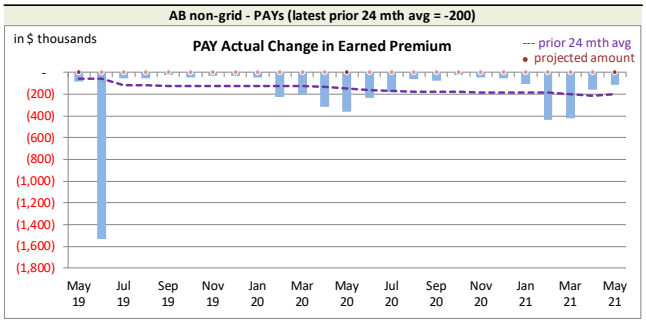
More detailed analysis and commentary on actual vs. projected for the most recent reporting months is provided below.

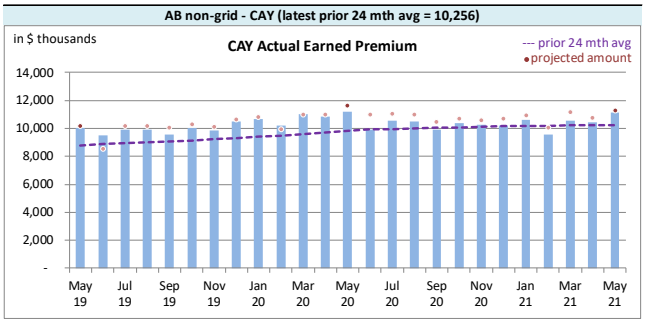
2.1.a Actual vs. Projected (AvsP): Earned Premium

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.

[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.

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

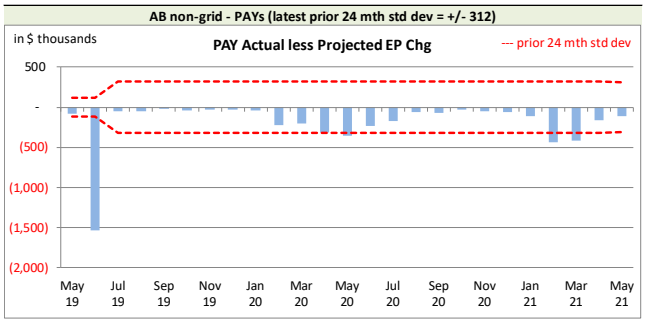


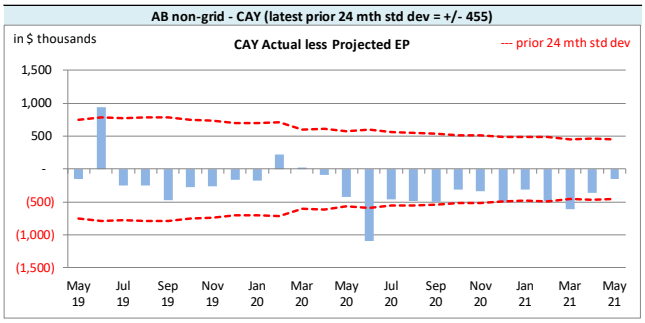


Earned premium changes during a given calendar month in relation to prior accident years tend to be at modest levels, although relatively high levels generally occur at the beginning of each year.

The associated variance between the actual changes and the projections from the previous month are shown in the 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)	(200)	10,256
std dev	312	455
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

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

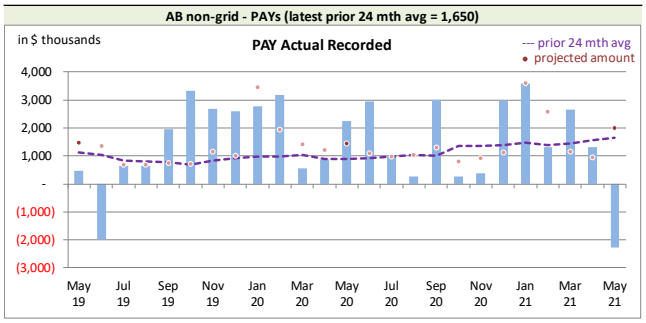
[6]We measure bias based on a 95% confidence range for a binominal distribution with trials based on the range being considered (25 in this case) and 50% probability of success. The rolling 25-month CAY variances at May 2021 had only 3 months where the actuals was higher than projected, and as the 95% confidence range is 8 to 17, bias continues to be indicated.

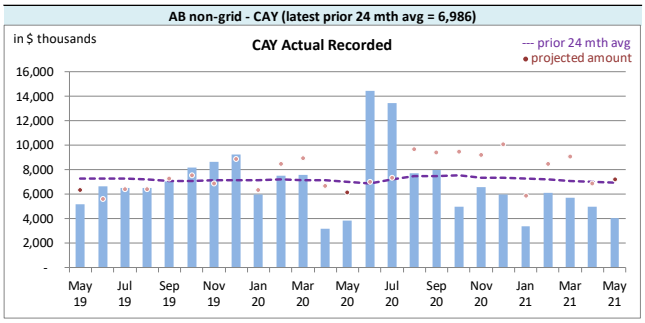
approaches to address the bias issue, but it is not currently deemed as priority.

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.

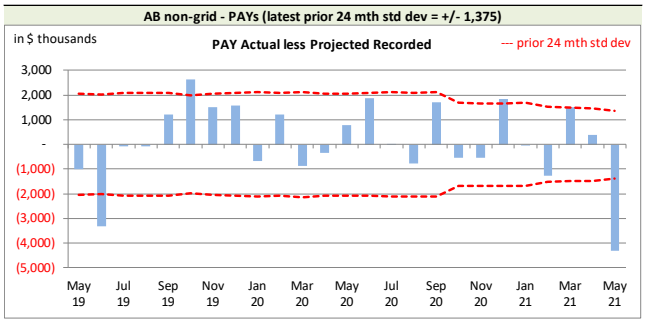
*Alberta non-Grid RSP Actual **Recorded** by Calendar Month*

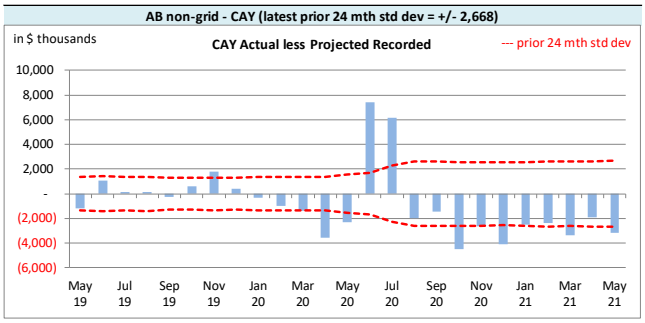




Recorded activity variances from the previous month's projections are shown in the following charts, including the "prior 24-month standard deviation" levels to show how the variances from projection compare with historical standard deviations.

*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)	1,650	6,986
std dev	1,375	2,668
A-P <> std dev	5	11
% <> std dev	20.0%	44.0%
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 (12 of 25 variances are positive).

The PAY **recorded** variance was outside of the one standard deviation band this month (see preceding chart on the left). The lower than projected recorded activity was reviewed, and attributed to the reserving methodology change of one member company group.

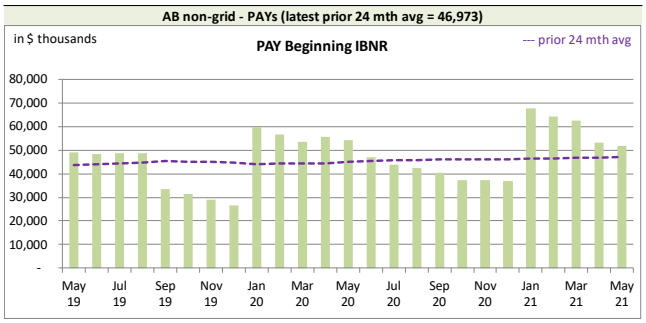
The current accident year (CAY) **recorded** variances fell outside of one standard deviation 44% of the time over the last 25 calendar months (see the preceding table on the left), suggesting that the projection process has performed worse than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (8 of 25 variances are positive).

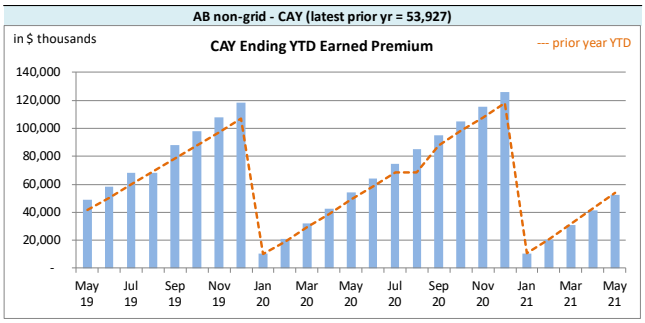
The CAY **recorded** variance was just outside of the one standard deviation band this month (see preceding chart on the right). The lower than projected recorded activity was reviewed, and attributed to process variance.

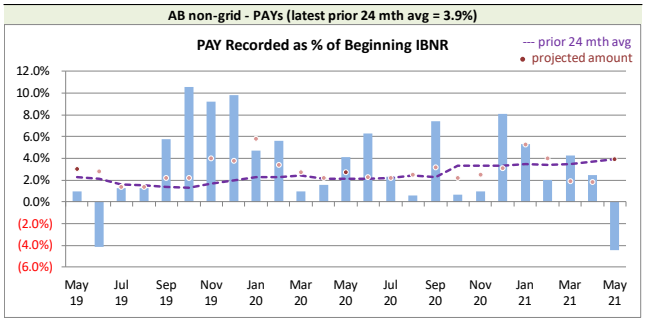
The method for establishing IBNR adjusts automatically for changes in **earned premium** and **recorded** claims activity level (see sections 2.2 and 3).

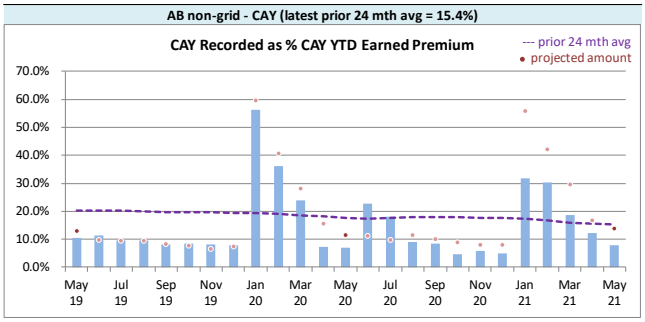
We have included, for reference, the following charts related to levels influencing **recorded** activity.

*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

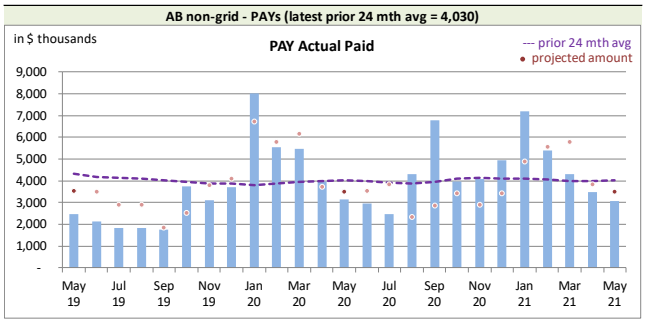
[7]Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned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

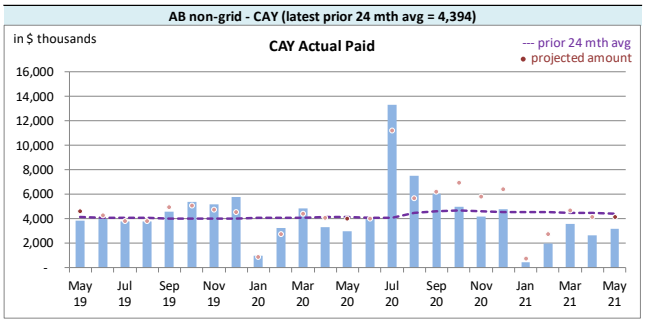
valuation is implemented, i.e. the change will generally show in April, June, September, and November).

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.

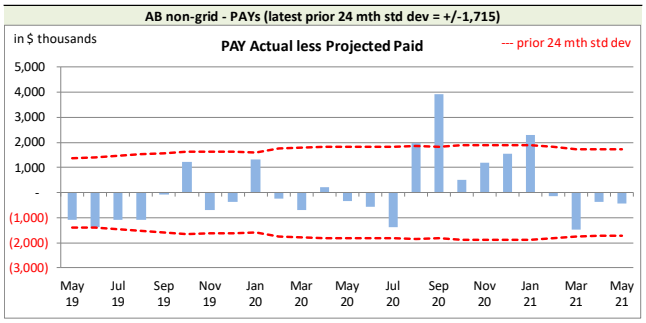
*Alberta non-Grid RSP Actual **Paid** activity by Calendar Month*

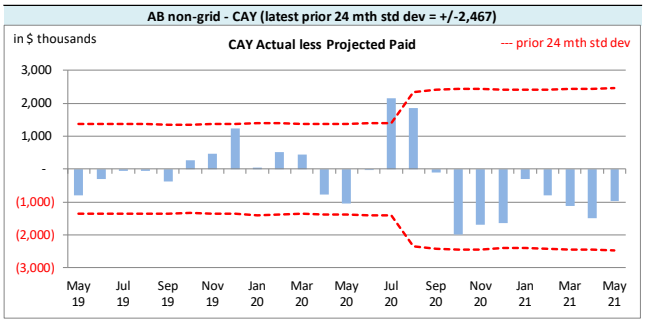




Paid activity variances from the previous month's projections are shown in the following charts, including the "prior 24-month standard deviation" levels to show how the variances from projection compare with historical standard deviations.

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





On Latest $ thousands		
Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)	4,030	4,394
std dev	1,715	2,467
A-P <> std dev	3	1
% <> std dev	12.0%	4.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	better

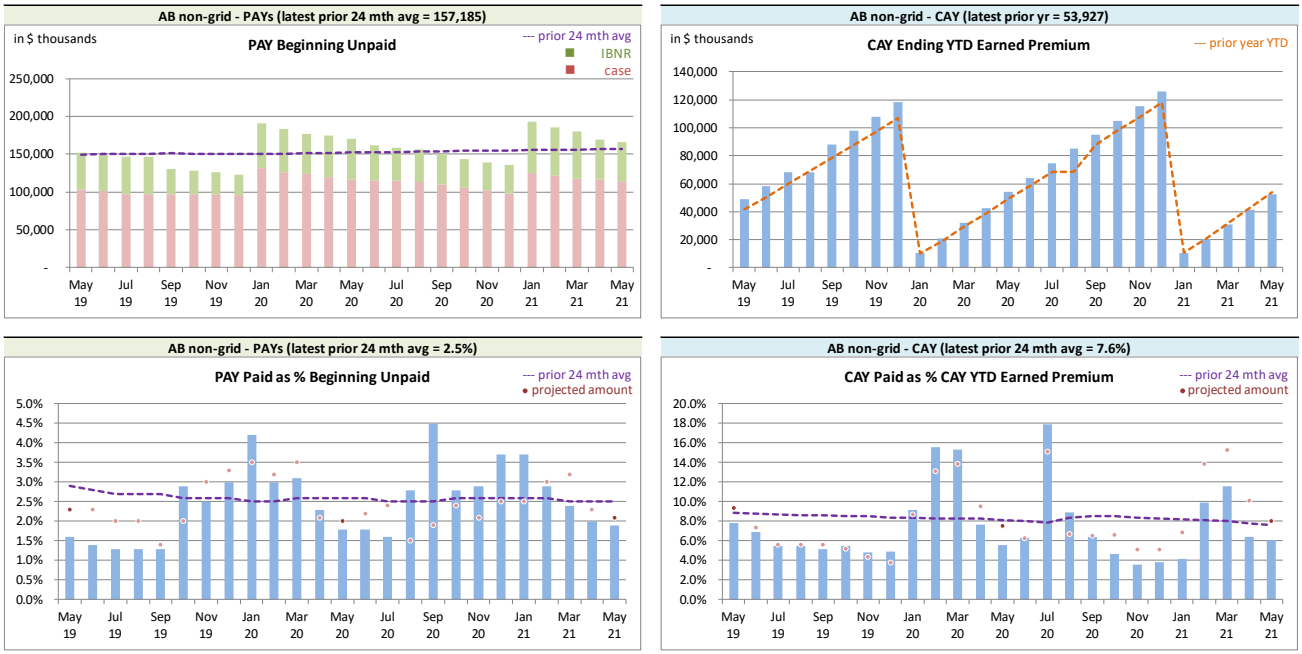
With respect to **paid** indemnity & allowed claims expense, 12% of the prior accident years' (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **paid** amounts (see table on left), suggesting the projection process has performed better than 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 (9 of 25 variances are positive).

The current accident year (CAY) **paid** variances fell outside of one standard deviation 4% 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 (8 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

[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".

projections and actuals were based on the applicable valuation.

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 90.2% rather than 88.1% (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 Alberta Non-Grid 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).

[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.

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	(7,733)	(15.2%)	(5,337)	(10.5%)	(13,070)	(25.6%)	(3,130)	(0.8%)
CAY	46,046	90.2%	3,413	6.7%	49,459	96.9%	9,500	(2.9%)
TOTAL	38,313	75.1%	(1,924)	(3.8%)	36,389	71.3%	6,369	(3.7%)

("% 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 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

IBNR + M/S actuarial present value adjustments

discount rate 0.73%

interest rate margin 25 basis pts

Amounts in $000s								
Accident Year	Actual Apr. 2021	Actual May. 2021	Projected Jun. 2021	Projected Jul. 2021	Projected Aug. 2021	Projected Sep. 2021	Projected Oct. 2021	Projected Dec. 2021
2005	13	13	13	13	12	12	12	11
2006	83	83	79	78	76	74	73	67
2007	100	98	94	92	89	86	84	77
2008	70	71	68	67	65	63	62	57
2009	57	49	49	47	46	45	42	40
2010	93	76	74	72	71	69	66	61
2011	2	(5)	(3)	(4)	(4)	(4)	(4)	(3)
2012	269	383	371	361	352	342	332	307
2013	542	692	664	653	635	615	601	554
2014	1,919	869	834	821	797	769	755	695
2015	1,053	929	895	878	853	828	806	744
2016	2,403	2,917	2,807	2,753	2,677	2,592	2,527	2,334
2017	4,994	4,575	4,406	4,245	4,093	3,831	3,763	3,501
2018	9,871	9,490	9,141	8,790	8,542	8,080	7,635	7,044
2019	18,599	18,503	18,293	17,713	16,883	16,100	15,490	14,371
2020	30,910	31,390	30,860	30,509	30,187	29,705	29,328	27,941
2021	19,823	25,239	28,980	33,134	34,546	35,519	36,372	37,024
TOTAL	90,843	95,414	97,665	100,262	99,959	98,764	97,980	94,858
Change		4,571	2,251	2,597	(303)	(1,195)	(784)	

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 Apr. 2021	Actual May. 2021	Projected Jun. 2021	Projected Jul. 2021	Projected Aug. 2021	Projected Sep. 2021	Projected Oct. 2021	Projected Dec. 2021
97.4%	2005	5	5	5	5	5	5	5	5
87.0%	2006	75	75	72	71	69	67	66	61
101.9%	2007	63	63	60	59	57	55	54	49
101.1%	2008	67	68	65	64	62	60	59	54
95.6%	2009	(22)	(22)	(21)	(21)	(20)	(19)	(19)	(17)
84.3%	2010	8	(1)	(1)	(1)	(1)	(1)	(1)	(1)
84.4%	2011	(33)	(34)	(32)	(32)	(31)	(30)	(29)	(27)
101.5%	2012	23	161	154	152	148	143	140	129
98.8%	2013	292	465	444	439	426	411	404	372
106.3%	2014	1,650	714	682	674	654	630	619	570
94.4%	2015	499	469	448	443	430	415	408	376
117.1%	2016	1,058	1,778	1,698	1,678	1,629	1,570	1,542	1,421
106.4%	2017	3,135	3,076	2,938	2,806	2,677	2,449	2,422	2,232
101.5%	2018	6,378	6,515	6,222	5,942	5,728	5,333	4,965	4,524
92.3%	2019	13,733	14,244	14,102	13,623	12,846	12,152	11,629	10,712
96.3%	2020	24,681	25,848	25,434	25,180	24,928	24,529	24,235	23,012
88.1%	2021	16,615	21,826	24,908	28,372	29,007	29,188	29,187	28,070
	TOTAL	68,263	75,286	77,212	79,488	78,647	76,989	75,717	71,570
	Change		7,023	1,926	2,276	(841)	(1,658)	(1,272)	

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 Apr. 2021	Actual May. 2021	Projected Jun. 2021	Projected Jul. 2021	Projected Aug. 2021	Projected Sep. 2021	Projected Oct. 2021	Projected Dec. 2021
(1) unearned premium (UP)	64,987	69,461	73,934	77,513	80,099	86,274	91,424	95,242
FOR MEMBER SHARING								
(2) expected future costs ratio {% of (1)}	97.9%	97.6%	98.4%	99.2%	100.1%	101.1%	102.2%	104.4%
(3) expected future costs {(1) x (2)}	63,602	67,801	72,765	76,911	80,190	87,230	93,394	99,447
(4) premium deficiency / (deferred policy acquisition cost)	(1,385)	(1,660)	(1,169)	(602)	91	956	1,970	4,205
Excluding Actuarial Present Value Adjustments								
(5) expected future costs ratio {% of (1)}	90.6%	90.1%	90.9%	91.6%	92.4%	93.4%	94.3%	96.4%
(6) expected future costs {(1) x (5)}	58,878	62,606	67,189	71,016	74,044	80,544	86,236	91,823
(7) premium deficiency / (deferred policy acquisition cost)	(6,109)	(6,855)	(6,745)	(6,497)	(6,055)	(5,730)	(5,188)	(3,419)

EXHIBIT D

Projected Year-end Policy Liabilities

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

Alberta non-Grid	Projected Balances as at Dec. 31, 2021 ($000s)									
ending 2021	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
2005	59	5	64	-	-	6	-	6	6	70
2006	-	61	61	-	-	6	-	6	6	67
2007	245	49	294	(1)	-	29	-	29	28	322
2008	(28)	54	26	-	-	3	-	3	3	29
2009	650	(17)	633	(7)	2	63	(1)	62	57	690
2010	684	(1)	683	(8)	3	68	(1)	67	62	745
2011	308	(27)	281	(5)	2	28	(1)	27	24	305
2012	1,912	129	2,041	(35)	12	204	(3)	201	178	2,219
2013	1,684	372	2,056	(31)	10	206	(3)	203	182	2,238
2014	861	570	1,431	(23)	7	143	(2)	141	125	1,556
2015	4,014	376	4,390	(88)	26	439	(9)	430	368	4,758
2016	9,605	1,421	11,026	(243)	77	1,103	(24)	1,079	913	11,939
2017	12,496	2,232	14,728	(265)	88	1,473	(27)	1,446	1,269	15,997
2018	18,226	4,524	22,750	(409)	136	2,844	(51)	2,793	2,520	25,270
2019	22,329	10,712	33,041	(595)	198	4,130	(74)	4,056	3,659	36,700
2020	22,015	23,012	45,027	(901)	315	5,628	(113)	5,515	4,929	49,956
PAYs (sub-total):	95,082	43,500	138,582	(2,611)	876	16,378	(309)	16,069	14,334	152,916
CAY (2021)	61,631	28,070	89,701	(1,704)	538	10,316	(196)	10,120	8,954	98,655
claims liabilities:	156,713	71,570	228,283	(4,315)	1,414	26,694	(505)	26,189	23,288	251,571
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	95,242	(3,419)	91,823	(1,461)	457	8,768	(140)	8,628	7,624	99,447
										*Total may not be sum of parts, as apvs apply to future costs within UPR
policy liabilities:			**320,106**	**(5,776)**	**1,871**	**35,462**	**(645)**	**34,817**	**30,912**	**351,018**

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.

Selected Claims Development MfADs (Mar. 31, 2021)

Accident Year	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	12.5%	10.0%	12.5%	12.5%
2019	12.5%	10.0%	12.5%	12.5%
2020	12.5%	10.0%	7.8%	12.5%
2021	12.1%	10.0%	12.5%	11.5%
2022	11.9%	10.0%	5.2%	11.9%
prem liab	11.9%	10.0%	5.2%	9.6%

discount rate:	0.73%
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, 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 (0.73%), the prior valuation assumption (0.25%) 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.

$ Format: $000s

	Actuarial Present Value of Provisions at Various Discount Rates - Dec. 31, 2021 projected Unpaid							
AY	0.00%	0.23%	0.73%	1.23%	1.73%	2.23%	0.25%	0.22%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	221	221	221	220	219	218	221	221
2008	-	-	-	-	-	-	-	-
2009	647	647	642	637	632	627	647	647
2010	754	754	748	742	736	730	754	754
2011	359	359	354	350	345	341	359	359
2012	1,942	1,941	1,920	1,898	1,877	1,856	1,941	1,941
2013	2,071	2,071	2,050	2,030	2,010	1,991	2,071	2,071
2014	1,731	1,730	1,711	1,692	1,673	1,655	1,730	1,730
2015	5,404	5,401	5,327	5,253	5,181	5,110	5,400	5,401
2016	10,321	10,314	10,161	10,007	9,858	9,712	10,313	10,314
2017	14,618	14,610	14,435	14,258	14,086	13,920	14,610	14,610
2018	22,988	22,973	22,699	22,423	22,157	21,898	22,973	22,976
2019	36,524	36,500	36,064	35,625	35,201	34,784	36,500	36,500
2020	49,051	49,019	48,361	47,705	47,064	46,443	49,013	49,019
2021	71,532	71,488	70,585	69,684	68,798	67,953	71,481	71,488
Total	218,163	218,028	215,278	212,524	209,837	207,238	218,013	218,031
	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%	0.23%	0.73%	1.23%	1.73%	2.23%	0.25%	0.22%
Total	2,885	2,750	-	(2,754)	(5,441)	(8,040)	2,735	2,753
	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%	0.23%	0.73%	1.23%	1.73%	2.23%	0.25%	0.22%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	-	-	-	(0.5%)	(0.9%)	(1.4%)	-	-
2008	-	-	-	-	-	-	-	-
2009	0.8%	0.8%	-	(0.8%)	(1.6%)	(2.3%)	0.8%	0.8%
2010	0.8%	0.8%	-	(0.8%)	(1.6%)	(2.4%)	0.8%	0.8%
2011	1.4%	1.4%	-	(1.1%)	(2.5%)	(3.7%)	1.4%	1.4%
2012	1.1%	1.1%	-	(1.1%)	(2.2%)	(3.3%)	1.1%	1.1%
2013	1.0%	1.0%	-	(1.0%)	(2.0%)	(2.9%)	1.0%	1.0%
2014	1.2%	1.1%	-	(1.1%)	(2.2%)	(3.3%)	1.1%	1.1%
2015	1.4%	1.4%	-	(1.4%)	(2.7%)	(4.1%)	1.4%	1.4%
2016	1.6%	1.5%	-	(1.5%)	(3.0%)	(4.4%)	1.5%	1.5%
2017	1.3%	1.2%	-	(1.2%)	(2.4%)	(3.6%)	1.2%	1.2%
2018	1.3%	1.2%	-	(1.2%)	(2.4%)	(3.5%)	1.2%	1.2%
2019	1.3%	1.2%	-	(1.2%)	(2.4%)	(3.5%)	1.2%	1.2%
2020	1.4%	1.4%	-	(1.4%)	(2.7%)	(4.0%)	1.3%	1.4%
2021	1.3%	1.3%	-	(1.3%)	(2.5%)	(3.7%)	1.3%	1.3%
Total	1.3%	1.3%	-	(1.3%)	(2.5%)	(3.7%)	1.3%	1.3%
	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

(April 2021 to May 2021)

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	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-
2004	42	(2)	2	-	-	-	42
2005	13	-	-	-	-	-	13
2006	83	(7)	7	-	-	-	83
2007	100	(7)	7	(2)	(2)	(2.0%)	98
2008	70	(4)	5	-	1	1.4%	71
2009	57	(4)	4	(8)	(8)	(14.0%)	49
2010	110	(5)	(21)	(8)	(34)	(30.9%)	76
2011	3	-	(2)	(6)	(8)	(266.7%)	(5)
2012	269	(16)	76	54	114	42.4%	383
2013	525	(33)	139	61	167	31.8%	692
2014	1,902	(116)	121	(1,038)	(1,033)	(54.3%)	869
2015	1,013	(62)	(37)	15	(84)	(8.3%)	929
2016	2,491	(146)	501	71	426	17.1%	2,917
2017	5,391	(422)	681	(1,075)	(816)	(15.1%)	4,575
2018	10,497	(767)	596	(836)	(1,007)	(9.6%)	9,490
2019	19,169	(1,407)	998	(257)	(666)	(3.5%)	18,503
2020	31,172	(803)	639	382	218	0.7%	31,390
2021	14,718	6,852	4,860	(1,191)	10,521	71.5%	25,239
Grand Total	**87,625**	**3,051**	**8,576**	**(3,838)**	**7,789**	**8.9%**	**95,414**

EXHIBIT G

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

(April 2021 to May 2021)

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	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-
2004	36	(2)	2	-	-	-	36
2005	5	-	-	-	-	-	5
2006	75	(5)	5	-	-	-	75
2007	63	(4)	4	-	-	-	63
2008	67	(4)	5	-	1	1.5%	68
2009	(22)	1	(1)	-	-	-	(22)
2010	7	-	(8)	-	(8)	(114.3%)	(1)
2011	(32)	2	(4)	-	(2)	6.3%	(34)
2012	23	(1)	61	78	138	600.0%	161
2013	274	(18)	128	81	191	69.7%	465
2014	1,631	(100)	107	(924)	(917)	(56.2%)	714
2015	444	(29)	(35)	89	25	5.6%	469
2016	1,120	(65)	454	269	658	58.8%	1,778
2017	3,465	(333)	713	(769)	(389)	(11.2%)	3,076
2018	6,922	(654)	668	(421)	(407)	(5.9%)	6,515
2019	14,217	(1,251)	1,045	233	27	0.2%	14,244
2020	24,824	(495)	520	999	1,024	4.1%	25,848
2021	12,271	5,553	4,629	(627)	9,555	77.9%	21,826
Grand Total	**65,390**	**2,595**	**8,293**	**(992)**	**9,896**	**15.1%**	**75,286**