



ALBERTA NON-GRID RISK SHARING POOL

AUGUST 2020 OPERATIONAL REPORT

ACTUARIAL HIGHLIGHTS

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ACTUARIAL HIGHLIGHTS**RSP ALBERTA NON-GRID****OPERATIONAL REPORT****AUGUST 2020**

TABLE OF CONTENTS

1	Summary.....	2
1.1	Valuation Schedule (Fiscal Year 2020)	2
1.2	New Valuation	3
1.3	Appointed Actuary and Hybrid Actuarial Services Model.....	5
1.4	Consideration of Recent Legal Decisions and Changes in Legislation / Regulation	5
1.5	Current Provision Summary	5
2	Activity During the Month of August 2020	6
2.1	Recorded Premium and Claims Activity	6
2.1.a	Actual vs. Projected (AvsP): Earned Premium.....	7
2.1.b	AvsP: Recorded Indemnity & Allowed Claims Expense	8
2.1.c	AvsP: Paid Indemnity & Allowed Claims Expense	10
2.2	Actuarial Provisions.....	12
3	Ultimate Loss Ratio Matching Method.....	14
4	Calendar Year-to-Date Results.....	14
5	Current Operational Report – Additional Exhibits	15
6	EXHIBITS	15

1 Summary

Key Points

- (a) The 2020 Q2 valuation was completed and implemented into the results this month, with a \$4.6 million unfavourable impact, or 1.6% of beginning policy liabilities (policy liabilities ended at \$285 million) and 5.5 points of year-to-date earned premium; the updated valuation loss ratios include a further assessment of the incurred impacts associated with the COVID-19 pandemic; and
- (b) August's premium projections have been updated to reflect the most recent information provided by certain members. Updated claims assumptions are derived from the 2020 Q2 valuation.

1.1 Valuation Schedule (Fiscal Year 2020)

The August 2020 Operational Report incorporates the results of an updated valuation (as at June 30, 2020) – 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 2020.

ALBERTA NON-GRID RISK SHARING POOL FISCAL YEAR 2020 – SCHEDULE OF VALUATIONS			
Valuation Date	Discount Rate (per annum)	Operational Report	Description of Changes
Sep 30, 2019 (completed)	1.46% mfad 25 bp	Oct. 2019	updated valuation (roll forward) : accident year 2019 loss ratio <u>d</u> ecreased 2.6 points to 102.2%; discount rate <u>i</u> ncreased 3 basis points; no change to selected margins for adverse deviations
Dec. 31, 2019 (completed)	1.64% mfad 25 bp	Mar. 2020	update valuation: 2019 loss ratio <u>d</u> ecreased 1.3 points to 100.9%; accident year 2020 loss ratio <u>d</u> ecreased 7.0 points to 99.7%; discount rate <u>i</u> ncreased 18 basis points; no change to selected margins for adverse deviations
Mar. 31, 2020 (completed)	0.63% mfad 25 bp	May. 2020	update valuation (partial roll-forward): accident year 2020 loss ratio <u>d</u> ecreased 3.6 points to 96.1%; discount rate <u>d</u> ecreased 101 basis points; no change to selected margins for adverse deviations
Jun. 30, 2020 (completed)	0.26% mfad 25 bp	Aug. 2020	update valuation: accident year 2020 loss ratio <u>i</u> ncreased 3.7 points to 99.8%; discount rate <u>d</u> ecreased by 37 basis points; selected margins for adverse deviations were updated
Sep 30, 2020	% mfad -- bp	Oct. 2020	update valuation (roll-forward)

Under the proposed schedule for fiscal year 2020, the off-half valuation quarters ending March 31, 2020 and September 30, 2020 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 June 30, 2020 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 (2020), and “Prem Def” refers to premium deficiency / deferred acquisition costs impacts.

Summary of Impact (\$000s) of Implementing Result of Valuation as at Jun. 30, 2020¹

AB Non-Grid	unfav / (fav) for the month and ytd					
	IMPACT in \$000s from changes in:					
	ults & payout patterns			dsct rate	margins	
	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL
	[1]	[2]	[3]	[4]	[5]	[6]
PAYs	(1,750)	(240)	(1,990)	1,725	(655)	(920)
CAY	3,142	200	3,342	495	-	3,837
Prem Def	1,004	144	1,148	549	-	1,697
TOTAL	2,396	104	2,500	2,769	(655)	4,614

As indicated in the preceding table, the incorporation of the new valuation had an estimated **\$4.6 million unfavourable impact** on the month’s net result from operations, adding an estimated 5.5 points (see following table) to the **year-to-date Combined Operating Ratio** to end at **130.4%**.

Summary of Impact (% YTD EP) of Implementing Result of Valuation as at Jun. 30, 2020

AB Non-Grid	ytd EP 83,295 (actual)					
	IMPACT unfav / (fav) as % ytd EP from changes in:					
	ults & payout patterns			dsct rate	margins	
	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL
	[1]	[2]	[3]	[4]	[5]	[6]
PAYs	(2.1%)	(0.3%)	(2.4%)	2.1%	(0.8%)	(1.1%)
CAY	3.8%	0.2%	4.0%	0.6%	-	4.6%
Prem Def	1.2%	0.2%	1.4%	0.7%	-	2.0%
TOTAL	2.9%	0.1%	3.0%	3.3%	(0.8%)	5.5%

¹In 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 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 \$2.4 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 **\$1.8 million favourable** nominal variance or 1.2% of the PAYs nominal unpaid balance of \$156.2 million determined at the end of last month (July 2020), driven by favourable claims development and updates to a priori loss ratios to include more recent data and updated trends. While the valuation implementation impact does differ from the valuation changes themselves (as they apply to different periods), the valuation result by government line provides insight into the relative PAYs nominal changes. As per the following table, the primary changes were in relation to TPL and Other Coverages for accident year 2019.

Valuation as at Jun. 30, 2020 – PAYs Nominal Changes 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
2015 & Prior	1,033	(2)	(75)	956
2016	390	-	75	465
2017	(123)	5	(38)	(156)
2018	2,082	10	175	2,267
2019	(3,681)	125	(2,614)	(6,170)
TOTAL	(299)	138	(2,477)	(2,638)

The CAY and premium deficiency impacts are a result of the change in the selected loss ratios for accident year **2020** (increased 3.7 points to 99.8%) and accident year **2021** (decreased 1.1 points to 98.9 %).

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 \$0.1 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 June 2020. Column [4] accounts for the change in the **discount rate** selected (decreased 37 basis points to **0.26%**),

indicating an unfavourable impact of \$2.8 million. The impact *related only to claims liabilities* (i.e. PAYs plus CAY) was \$2.2 million at August 2020 – this compares to the \$1.8 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**, but the selected **claims development MfADs** at the coverage and accident year level were **updated** as per usual practice with the June 30 valuation, resulting in a favourable impact of \$0.7 million, as margins on older PAYs were aged.

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

Mr. Cosimo Pantaleo of Ernst & Young LLP (EY) was appointed as Actuary by the FA Board at its February 18, 2020 meeting.

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 / Regulation²

There have been no changes in these descriptions since last month's Highlights, other than the updated reference 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 June 30, 2020), 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 December 31, 2019).

1.5 Current Provision Summary

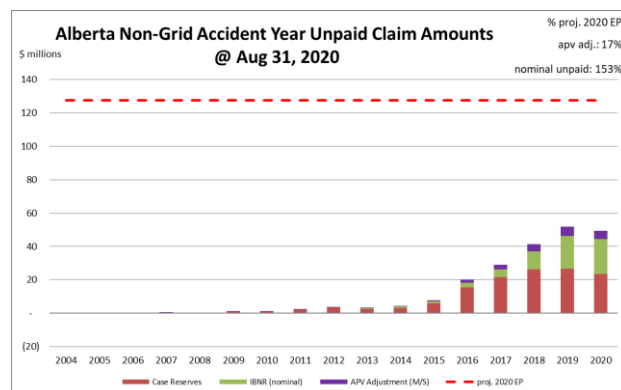
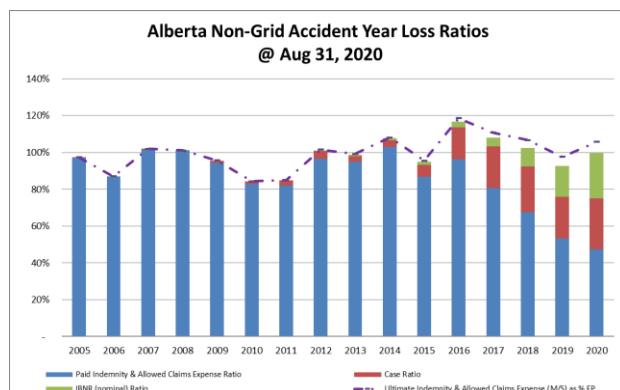
The following charts show the current levels of claim liabilities³ booked by accident year⁴. The left chart displays life-to-date payments, case reserves, IBNR, and the total including actuarial present value adjustments against accident year earned premium. The right chart shows the associated dollar

²This url to a pdf is to a helpful guide on how bills become laws: <https://www.ola.org/sites/default/files/common/how-bills-become-law-en.pdf>.

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

⁴Accident year 2004 was an incomplete year and therefore has been excluded from the loss ratio chart.

amounts for the components of the claim liabilities and the current projected amount of 2020 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 (\$22.0 million – see the following table) represents 17% of the earned premium projected for the full year 2020 (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	133,118	61.5%
ibnr	61,399	28.4%
M/S apv adjust.	21,990	10.2%
M/S total	216,507	100.0%

The table to the left breaks down the Member Statement (M/S) claim liabilities total into component parts, showing that the majority of the claim liabilities for this RSP is in case reserves. Approximately 66% of the IBNR balance relates to accident years 2019 and 2020 (see Exhibit B). Approximately 89% of the M/S total claim

liabilities are related to accident years 2016-2020 inclusive (i.e. the most recent 5 accident years), and approximately 1% is related to accident years 2010 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	62,963	91.6%
prem def/(dpac)	(65)	(0.1%)
M/S apv adjust.	5,854	8.5%
M/S total	68,752	100.0%

policy liabilities (\$000s)

	amt	%
claim	194,517	68.2%
premium	62,898	22.0%
M/S apv adjust.	27,844	9.8%
M/S total	285,259	100.0%

2 Activity During the Month of August 2020

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 Report⁵.

⁵There may be rounding differences in values in this document compared with the associated Bulletin and/or Operational Report.

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

Accident Year	Earned Premium		Paid Indemnity & Allowed Claims Expense		Case increase / (decrease)		Recorded increase / (decrease)	
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	(0)	(0)	2,123	991	(2,193)	(1,418)	(70)	(427)
2018	(20)	(20)	1,715	1,246	(1,537)	(1,479)	179	(232)
2019	(41)	(41)	474	(256)	(323)	128	151	(128)
2020	10,482	(488)	7,521	1,846	223	(3,828)	7,744	(1,982)
TOTAL	10,421	(550)	11,833	3,827	(3,829)	(6,596)	8,004	(2,769)

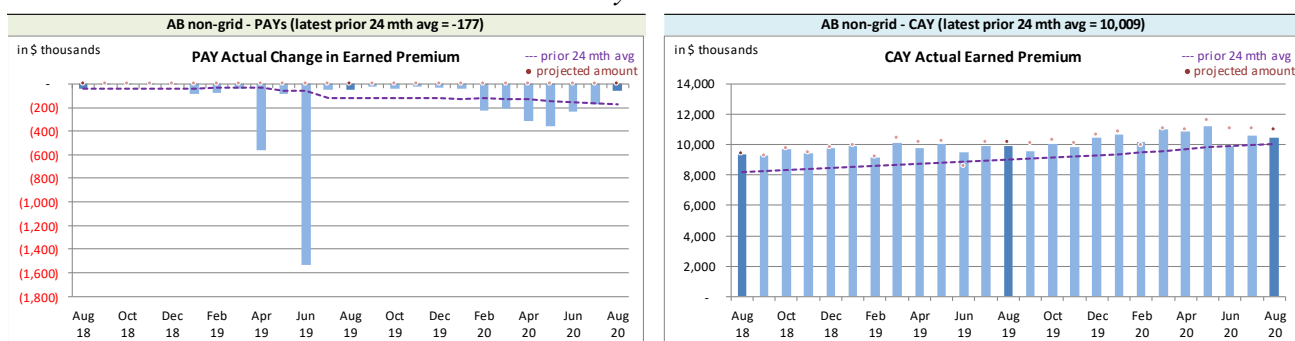
(Recorded transaction amounts exclude IBNR & other actuarial provisions)

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. 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**⁶ activity in each of the most recent 25 calendar months, along with a “prior 24-month average” to show how each month’s actual compares with the average amount of the preceding 24 calendar months.

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



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.

On Latest \$ thousands		
	Earned Premium	PAYS CAY
Mthly Avg EP Chg (prior 24 mths)	(177)	10,009
std dev	320	551
A-P <> std dev	6	2
% <> std dev	24.0%	8.0%
norm <> std dev	31.7%	31.7%
performance vs 24-mth avg:	better	better

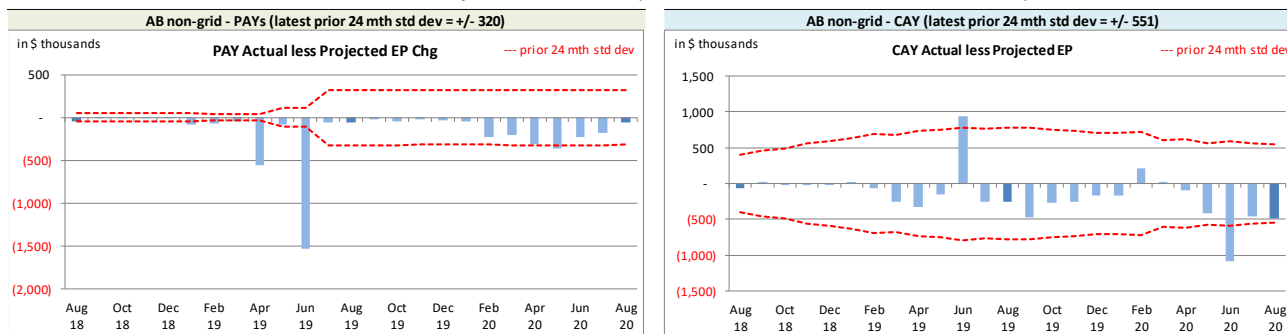
The associated variance between the actual changes and the projections from the previous month are shown in the following charts. **Earned premium** change projections are all attributed to the current accident year as the projection upload does not accept **earned premium** changes for other accident 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

⁶Premium 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.

accident years.

*Alberta non-Grid RSP Actual vs. Projected Summary: **Earned Premium** Variances by Calendar Month*

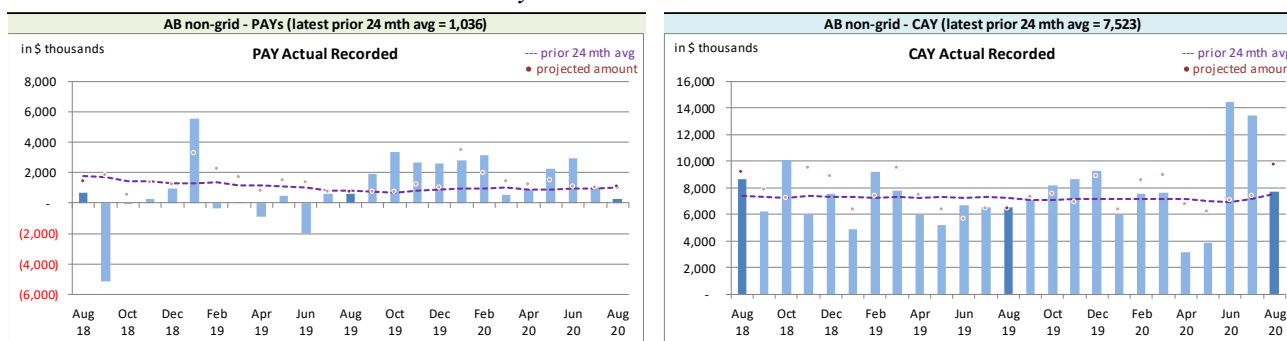


We project **earned premium** changes from known unearned premium and projected written premium levels, but upload the total projections as current accident year (CAY). This process has generated prior accident years' (PAYs) bias⁷, with actuals generally lower than projected, although the magnitude is not high relative to monthly premium. In addition to the PAYs' bias, the CAY has also shown bias⁸, with actuals being generally lower than projected, and while we modified our projections processes in response, bias still exists. Over time, we may consider other projection approaches to address the bias issue, but it is not currently deemed as priority.

2.1.b AvsP: Recorded Indemnity & Allowed Claims Expense

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

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

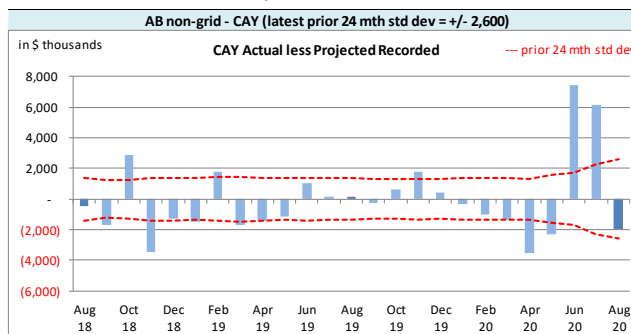
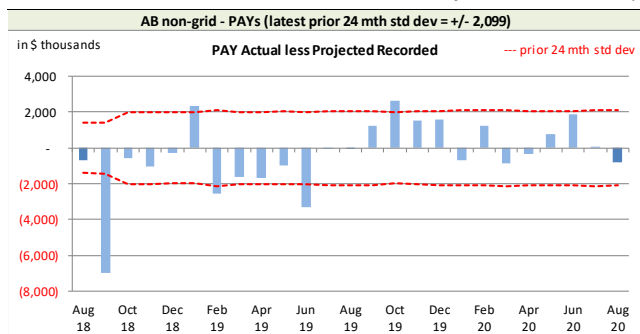


Recorded activity variances from the previous month’s projections are shown in the following charts, including the “prior 24-month standard deviation” levels to show how the variances from projection compare with historical standard deviations.

⁷The PAYs’ variances will show bias as the projection upload forces all earned premium projections to be attributed to the CAY.

⁸We 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 August 2020 had only 5 months where the actuals was higher than projected, and as the 95% confidence range is 8 to 17, bias continues to be indicated.

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



On Latest \$ thousands			
	Recorded	PAYs	CAY
Mthly Avg Recorded (prior 24 mths)		1,036	7,523
std dev		2,099	2,600
A-P <> std dev		5	13
% <> std dev		20.0%	52.0%
norm <> std dev		31.7%	31.7%
performance vs 24-mth avg:		better	worse

With respect to **recorded** indemnity & allowed claims expense activity, 20% of the prior accident years' (PAYs) variances over the last 25 calendar months have fallen outside of one standard deviation of the actual **recorded** amounts (see table on left), suggesting the projection process has performed better than simply projecting the prior 24-month average amount (assuming it follows a

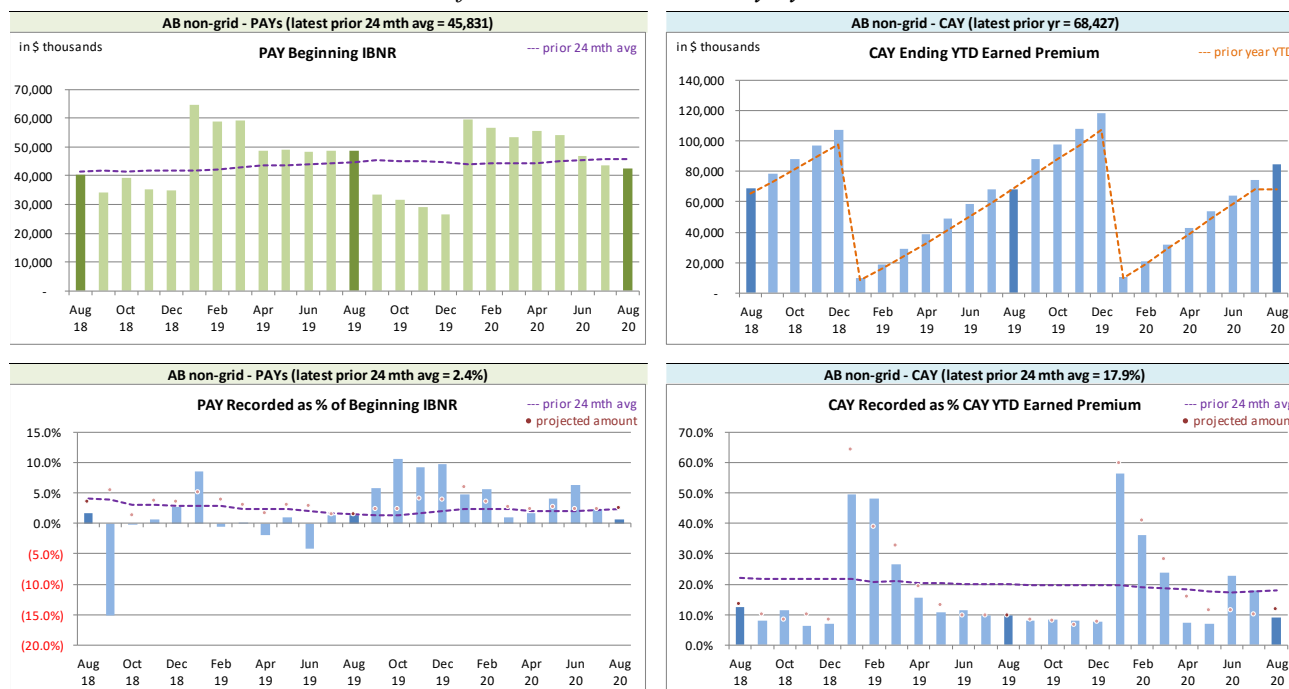
normal distribution). Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (9 of 25 variances are positive).

The current accident year (CAY) **recorded** variances fell outside of one standard deviation 52% of the time over the last 25 calendar months (see the preceding table on the left), suggesting that the projection process has performed worse than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (10 of 25 variances are positive).

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

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

Alberta non-Grid RSP Levels that influence⁹ Recorded activity by Calendar Month



We track PAY beginning IBNR as **recorded** activity comes out of IBNR. Changes in the PAY beginning IBNR (see upper left of the preceding group of charts) occur for several possible reasons:

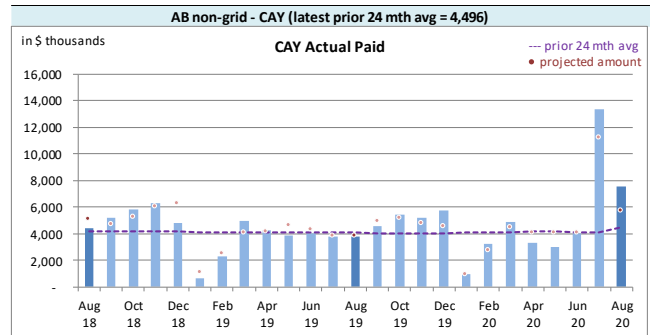
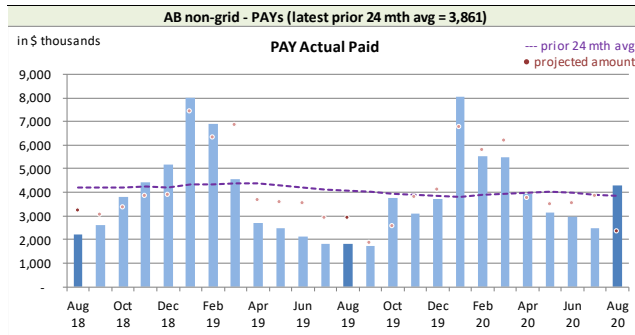
- to offset actual **recorded** activity (through loss ratio matching);
- the annual switchover as a CAY becomes a PAY (occurs in January); and
- when a new valuation is implemented, where the valuation resulted in changes to the selection of PAYs' ultimates (will show up as a beginning IBNR change one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

2.1.c AvsP: Paid Indemnity & Allowed Claims Expense

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

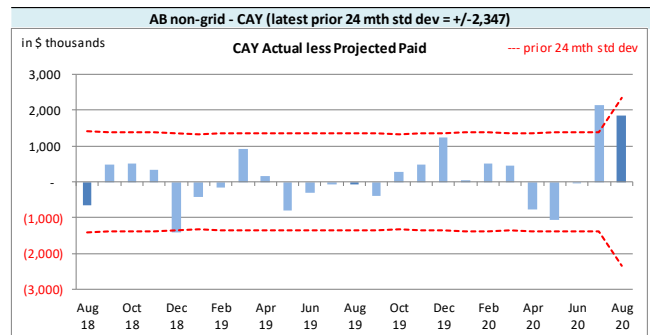
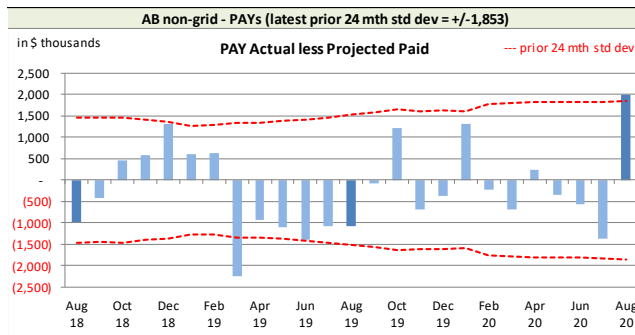
⁹Our recorded activity projections for the prior accident years are based on selected ratios of recorded activity to beginning unpaid balances, whereas the current accident year projections are based on selected ratios of year-to-date IBNR to year-to-date selected ultimate (i.e. selected LR x earned premium), deriving year-to-date recorded as selected ultimate less IBNR. In both cases, the ratio selection is based on our review of the more recent recorded activity and recent AvsP analyses.

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



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

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



On Latest \$ thousands			
	Paid	PAYs	CAY
Mthly Avg Paid (prior 24 mths)		3,861	4,496
std dev		1,853	2,347
A-P <> std dev		2	2
% <> std dev		8.0%	8.0%
norm <> std dev		31.7%	31.7%
performance vs 24-mth avg:		better	better

With respect to **paid** indemnity & allowed claims expense, 8% 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

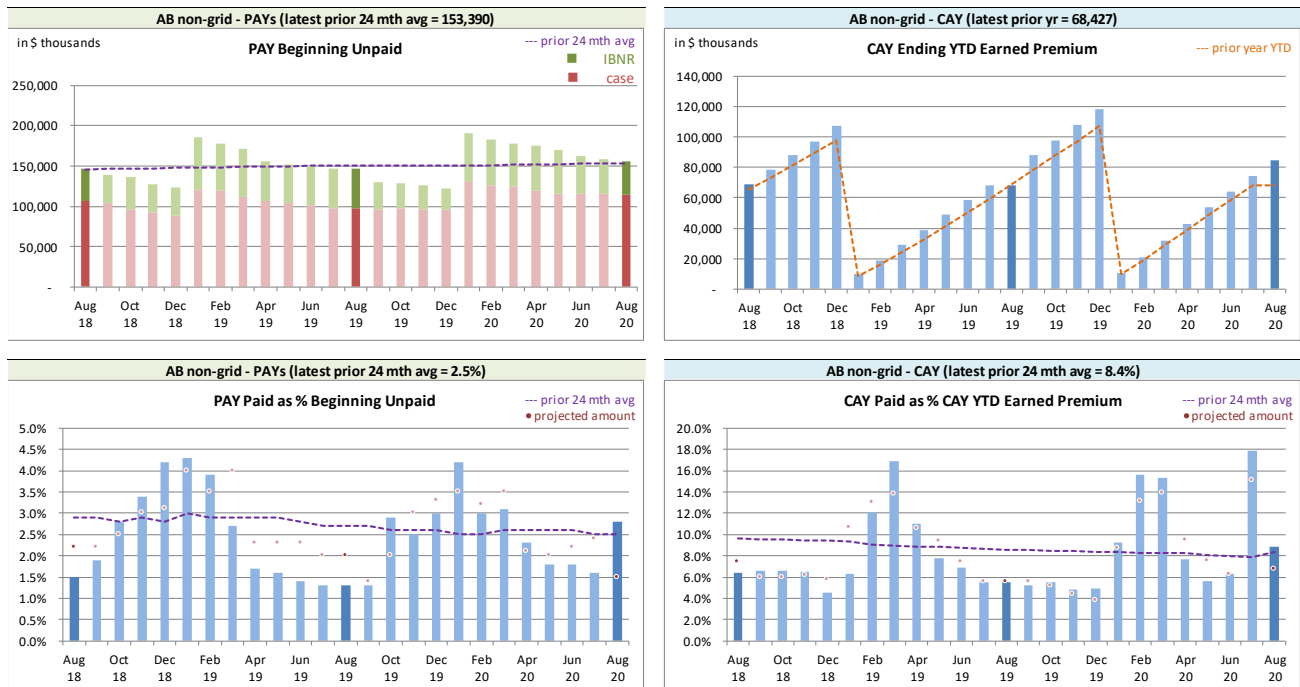
has not been indicated at a 95% confidence level on a lagging 24-month basis (9 of 25 variances are positive).

The PAY **paid** variance was outside of the one standard deviation band this month (see preceding chart on the left) the higher than projected paid activity was reviewed, and attributed to two large claim settlements, which have been confirmed.

The current accident year (CAY) **paid** variances fell outside of one standard deviation 8% of the time over the last 25 calendar months (see the preceding table), suggesting the projection process has performed better than simply projecting the prior 24-month average amount. Bias has not been indicated at a 95% confidence level on a rolling 25-month basis (13 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 influence¹⁰ 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 IBNR¹¹, and factors are applied to the nominal unpaid claims liability (case plus IBNR) to determine the discount amount (shown as a negative value to indicate its impact of reducing the liability) and the Provisions for Adverse Deviations. The loss ratios and the factors used to determine the projections and actuals were based on the applicable valuation.

The following table summarizes variances in provisions included in this month's Operational Report

¹⁰Our 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.

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

and the associated one-month projections from last month's Report.

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

Table 02

Accident Year	actuarial present value adjustments							
	IBNR		Discount Amount		Provisions for Adverse Deviations		IBNR + actuarial present value adjustments	
	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected	Actual	Actual less Projected
Prior	10,316	1,648	(457)	637	7,110	(555)	16,969	1,730
2018	10,547	2,743	(258)	312	4,839	241	15,128	3,296
2019	19,630	(5,416)	(323)	551	6,051	(578)	25,358	(5,443)
2020	20,906	4,655	(311)	430	5,339	22	25,934	5,107
TOTAL	61,399	3,630	(1,349)	1,930	23,339	(870)	83,389	4,690

The IBNR provision is \$3.6 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 valuation implementation.

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

- (i) the change projected last month;
- (ii) the additional change due to variances in earned premium (because we apply a loss ratio to earned premium in determining ultimate level) and/or recorded claims (as IBNR is calculated as ultimate less recorded) differences; and
- (iii) the additional change due to valuation implementation impacts (as applicable)

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

The 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 premium deficiency position (shown as a positive amount) prior to and after actuarial present value adjustments. Actuarial present value adjustments increase the liability 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 due to the valuation implementation.

Alberta Non-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:	(65)	1,041	5,854	421	5,789	1,462
balance as % unearned premium:	(0.1%)	1.6%	9.3%	1.1%	9.2%	2.7%
actual unearned premium:	62,963					
less projected:	(3,277)					

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 loss¹² 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 expenses¹³, including IBNR.

In calculating the amounts as percentages of earned premium, the calendar year-to-date earned premium has been used, which includes earned premium associated with the current accident year but also earned premium adjustments related to prior accident years. Specifically, the current accident year (CAY) ratio in the table is 101.7% rather than 99.8% (the valuation ultimate ratio for accident year 2020), as the calendar year-to-date earned premium includes prior accident year earned premium adjustments. (Note that the ratios in this table may differ slightly from those shown in the Alberta Non-Grid RSP Summary of Operations due to rounding.)

Alberta Non-Grid RSP Calendar Year-to-Date Indemnity & Allowed Claims Expense Summary
(\$ thousands)

Table 04	YTD Nominal Values		YTD actuarial present value adjustment		YTD Total		Change from Prior Month YTD	
	Amount	% EP	Amount	% EP	Amount	% EP	Amount	LR pts
PAYs	(5,246)	(6.3%)	1,655	2.0%	(3,591)	(4.3%)	(1,442)	(1.4%)
CAY	84,747	101.7%	5,028	6.0%	89,775	107.8%	14,179	4.1%
TOTAL	79,501	95.4%	6,683	8.0%	86,184	103.5%	12,737	2.7%

(“% EP” based on 2020 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 to the 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 valuation implementation.

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).

¹³Allowed 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.

5 Current Operational Report – Additional Exhibits

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

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

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

The ultimate loss ratios detailed in section 6, Exhibit B, refer to the estimates derived on the basis of various actuarial methodologies applied to the experience of the Alberta Non-Grid Risk Sharing Pool for the purposes of the most recent quarterly valuation. As discussed in section 3, IBNR reflected in the current month's Operational Report was derived as the difference between the estimated ultimate for the claims amount (i.e. earned premium x ultimate loss ratio) and the associated current recorded amounts (life-to-date payments plus current case reserves).

6 EXHIBITS

The exhibits listed below are provided on the pages that follow:

- EXHIBIT A IBNR for Member Sharing – includes Actuarial Present Value Adjustments
- EXHIBIT B IBNR
- EXHIBIT C Premium Liabilities
- EXHIBIT D Projected Year-end Policy Liabilities
- EXHIBIT E Discount Rate & Margins for Adverse Deviations
- EXHIBIT F Interest Rate Sensitivity
- EXHIBIT G Components of IBNR Change During Month

EXHIBIT A

IBNR for Member Sharing – includes Actuarial Present Value Adjustments

TABLE EXHIBIT A

Amounts in \$000s						
IBNR + M/S actuarial present value adjustments	Accident Year	Actual Jul. 2020	Actual Aug. 2020	Projected Sep. 2020	Projected Oct. 2020	Projected Dec. 2020
	2004	42	42	41	40	37
	2005	13	13	13	12	12
	2006	1	83	81	80	74
	2007	18	96	95	92	85
	2008	68	68	67	66	61
	2009	58	65	63	60	56
	2010	118	129	127	123	115
	2011	(328)	(8)	(8)	(12)	(9)
	2012	182	553	542	525	486
	2013	418	905	888	866	800
	2014	1,207	1,162	1,140	1,111	1,028
discount rate	2015	2,351	2,042	2,003	1,954	1,805
0.26%	2016	3,733	4,524	4,296	4,137	3,817
	2017	7,820	7,295	6,922	6,798	6,340
interest rate margin	2018	12,295	15,128	14,599	14,080	13,403
25 basis pts	2019	31,161	25,358	24,957	24,622	23,596
	2020	19,499	25,934	27,392	28,858	44,715
	TOTAL	78,656	83,389	83,218	83,412	96,421
	Change		4,733	(171)	194	

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 Jul. 2020	Actual Aug. 2020	Projected Sep. 2020	Projected Oct. 2020	Projected Dec. 2020
349.1%	2004	36	36	35	34	31
97.4%	2005	5	5	5	5	5
87.0%	2006	1	75	74	73	67
101.9%	2007	(10)	60	59	58	53
101.1%	2008	65	65	64	63	58
95.6%	2009	(21)	(21)	(21)	(21)	(19)
84.3%	2010	19	22	22	22	20
84.6%	2011	(550)	(211)	(207)	(203)	(187)
101.1%	2012	(111)	201	197	193	178
98.8%	2013	156	586	575	565	521
107.7%	2014	856	771	757	743	685
94.8%	2015	1,705	1,341	1,317	1,293	1,191
116.6%	2016	2,137	2,712	2,525	2,416	2,194
108.1%	2017	4,737	4,674	4,351	4,307	3,945
102.5%	2018	8,215	10,547	10,115	9,690	9,221
92.7%	2019	25,325	19,630	19,316	19,065	18,216
99.8%	2020	15,434	20,906	21,887	22,923	36,103
	TOTAL	57,999	61,399	61,071	61,226	72,282
	Change		3,400	(328)	155	

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

EXHIBIT C
Premium Liabilities
TABLE EXHIBIT C

	Amounts in \$000s				
Premium Liabilities	Actual Jul. 2020	Actual Aug. 2020	Projected Sep. 2020	Projected Oct. 2020	Projected Dec. 2020
(1) unearned premium (UP)	64,756	62,963	64,356	66,684	82,113
FOR MEMBER SHARING					
(2) expected future costs ratio {% of (1)}	106.1%	109.2%	109.1%	108.9%	108.6%
(3) expected future costs {(1) x (2)}	68,679	68,752	70,188	72,635	89,199
(4) premium deficiency / (deferred policy acquisition cost)	3,923	5,789	5,832	5,951	7,086
Excluding Actuarial Present Value Adjustments					
(5) expected future costs ratio {% of (1)}	97.9%	99.9%	99.8%	99.6%	99.4%
(6) expected future costs {(1) x (5)}	63,395	62,898	64,211	66,450	81,603
(7) premium deficiency / (deferred policy acquisition cost)	(1,361)	(65)	(145)	(234)	(510)

EXHIBIT D

Projected Year-end Policy Liabilities

The table below presents the projected policy liabilities as at December 31, 2020, broken down by component.

Alberta non-Grid ending 2020		Projected Balances as at Dec. 31, 2020 (\$000s)								
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
2004	24	31	55	-	-	6	-	6	6	61
2005	65	5	70	-	-	7	-	7	7	77
2006	(1)	67	66	-	-	7	-	7	7	73
2007	265	53	318	(1)	1	32	-	32	32	350
2008	(32)	58	26	-	-	3	-	3	3	29
2009	769	(19)	750	(4)	4	75	-	75	75	825
2010	927	20	947	(5)	5	95	-	95	95	1,042
2011	1,973	(187)	1,786	(11)	11	179	(1)	178	178	1,964
2012	2,922	178	3,100	(16)	16	310	(2)	308	308	3,408
2013	2,290	521	2,811	(17)	17	281	(2)	279	279	3,090
2014	2,762	685	3,447	(24)	24	345	(2)	343	343	3,790
2015	5,061	1,191	6,252	(50)	50	619	(5)	614	614	6,866
2016	14,143	2,194	16,337	(114)	114	1,634	(11)	1,623	1,623	17,960
2017	20,173	3,945	24,118	(169)	169	2,412	(17)	2,395	2,395	26,513
2018	24,471	9,221	33,692	(236)	236	4,211	(29)	4,182	4,182	37,874
2019	25,130	18,216	43,346	(303)	303	5,418	(38)	5,380	5,380	48,726
PAYs (sub-total):	100,942	36,179	137,121	(950)	950	15,634	(107)	15,527	15,527	152,648
CAY (2020)	39,972	36,103	76,075	(533)	533	8,673	(61)	8,612	8,612	84,687
claims liabilities:	140,914	72,282	213,196	(1,483)	1,483	24,307	(168)	24,139	24,139	237,335
	Unearned Premium	Premium Deficiency / (DPAC)	Total Provision	discount	investment PfAD	nominal development PfAD	development PfAD discount	development PfAD	Total apvs	TOTAL*
premium liabilities:	82,113	(510)	81,603	(406)	406	7,634	(38)	7,596	7,596	89,199
*Total may not be sum of parts, as apvs apply to future costs within UPR										
policy liabilities:			294,799	(1,889)	1,889	31,941	(206)	31,735	31,735	326,533

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, 2020 from the valuation), followed by the selected discount rate and the associated margin for investment income.

**Selected Claims Development MfADs (Jun. 30,
 2020)**

Accident Year	Third Party Liability Margins	Accident Benefits Margins	Other Coverages Margins	Total 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%	5.0%	10.0%
2014	10.0%	10.0%	9.3%	10.0%
2015	10.0%	10.0%	10.0%	9.9%
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%	6.0%	12.5%
2020	12.2%	10.0%	6.5%	11.4%
2021	11.8%	10.0%	5.1%	9.4%
prem liab	11.8%	10.0%	5.1%	9.4%

discount rate: 0.26%
 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, 2020 from the latest valuation date (projections in exhibits A to D are to Dec. 31, 2020, and are based on more up-to-date information). We have included the most recent valuation selection (0.26%), the prior valuation assumption (0.63%) and the prior fiscal year end valuation assumption (1.46%) for comparative purposes. A 25 basis point margin for investment return adverse deviation is used in all scenarios presented.

\$ Format: \$000s

AY	Actuarial Present Value of Provisions at Various Discount Rates - Dec. 31, 2020 projected Unpaid							
	0.00%	0.00%	0.26%	0.76%	1.26%	1.76%	0.63%	1.46%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	1	1	1	1	1	1	1	1
2007	277	277	277	275	274	272	276	273
2008	-	-	-	-	-	-	-	-
2009	687	687	687	681	675	669	682	672
2010	1,062	1,062	1,061	1,051	1,042	1,033	1,054	1,038
2011	2,410	2,410	2,409	2,383	2,357	2,333	2,389	2,348
2012	3,293	3,293	3,291	3,257	3,224	3,192	3,266	3,211
2013	3,162	3,162	3,159	3,124	3,089	3,056	3,133	3,076
2014	4,236	4,236	4,232	4,172	4,114	4,058	4,187	4,091
2015	6,655	6,655	6,648	6,542	6,439	6,340	6,569	6,399
2016	16,616	16,616	16,602	16,373	16,151	15,937	16,432	16,065
2017	23,904	23,904	23,884	23,578	23,276	22,989	23,655	23,161
2018	37,889	37,889	37,852	37,375	36,909	36,461	37,496	36,729
2019	48,714	48,714	48,666	47,990	47,335	46,705	48,163	47,083
2020	82,955	82,955	82,879	81,770	80,689	79,658	82,049	80,273
Total	231,861	231,861	231,648	228,572	225,575	222,704	229,352	224,420
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

AY	Dollar Impact Relative to Valuation Assumption							
	0.00%	0.00%	0.26%	0.76%	1.26%	1.76%	0.63%	1.46%
Total	213	213	-	(3,076)	(6,073)	(8,944)	(2,296)	(7,228)
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

AY	Percentage Impact Relative to Valuation Assumption							
	0.00%	0.00%	0.26%	0.76%	1.26%	1.76%	0.63%	1.46%
2004	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-
2007	-	-	-	(0.7%)	(1.1%)	(1.8%)	(0.4%)	(1.4%)
2008	-	-	-	-	-	-	-	-
2009	-	-	-	(0.9%)	(1.7%)	(2.6%)	(0.7%)	(2.2%)
2010	0.1%	0.1%	-	(0.9%)	(1.8%)	(2.6%)	(0.7%)	(2.2%)
2011	0.0%	0.0%	-	(1.1%)	(2.2%)	(3.2%)	(0.8%)	(2.5%)
2012	0.1%	0.1%	-	(1.0%)	(2.0%)	(3.0%)	(0.8%)	(2.4%)
2013	0.1%	0.1%	-	(1.1%)	(2.2%)	(3.3%)	(0.8%)	(2.6%)
2014	0.1%	0.1%	-	(1.4%)	(2.8%)	(4.1%)	(1.1%)	(3.3%)
2015	0.1%	0.1%	-	(1.6%)	(3.1%)	(4.6%)	(1.2%)	(3.7%)
2016	0.1%	0.1%	-	(1.4%)	(2.7%)	(4.0%)	(1.0%)	(3.2%)
2017	0.1%	0.1%	-	(1.3%)	(2.5%)	(3.7%)	(1.0%)	(3.0%)
2018	0.1%	0.1%	-	(1.3%)	(2.5%)	(3.7%)	(0.9%)	(3.0%)
2019	0.1%	0.1%	-	(1.4%)	(2.7%)	(4.0%)	(1.0%)	(3.3%)
2020	0.1%	0.1%	-	(1.3%)	(2.6%)	(3.9%)	(1.0%)	(3.1%)
Total	0.1%	0.1%	-	(1.3%)	(2.6%)	(3.9%)	(1.0%)	(3.1%)
	curr - 100 bp	curr - 50 bp	curr val assumption	curr + 50bp	curr + 100bp	curr + 150bp	prior val assumption	prior fyr end assumption

EXHIBIT G

Page 1 of 2

Components of Member Statement IBNR (i.e. “Discounted”) Change During Month

RSP
AccountCode Desc

Alberta Non-Grid
IBNR - Discounted

M/S IBNR - in \$000s

AccYear	Values				Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation			
2004	42	-	-	-	-	-	42
2005	13	-	-	-	-	-	13
2006	1	-	-	82	82	8,200.0%	83
2007	18	-	-	78	78	433.3%	96
2008	68	(1)	1	-	-	-	68
2009	58	(2)	2	7	7	12.1%	65
2010	118	(2)	5	8	11	9.3%	129
2011	(328)	-	(298)	618	320	(97.6%)	(8)
2012	182	(4)	6	369	371	203.8%	553
2013	418	(8)	25	470	487	116.5%	905
2014	1,207	(17)	16	(44)	(45)	(3.7%)	1,162
2015	2,351	(33)	20	(296)	(309)	(13.1%)	2,042
2016	3,733	(166)	268	689	791	21.2%	4,524
2017	7,820	(229)	279	(575)	(525)	(6.7%)	7,295
2018	12,295	(463)	67	3,229	2,833	23.0%	15,128
2019	31,161	(360)	112	(5,555)	(5,803)	(18.6%)	25,358
2020	19,499	1,328	1,270	3,837	6,435	33.0%	25,934
Grand Total	78,656	43	1,773	2,917	4,733	6.0%	83,389

EXHIBIT G

Page 2 of 2

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

RSP
AccountCode Desc

Alberta Non-Grid
IBNR - Undiscounted

IBNR - in \$000s

AccYear	Values				Sum of Total Change	Sum of % Total Change	Sum of Current Month Final Amount
	Sum of Prior Month Actual Amount	Sum of Projected Change	Sum of Change Due to AvsP Variances	Sum of Change Due to Valuation Implementation			
2004	36	-	-	-	-	-	36
2005	5	-	-	-	-	-	5
2006	1	-	-	74	74	7,400.0%	75
2007	(10)	-	-	70	70	(700.0%)	60
2008	65	(1)	1	-	-	-	65
2009	(21)	-	-	-	-	-	(21)
2010	19	-	3	-	3	15.8%	22
2011	(550)	6	(217)	550	339	(61.6%)	(211)
2012	(111)	1	2	309	312	(281.1%)	201
2013	156	(2)	26	406	430	275.6%	586
2014	856	(9)	8	(84)	(85)	(9.9%)	771
2015	1,705	(17)	12	(359)	(364)	(21.3%)	1,341
2016	2,137	(141)	267	449	575	26.9%	2,712
2017	4,737	(194)	323	(192)	(63)	(1.3%)	4,674
2018	8,215	(411)	212	2,531	2,332	28.4%	10,547
2019	25,325	(279)	88	(5,504)	(5,695)	(22.5%)	19,630
2020	15,434	817	1,513	3,142	5,472	35.5%	20,906
Grand Total	57,999	(230)	2,238	1,392	3,400	5.9%	61,399