ALBERTA GRID RISK SHARING POOL

MAY 2021 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

Related Bulletin: F2021-044_AB_RSP_May_2021_Operational_Report

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FACILITY ASSOCIATION

ACTUARIAL HIGHLIGHTS
RSP ALBERTA GRID
OPERATIONAL REPORT
MAY 2021

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1 Summary

1) The month's recorded activities were significantly lower than projected; the activity was reviewed and attributed to the reserving methodology change of one member company group.

2) Note to members: we are currently reviewing our member reporting requirements and intend to provide the **Actuarial Highlights quarterly instead of the current monthly reporting**, starting with the May 2021 operational reporting and aligned with the valuation 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 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)	0.20% mfad[1] 25 bp	Oct. 2020	update valuation (roll-forward): accident year 2020 loss ratio decreased 6.3 points to 70.6%; discount rate decreased 4 basis points; no change to selected margins for adverse deviations
Dec. 31, 2020 (completed)	0.24% mfad 25 bp	Mar. 2021	update valuation: accident year 2020 loss ratio decreased 0.7 points to 69.9% and accident year 2021 loss ratio decreased 7.0 points to 71.2%; discount rate increased 4 basis points; no change to selected margins for adverse deviations
Mar. 31, 2021 (completed)	0.71% mfad 25 bp	May 2021	update valuation (roll-forward): accident year 2021 loss ratio decreased 0.4 points to 70.8%; discount rate increased 47 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 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 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	1,327	75	1,402	(3,509)	-	(2,107)
CAY	(312)	(83)	(395)	(669)	-	(1,064)
Prem Def	(322)	459	137	(1,031)	-	(894)
TOTAL	693	451	1,144	(5,209)	-	(4,065)

As indicated in the preceding table, the incorporation of the new valuation had an estimated ***$4.1 million favourable impact*** on the month's net result from operations, subtracting an estimated 5.3 points (see following table) from the **year-to-date Combined Operating Ratio** to end at **72.0%**.

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

AB Grid	ytd EP 76,507 (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	1.7%	0.1%	1.8%	(4.6%)	-	(2.8%)
CAY	(0.4%)	(0.1%)	(0.5%)	(0.9%)	-	(1.4%)
Prem Def	(0.4%)	0.6%	0.2%	(1.3%)	-	(1.2%)
TOTAL	0.9%	0.6%	1.5%	(6.8%)	-	(5.3%)

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 **unfavourable by $0.7 million** overall. This reflects

[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 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 **$1.3 million unfavourable** nominal variance or 0.5% of the PAYs nominal unpaid balance of $274.5 million determined at the end of last month (April 2021), driven by unfavourable 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 claims for accident year 2017. The table below summarizes the movements for 2020 & prior by government line:

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

Accident Year	Third Party Liability	Accident Benefits	Other Coverages	Total
2016 & Prior	(697)	(28)	26	(699)
2017	1,035	(13)	(6)	1,016
2018	(378)	231	315	168
2019	(324)	413	(110)	(21)
2020	(133)	(30)	(150)	(313)
TOTAL	**(497)**	**573**	**75**	**151**

The CAY and premium deficiency impacts are a result of the change in the selected loss for accident year **2021** (decreased 0.4 points to 70.8%). 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 $0.5 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 47 basis point to **0.71%**), indicating a favourable impact of $5.2 million. The impact *related only to claims liabilities* (i.e. PAYs plus CAY) was $4.2 million at May 2021 – this compares to the $2.9 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 month's 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.

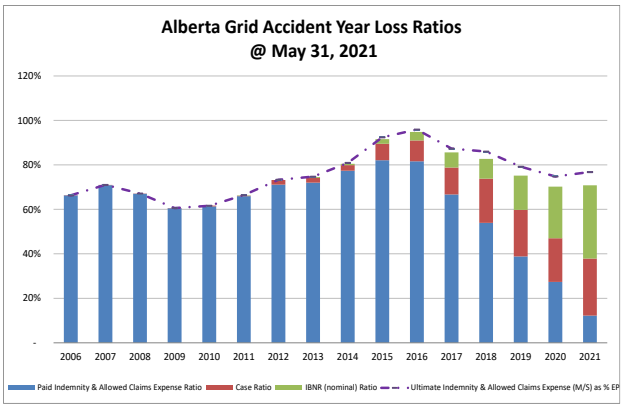
In the **Alberta Treasury Board and Finance Notice 04-2018** (Clarification of Minor Injury Regulation), dated **May 17, 2018**, the Alberta Superintendent of Insurance advised that clarifying amendments have been made to the definition of minor injuries under the Minor Injury Regulation (MIR). With 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).

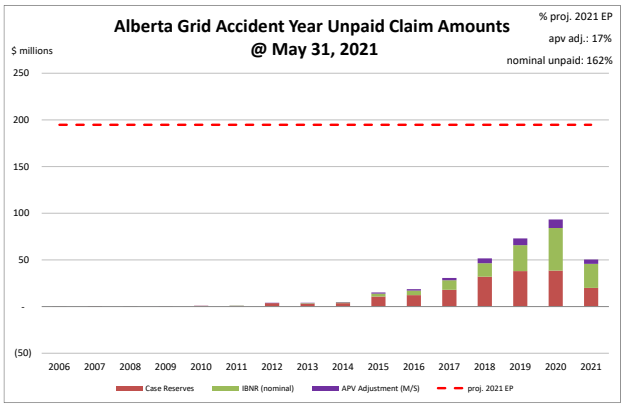
Amendments to the **Alberta Automobile Accident Insurance Benefits Regulation, Diagnostic and Treatment Protocols Regulation, and Minor Injury Regulation** came into force effective November 1, 2020, amending definitions and various benefit maximums defined in these regulations. **Alberta Bill 41** (Insurance (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 ($32.9 million – see the following table) represents 17% 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	183,173	52.5%
ibnr	132,971	38.1%
M/S apv adjust.	32,870	9.4%
M/S total	349,014	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 54% of the IBNR balance relates to accident years 2020 and 2021 (see Exhibit B). Approximately 86% of the M/S total claim liabilities are related to accident years 2017-2021 inclusive (i.e. the most recent 5 accident years), and approximately 1% is related to accident years 2011 and prior (i.e. prior to the most recent 10 accident years).

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

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

premium liabilities ($000s)

	amt	%
unearned prem	99,602	126.8%
prem def/(dpac)	(27,612)	(35.1%)
M/S apv adjust.	6,583	8.4%
M/S total	78,573	100.0%

policy liabilities ($000s)

	amt	%
claim	316,144	73.9%
premium	71,990	16.8%
M/S apv adjust.	39,453	9.2%
M/S total	427,587	100.0%

2 Activity During the Month of May 2021

2.1 Recorded Premium and Claims Activity

The following table summarizes the extent to which premiums and claims amounts recorded during the month differ from projections reflected in the prior month's Operational Report[4].

Alberta Grid RSP Actual vs Projected Summary: Recorded Transaction Amounts ($ thousands)

Table 01	Earned Premium		Paid Indemnity & Allowed Claims Expense		Case increase / (decrease)		Recorded increase / (decrease)	
Accident Year	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	-	-	2,198	(1,600)	(3,361)	(678)	(1,163)	(2,278)
2019	(11)	(11)	1,852	436	(3,307)	(2,544)	(1,455)	(2,108)
2020	(90)	(90)	1,330	(794)	(1,011)	660	319	(134)
2021	16,298	(3,342)	2,021	(2,386)	5,534	1,673	7,555	(713)
TOTAL	16,197	(3,443)	7,401	(4,344)	(2,144)	(888)	5,257	(5,233)

(Recorded transaction amounts exclude IBNR & other actuarial provisions)

Claims transaction activity is generally volatile; 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. Commentary from our review is provided in the sub-sections that follow.

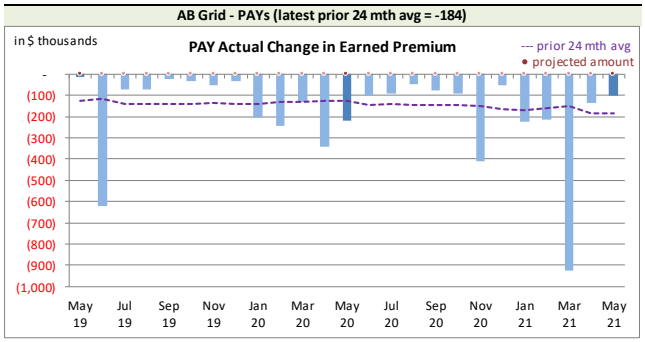
2.1.a Actual vs. Projected (AvsP): Earned Premium

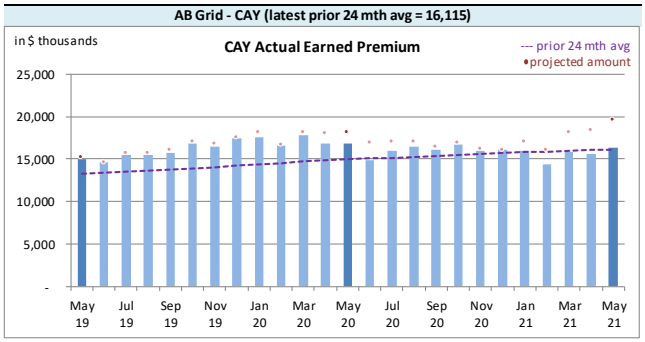
The following charts show actual **earned premium**[5] activity in each of the most recent 25 calendar months, along with a "prior 24-month average" to show how each month's actual compares with the average amount of the preceding 24 calendar months.

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

[5]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 Grid RSP Actual **Earned Premium** by Calendar Month*

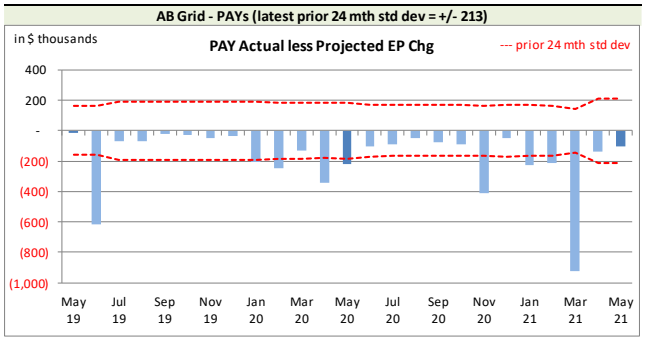


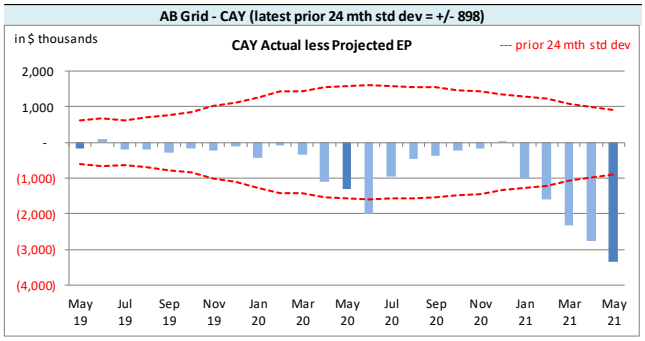


Earned premium changes during a given calendar month in relation to prior accident years tend to be at modest levels, although relatively high levels generally occur at the beginning of each year.

The associated variances 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 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)	(184)	16,115
std dev	213	898
A-P <> std dev	9	5
% <> std dev	36.0%	20.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	no better	better

We project **earned premium** changes from known unearned premium balances and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years' (PAYs) bias[6], 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[7], with actuals being generally lower than projected, and while we modified our projections processes in response, bias

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

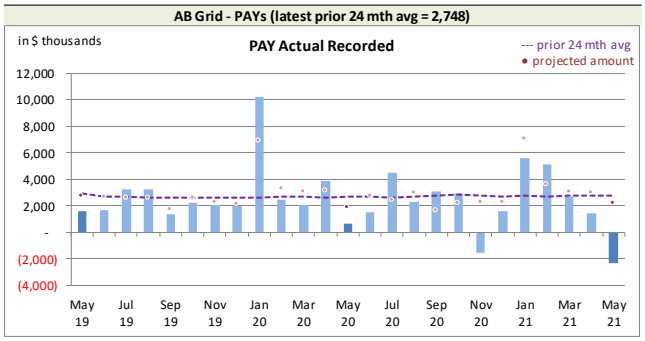
[7]We measure bias based on a 95% confidence range for a binominal distribution with trials based on the range being considered (25 in this case) and 50% probability of success. The rolling 25-month CAY variances at May 2021 has only 2 months where the actuals were higher than projected, and as the 95% confidence range is 8 to 17, bias continues to be indicated.

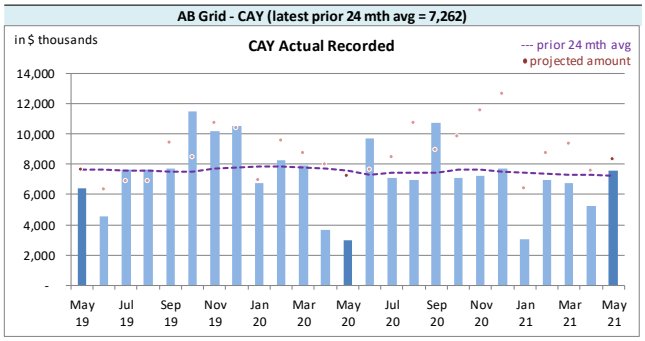
still exists. Over time, we may consider other projection approaches to address the bias issue, but it has not currently deemed as a priority.

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.

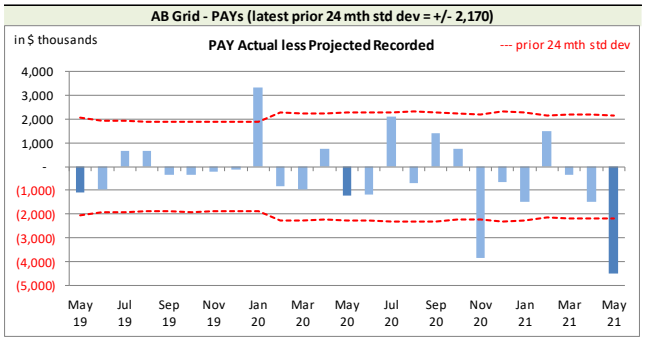
Alberta Grid RSP Actual **Recorded** *by Calendar Month*

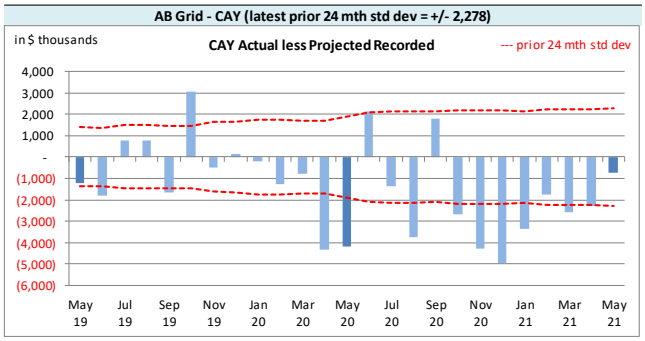




Recorded activity variances from the previous month's projections shown in the following charts, including the "prior 24-month standard deviation" levels to show how the variances from projection compare with historical standard deviations.

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





On Latest $ thousands		
Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)	2,748	7,262
std dev	2,170	2,278
A-P <> std dev	3	13
% <> std dev	12.0%	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, 12% 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[8] has not been

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

indicated at a 95% confidence level on a rolling 25-month basis (8 of 25 variances were positive).

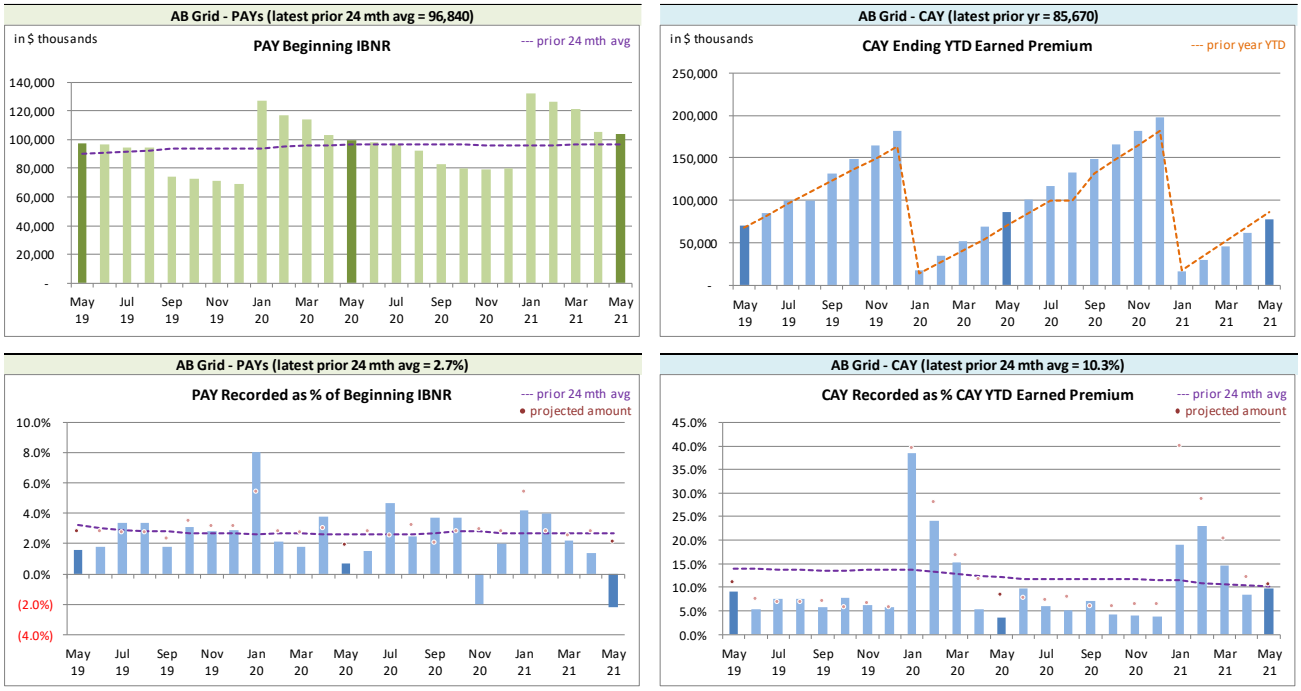
The PAY **recorded** variance was outside of the one standard deviation band this month (see preceding chart on the left). The lower than projected recorded activity was reviewed, and attributed to the reserving methodology change of one member company group.

The current accident year (CAY) **recorded** variances fell outside of one standard deviation 52% of the time over the last 25 calendar months (see preceding table on the left), suggesting that the projection process has performed worse than simply projecting the prior 24-month average amount. Bias has been indicated at a 95% confidence level on a lagging 24-month basis (6 of 25 variances were 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, additional charts below related to levels influencing **recorded** activity. Note in particular the changes in the level of PAY beginning IBNR over the months, as a response to valuations and showing up as a beginning IBNR change one month after the valuation is implemented (i.e. April, June, September, and November).

Alberta Grid RSP Levels that influence[9] ***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:

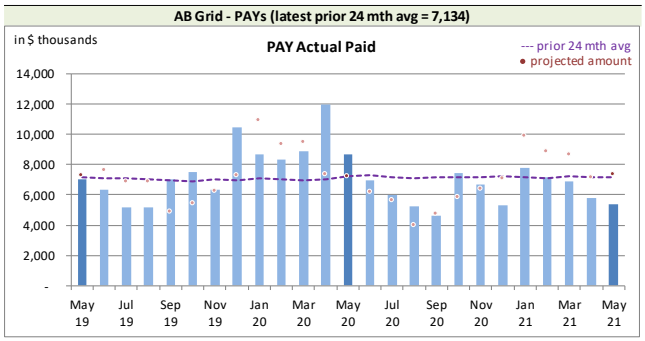
[9]Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned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

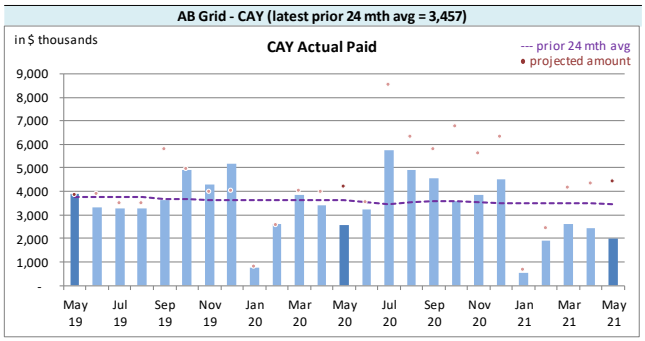
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs' ultimates (will show up as a beginning IBNR change one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

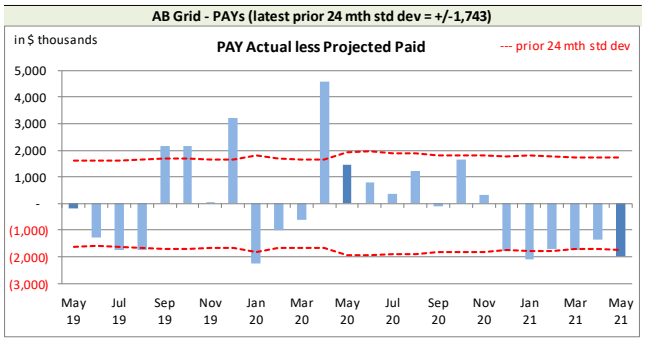
*Alberta Grid RSP Actual **Paid** activity by Calendar Month*

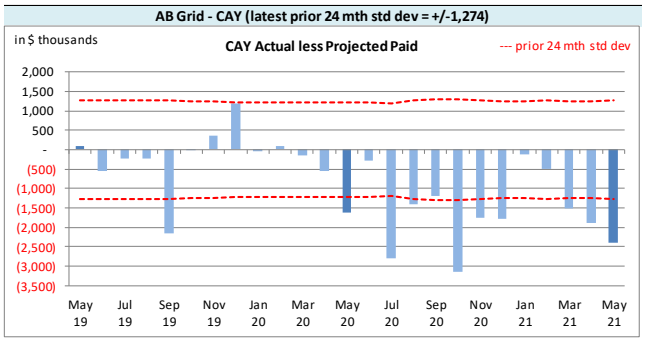




Paid activity variances from the previous month's projections shown in the following charts, including the prior 24-month standard deviation levels to show how the variances from projection compare with historical standard deviations.

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





On Latest $ thousands		
Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)	7,134	3,457
std dev	1,743	1,274
A-P <> std dev	11	10
% <> std dev	44.0%	40.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	worse	worse

With respect to **paid** indemnity & allowed claims expense, 44% 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 worse than simply projecting the prior 24-month average amount (assuming it follows a normal distribution), and we are actively looking into the projection process for means of improving this result. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (11 of 25 variances are positive).

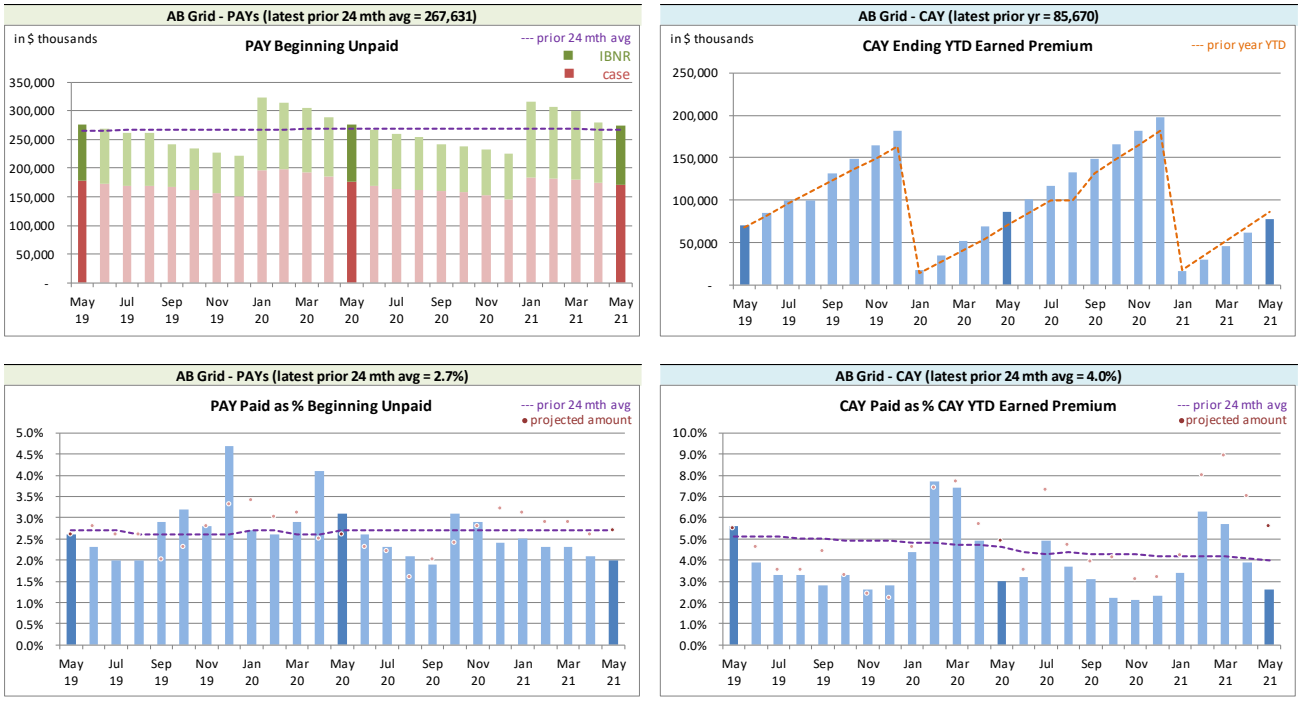
The PAY **paid** variance was just outside of the one standard deviation band this month (see preceding chart on the right). The lower than projected recorded activity was reviewed, and attributed to process variance.

The current accident year (CAY) **paid** variances fell outside one standard deviation 40% of the time over the last 25 calendar months (see preceding table on the left), suggesting the projection process has performed worse than simply projecting the prior 24-month average amount. Bias has been indicated at a 95% confidence level on a rolling 25-month basis (4 of 25 variances are positive).

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

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

Alberta Grid RSP Levels that influence[10] ***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[11], 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 based on the applicable valuation.

[10]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.

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

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

Alberta Grid RSP Actual vs Projected Summary: IBNR and APV Amounts ($ thousands)

Table 02

			actuarial present value adjustments					
	IBNR		Discount Amount		Provisions for Adverse Deviations		IBNR + actuarial present value adjustments	
Accident Year	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	33,983	2,834	(1,922)	(1,276)	13,695	130	45,756	1,688
2019	27,753	2,280	(1,250)	(854)	8,525	(75)	35,028	1,351
2020	45,553	661	(1,683)	(1,103)	10,815	(46)	54,685	(488)
2021	25,682	(1,979)	(960)	(638)	5,650	(113)	30,372	(2,730)
TOTAL	132,971	3,796	(5,815)	(3,871)	38,685	(104)	165,841	(179)

The IBNR provision is $3.8 million higher than projected from last month, counterbalancing the recorded claims activity and adjusting for the earned premium variance impacts indicated in section 2.1, and due to the impact of valuation implementation.

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

(i) the change projected last month;

(ii) the additional change due to variances in earned premium (because we apply a loss ratio to earned premium in determining ultimate level) and/or recorded claims (as IBNR is calculated as ultimate less recorded) differences; and

(iii) the additional change due to valuation implementation impacts (as applicable)

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

The following table summarizes the variances in the provisions for premium deficiency liability / (deferred policy acquisition cost asset) included in this month's Operational Report and the one-month projections from last month's Report. This RSP is in a deferred policy acquisition cost asset position (shown as a negative amount) prior to and after actuarial present value adjustments. Actuarial present value adjustments decrease the asset value as the adjustments increase the expected future policy obligations (costs) associated with the unearned premium. The variances noted are mainly driven by the unearned premium variance, and the impact of valuation implementation.

Alberta Grid RSP Actual vs Projected Summary: Premium Deficiency / (DPAC) Amounts ($ thousands)

Table 03

	Premium Deficiency / (Deferred Policy Acquisition Costs)		actuarial present value adjustments		Premium Deficiency / (DPAC) including actuarial present value adjustments	
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
balance:	(27,612)	(1,217)	6,583	(349)	(21,029)	(1,566)
balance as % unearned premium:	(27.7%)	(0.3%)	6.6%	(0.6%)	(21.1%)	(0.9%)
actual unearned premium:	99,602					
less projected:	3,148					

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[12] 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[13], 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 72.3% rather than 70.8% (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 Grid RSP Summary of Operations due to rounding.)

[12]"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).

[13]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 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	(12,287)	(16.1%)	(8,383)	(11.0%)	(20,670)	(27.0%)	(2,819)	2.6%
CAY	55,298	72.3%	4,690	6.1%	59,988	78.4%	11,671	(1.7%)
TOTAL	43,011	56.2%	(3,693)	(4.8%)	39,318	51.4%	8,853	0.9%

("% 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 implemented. The loss ratio change year-to-date in Table 04 reflects not only changes in the prior accident year levels, but also the increase in the calendar year-to-date earned premium with an additional month's earned premium, and due to the impact of valuation implementation.

For the current accident year (CAY), changes in the year-to-date total reflects the additional month's exposure and regular changes to actuarial present value adjustments as the year ages, and due to the impact of valuation implementation.

5 Current Operational Report – Additional Exhibits

Section 6 provides exhibits pertaining to the actuarial provisions reflected in the current month's Operational Report.

IBNR (including actuarial present value adjustments) presented in section 6, Exhibit A, were derived on a discounted basis, and therefore reflect the time value of money and include an explicit provision for adverse deviations in accordance with accepted actuarial practice in Canada.

IBNR presented in section 6, Exhibit B, does NOT include any actuarial present value adjustments. The "Total IBNR" from this exhibit shown in the Operational Report as "Undiscounted IBNR".

The ultimate loss ratios presented in section 6, Exhibit B, refer to the estimates derived based on various actuarial methodologies applied to the experience of the Alberta 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 0.71%

interest rate margin 25 basis pts

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	23	21	20	19	19	18	17
2006	(120)	(120)	(118)	(116)	(112)	(107)	(104)	(100)
2007	193	(130)	(129)	(127)	(123)	(116)	(114)	(110)
2008	5	4	3	3	2	3	2	2
2009	46	45	45	43	42	40	38	36
2010	(280)	(45)	(46)	(45)	(43)	(41)	(41)	(39)
2011	(53)	536	526	512	498	477	464	440
2012	459	231	221	211	208	203	194	179
2013	720	943	922	897	874	838	815	768
2014	1,955	1,342	1,314	1,279	1,244	1,193	1,160	1,096
2015	4,797	4,308	4,219	4,110	3,996	3,836	3,727	3,522
2016	6,718	6,470	6,344	6,183	6,011	5,764	5,606	5,304
2017	11,028	12,647	12,446	11,890	11,183	10,795	10,503	9,884
2018	20,182	19,572	19,257	18,887	18,148	17,804	17,369	16,253
2019	34,506	35,028	34,343	33,046	31,914	30,909	30,142	29,127
2020	55,890	54,685	53,810	52,447	51,599	50,774	49,512	46,699
2021	26,256	30,372	37,582	42,127	46,298	49,754	53,030	58,384
TOTAL	162,245	165,841	170,691	171,299	171,692	172,082	172,260	171,404
Change		3,596	4,850	608	393	390	178	

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
60.5%	2005	(26)	(16)	(16)	(16)	(16)	(15)	(15)	(14)
66.3%	2006	(129)	(129)	(127)	(124)	(120)	(115)	(112)	(107)
71.0%	2007	135	(159)	(157)	(154)	(149)	(142)	(138)	(132)
67.1%	2008	(14)	(14)	(14)	(14)	(14)	(13)	(13)	(12)
60.6%	2009	26	26	26	25	24	23	22	21
61.6%	2010	(331)	(112)	(110)	(108)	(105)	(100)	(97)	(92)
66.4%	2011	(108)	450	443	433	420	402	392	373
73.1%	2012	91	(102)	(100)	(98)	(95)	(91)	(89)	(85)
74.5%	2013	347	603	594	581	563	538	525	500
80.6%	2014	1,435	927	913	893	865	827	806	767
91.6%	2015	3,340	3,077	3,031	2,964	2,872	2,746	2,677	2,547
94.7%	2016	4,935	4,951	4,877	4,770	4,622	4,419	4,309	4,100
85.6%	2017	8,297	10,184	10,031	9,529	8,871	8,534	8,321	7,908
82.8%	2018	14,344	14,375	14,159	13,890	13,251	12,986	12,661	11,848
75.2%	2019	26,126	27,753	27,198	26,001	24,961	24,087	23,485	22,786
70.2%	2020	45,345	45,553	44,870	43,703	43,004	42,316	41,216	38,699
70.8%	2021	21,946	25,682	31,800	35,454	38,776	41,458	43,967	47,977
	TOTAL	125,681	132,971	137,341	137,654	137,657	137,790	137,849	137,020
	Change		7,290	4,370	313	3	133	59	

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)	95,616	99,602	97,599	102,418	107,270	112,764	117,161	119,021
FOR MEMBER SHARING								
(2) expected future costs ratio {% of (1)}	79.3%	78.9%	79.5%	80.2%	80.9%	81.7%	82.5%	84.2%
(3) expected future costs {(1) x (2)}	75,832	78,573	77,598	82,129	86,807	92,094	96,629	100,198
(4) premium deficiency / (deferred policy acquisition cost)	(19,784)	(21,029)	(20,001)	(20,289)	(20,463)	(20,670)	(20,532)	(18,823)
Excluding Actuarial Present Value Adjustments								
(5) expected future costs ratio {% of (1)}	72.2%	72.3%	72.8%	73.5%	74.1%	74.8%	75.6%	77.1%
(6) expected future costs {(1) x (5)}	69,004	71,990	71,098	75,249	79,534	84,377	88,530	91,801
(7) premium deficiency / (deferred policy acquisition cost)	(26,612)	(27,612)	(26,501)	(27,169)	(27,736)	(28,387)	(28,631)	(27,220)

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 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	322	(14)	308	-	-	31	-	31	31	339
2006	177	(107)	70	-	-	7	-	7	7	77
2007	361	(132)	229	(1)	-	23	-	23	22	251
2008	164	(12)	152	(1)	-	15	-	15	14	166
2009	140	21	161	(2)	1	16	-	16	15	176
2010	668	(92)	576	(6)	2	58	(1)	57	53	629
2011	372	373	745	(9)	3	74	(1)	73	67	812
2012	2,981	(85)	2,896	(35)	12	290	(3)	287	264	3,160
2013	2,464	500	2,964	(36)	12	296	(4)	292	268	3,232
2014	2,851	767	3,618	(43)	14	362	(4)	358	329	3,947
2015	8,469	2,547	11,016	(165)	55	1,102	(17)	1,085	975	11,991
2016	9,519	4,100	13,619	(218)	82	1,362	(22)	1,340	1,204	14,823
2017	14,718	7,908	22,626	(385)	136	2,263	(38)	2,225	1,976	24,602
2018	27,540	11,848	39,388	(670)	236	4,923	(84)	4,839	4,405	43,793
2019	34,536	22,786	57,322	(1,089)	401	7,165	(136)	7,029	6,341	63,663
2020	35,026	38,699	73,725	(1,475)	516	9,142	(183)	8,959	8,000	81,725
PAYs (sub-total):	140,310	89,043	229,353	(4,135)	1,470	27,135	(493)	26,642	23,977	253,330
CAY (2021)	53,540	47,977	101,517	(2,132)	812	11,979	(252)	11,727	10,407	111,924
claims liabilities:	193,850	137,020	330,870	(6,267)	2,282	39,114	(745)	38,369	34,384	365,254
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	119,021	(27,220)	91,801	(1,828)	640	9,781	(196)	9,585	8,397	100,198
										*Total may not be sum of parts, as apvs apply to future costs within UPR
policy liabilities:			**422,671**	**(8,095)**	**2,922**	**48,895**	**(941)**	**47,954**	**42,781**	**465,452**

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%	12.5%	12.4%
2021	12.2%	10.0%	7.6%	11.8%
2022	12.0%	10.0%	5.1%	10.7%
prem liab	12.0%	10.0%	5.1%	10.7%

discount rate:	0.71%
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 (0.71%), the prior valuation assumption (0.24%) and the prior fiscal year end valuation assumption (0.20%) 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%	0.21%	0.71%	1.21%	1.71%	2.21%	0.24%	0.20%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	97	97	97	97	97	97	97	97
2007	295	295	294	294	293	292	295	295
2008	111	111	110	109	109	108	111	111
2009	111	111	110	109	108	107	111	111
2010	657	657	652	647	642	637	657	657
2011	610	610	605	600	595	590	610	610
2012	2,706	2,706	2,684	2,662	2,639	2,618	2,706	2,706
2013	2,730	2,729	2,707	2,684	2,661	2,639	2,729	2,729
2014	4,012	4,011	3,978	3,944	3,910	3,877	4,011	4,011
2015	12,381	12,377	12,257	12,132	12,010	11,890	12,375	12,377
2016	14,615	14,609	14,456	14,296	14,140	13,987	14,609	14,609
2017	23,387	23,376	23,120	22,852	22,590	22,335	23,374	23,376
2018	42,258	42,234	41,763	41,273	40,788	40,321	42,229	42,234
2019	61,908	61,867	61,105	60,315	59,534	58,782	61,867	61,874
2020	81,462	81,408	80,318	79,178	78,062	76,988	81,399	81,408
2021	103,888	103,822	102,410	100,957	99,527	98,152	103,811	103,822
Total	351,228	351,020	346,666	342,149	337,705	333,420	350,991	351,027
	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%	0.21%	0.71%	1.21%	1.71%	2.21%	0.24%	0.20%
Total	4,562	4,354	-	(4,517)	(8,961)	(13,246)	4,325	4,361
	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%	0.21%	0.71%	1.21%	1.71%	2.21%	0.24%	0.20%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	0.3%	0.3%	-	-	(0.3%)	(0.7%)	0.3%	0.3%
2008	0.9%	0.9%	-	(0.9%)	(0.9%)	(1.8%)	0.9%	0.9%
2009	0.9%	0.9%	-	(0.9%)	(1.8%)	(2.7%)	0.9%	0.9%
2010	0.8%	0.8%	-	(0.8%)	(1.5%)	(2.3%)	0.8%	0.8%
2011	0.8%	0.8%	-	(0.8%)	(1.7%)	(2.5%)	0.8%	0.8%
2012	0.8%	0.8%	-	(0.8%)	(1.7%)	(2.5%)	0.8%	0.8%
2013	0.8%	0.8%	-	(0.8%)	(1.7%)	(2.5%)	0.8%	0.8%
2014	0.9%	0.8%	-	(0.9%)	(1.7%)	(2.5%)	0.8%	0.8%
2015	1.0%	1.0%	-	(1.0%)	(2.0%)	(3.0%)	1.0%	1.0%
2016	1.1%	1.1%	-	(1.1%)	(2.2%)	(3.2%)	1.1%	1.1%
2017	1.2%	1.1%	-	(1.2%)	(2.3%)	(3.4%)	1.1%	1.1%
2018	1.2%	1.1%	-	(1.2%)	(2.3%)	(3.5%)	1.1%	1.1%
2019	1.3%	1.2%	-	(1.3%)	(2.6%)	(3.8%)	1.2%	1.3%
2020	1.4%	1.4%	-	(1.4%)	(2.8%)	(4.1%)	1.3%	1.4%
2021	1.4%	1.4%	-	(1.4%)	(2.8%)	(4.2%)	1.4%	1.4%
Total	1.3%	1.3%	-	(1.3%)	(2.6%)	(3.8%)	1.2%	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 During Month

RSP	**Alberta Grid**
AccountCode Desc	**IBNR - Discounted**

M/S IBNR - in $000s

AccYear	Values Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation	Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
2005	13	(1)	11	-	10	76.9%	23
2006	(120)	3	(3)	-	-	-	(120)
2007	193	(5)	21	(339)	(323)	(167.4%)	(130)
2008	5	(1)	1	(1)	(1)	(20.0%)	4
2009	46	(1)	1	(1)	(1)	(2.2%)	45
2010	(280)	5	(5)	235	235	(83.9%)	(45)
2011	(53)	-	157	432	589	(1,111.3%)	536
2012	459	(14)	(182)	(32)	(228)	(49.7%)	231
2013	720	(19)	275	(33)	223	31.0%	943
2014	1,955	(47)	(49)	(517)	(613)	(31.4%)	1,342
2015	4,797	(118)	104	(475)	(489)	(10.2%)	4,308
2016	6,718	(161)	536	(623)	(248)	(3.7%)	6,470
2017	11,028	(425)	1,240	804	1,619	14.7%	12,647
2018	20,182	(743)	346	(213)	(610)	(3.0%)	19,572
2019	34,506	(829)	2,045	(694)	522	1.5%	35,028
2020	55,890	(717)	162	(650)	(1,205)	(2.2%)	54,685
2021	26,256	6,846	(1,666)	(1,064)	4,116	15.7%	30,372
Grand Total	**162,245**	**3,775**	**2,992**	**(3,171)**	**3,596**	**2.2%**	**165,841**

EXHIBIT G

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

RSP	**Alberta Grid**
AccountCode Desc	**IBNR - Undiscounted**

IBNR - in $000s

AccYear	Values Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation	Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
2005	(26)	1	9	-	10	(38.5%)	(16)
2006	(129)	3	(3)	-	-	-	(129)
2007	135	(3)	17	(308)	(294)	(217.8%)	(159)
2008	(14)	-	-	-	-	-	(14)
2009	26	(1)	1	-	-	-	26
2010	(331)	7	(7)	219	219	(66.2%)	(112)
2011	(108)	2	156	400	558	(516.7%)	450
2012	91	(2)	(191)	-	(193)	(212.1%)	(102)
2013	347	(7)	263	-	256	73.8%	603
2014	1,435	(29)	(45)	(434)	(508)	(35.4%)	927
2015	3,340	(67)	97	(293)	(263)	(7.9%)	3,077
2016	4,935	(99)	507	(392)	16	0.3%	4,951
2017	8,297	(348)	1,192	1,043	1,887	22.7%	10,184
2018	14,344	(574)	283	322	31	0.2%	14,375
2019	26,126	(653)	2,100	180	1,627	6.2%	27,753
2020	45,345	(453)	71	590	208	0.5%	45,553
2021	21,946	5,715	(1,667)	(312)	3,736	17.0%	25,682
Grand Total	**125,681**	**3,494**	**2,781**	**1,015**	**7,290**	**5.8%**	**132,971**