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TO:	MEMBERS OF THE FACILITY ASSOCIATION
ATTENTION:	CHIEF EXECUTIVE OFFICER Nova Scotia Risk Sharing Pool Project Manager
BULLETIN NO.:	F18 - 089
DATE:	NOVEMBER 29, 2018
SUBJECT:	NOVA SCOTIA RISK SHARING POOL – October 2018 Operational Report

# A copy of this bulletin should be provided to your Chief Financial Officer and Appointed Actuary.

Please be advised that the October 2018 Nova Scotia Risk Sharing Pool Operational Report is now available on the Facility Association (FA) Portal at https://portal.facilityassociation.com.

### **New This Month**

### Valuation

A valuation of the Nova Scotia Risk Sharing Pool ("RSP") as at September 30, 2018 has been completed since last month's Operational Report and the results of that valuation have been incorporated into this month's Operational Report. The valuation was completed by the Facility Association's internal staff in conjunction with, and reviewed and approved by, the Appointed Actuary.

The implementation of the new valuation resulted in an estimated overall **\$0.4 million** unfavourable impact on the month's net result from operations, adding an estimated 1.6 points to the year-to-date Combined Operating Ratio (ending at 131.4%). The impact is summarized in the tables immediately below<sup>1</sup>.

NS		unfav /	/ <mark>(fav)</mark> for t	he month a	nd ytd		ytd EP	22,827	(actual)			
		IMPAG	CT in \$000s	from chang	ges in:	IMPACT unfav / (fav) as % ytd EP from changes in:						
	ults & payout patterns dsct rate margins						ults &	payout pat	terns	dsct rate	margins	
	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL
	[1]	[2]	[3]	[4]	[5]	[6]	[1]	[2]	[3]	[4]	[5]	[6]
PAYs	1,061	131	1,192	(289)	-	903	4.6%	0.6%	5.2%	(1.3%)	-	4.0%
CAY	(160)	2	(158)	(191)	-	(349)	(0.7%)	-	(0.7%)	(0.8%)	-	(1.5%)
Prem Def	(32)	4	(28)	(155)	-	(183)	(0.1%)	-	(0.1%)	(0.7%)	-	(0.8%)
TOTAL	869	137	1,006	(635)	-	371	3.8%	0.6%	4.4%	(2.8%)	-	1.6%

Please see "Effect of Quarterly Valuation" on page 4 for additional valuation result detail.

<sup>&</sup>lt;sup>1</sup>In the tables, "ults & payout patterns" refers to the impacts associated with changes in selected ultimates and updated cashflows of claims payments; "dsct rate" refers to the impact of changes in the selected discount rate applied to projected cashflows; and "apv adj." refers to "actuarial present value adjustments".

## **Summary of Financial Results**

The calendar year-to-date Operating Result is -\$7.2 million and the incurred loss ratio to the end of 10 months is 94.9%, as summarized in the table below.

Amounts in \$000s	October 2018	October 2017	Year to date Oct 2018	Year to Date Oct 2017
Premium Written	2,834	2,509	24,884	21,403
Premium Earned	2,427	1,902	22,827	14,762
Incurred Losses	2,863	3,010	21,668	10,757
Underwriting & Admin Expense	802	653	8,331	6,415
Operating Result	(1,238)	(1,761)	(7,172)	(2,410)
Ratios:				
Loss ratio - Prior Accident Years	35.1%	61.9%	(1.7%)	(25.9%)
- Current Accident Year	82.8%	96.4%	96.6%	98.8%
Total	117.9%	158.3%	94.9%	72.9%
Underwriting & Admin Expense	33.0%	34.3%	36.5%	43.5%
Combined Operating Ratio	150.9%	192.6%	131.4%	116.4%

rounding differences may occur

These results are discussed in some detail in the "Current Month Results" section. For additional numeric details, please refer to Exhibit 1 "Summary of Operations for Calendar Year 2018" attached to this bulletin.

### Updated Projection to Year-end 2018

The projected calendar year Operating Result to December 2018 is -\$8.5 million and the estimated combined operating ratio to December 2018 is 130.7%, as summarized in the table at the top of the next page.

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NS RSP 2018 Yr-end Projection	Current	Prior Mth		Final 2018	
Amounts in \$000s	(Oct 2018)	(Sep 2018)	Change	Outlook*	
Premium Written	29,300	28,910	390	39,593	
Premium Earned	27,730	27,656	74	35,242	
Incurred Losses	26,220	25,662	558	33,944	
Underwriting & Admin Expense	10,035	10,087	(52)	13,954	
Net Result from Operations	(8,525)	(8,093)	(432)	(12,656)	
Ratios:					
Loss ratio - Prior Accident Years	(1.9%)	(5.1%)	3.2%	(1.6%)	
- Current Accident Year	96.4%	97.9%	(1.5%)	98.0%	
Total	94.5%	92.8%	1.7%	96.4%	
Underwriting & Admin Expense	36.2%	36.5%	(0.3%)	39.6%	
Combined Operating Ratio	130.7%	129.3%	1.4%	136.0%	

rounding differences may occur

\*as posted to FA's website Oct. 3, 2017

This updated projection to the end of the year has deteriorated by \$0.4 million from the projection provided last month (-\$8.1 million and 129.3%), mainly due to the \$0.4 million overall <u>un</u>favourable impact of the valuation implementation as summarized in the tables immediately below (see also the "Effect of Quarterly Valuation" on page 4). Remaining differences were driven by changes in projected premium volumes, and the associated impacts on claims and expense projections.

NS		unfav,	/ <mark>(fav)</mark> proje	ected for fu	ll year	year EP 13,422 (projected this month)						
		IMPA	CT in \$000s	from chang	es in:	IMPACT unfav / (fav) as % full year EP from changes in:						
	ults &	payout pat	terns	dsct rate	margins	ults &	payout pat	tterns	dsct rate	margins		
	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL
	[1]	[2]	[3]	[4]	[5]	[6]	[1]	[2]	[3]	[4]	[5]	[6]
PAYs	1,061	125	1,186	(266)	-	920	7.9%	0.9%	8.8%	(2.0%)	-	6.9%
CAY	(195)	-	(195)	(224)	-	(419)	(1.5%)	-	(1.5%)	(1.7%)	-	(3.1%)
Prem Def	-	6	6	(151)	-	(145)	-	-	-	(1.1%)	-	(1.1%)
TOTAL	866	131	997	(641)	-	356	6.5%	1.0%	7.4%	(4.8%)	-	2.7%

# Current Month Results

The Nova Scotia Risk Sharing Pool produced a -\$1.2 million Operating Result in the month of October 2018, a \$0.5 million improvement from the same month last year. This improvement is composed of a \$1.0 million favourable impact stemming from the overall decrease in the combined ratio (from 192.6% to 150.9% applied to \$2.4 million in earned premium), offset by a \$0.5 million <u>un</u>favourable impact associated with the \$0.5 million increase in earned premium (at a combined ratio of 192.6%). The primary driver of the difference in combined ratios is the difference in the respective valuation implementation impacts.

This month's results moved the year-to-date combined operating ratio from 129.0% at the end of 9 months to 131.4% at the end of 10 months. The 2.4 percentage point increase is composed of a 4.4 percentage point increase in the Prior Accident Years loss ratio, offset by a 1.6 percentage point decrease in the Current Accident Year loss ratio, further offset by a 0.4 percentage point decrease in the expense ratio.

### Variances from Projections

The table below provides a summary of key components of the operating results as compared to the estimates projected last month.

October 2018	Actual	Projection	Difference	Difference %
Written Premium	2,834	2,606	228	8.7%
Earned Premium	2,427	2,437	(10)	(0.4%)
Reported Losses				
Paid Losses	1,573	1,533	40	2.6%
Paid Expenses	79	80	(1)	(1.3%)
Change in Outstanding Losses	408	74	334	451.4%
Total Reported Losses	2,060	1,687	373	22.1%
Change in IBNR Provision *	803	631	172	
Change in Premium Deficiency (DPAC) *	(110)	81	(191)	
(Amounts in \$000's)			rounding	differences may occur

\*Detailed information is included at Nova Scotia RSP October 2018 Operational Report - Actuarial Highlights.

Each month, management reviews the variance between reported premium activity and claims activity (actual reported claims payments and changes in case reserves) and the associated actuarial projections. The projection process involves many assumptions including claims Actual reporting patterns vary from month-to-month, sometimes reporting patterns. considerably. Although variances from our projections are expected, management investigates variances beyond set thresholds and responds as appropriate.

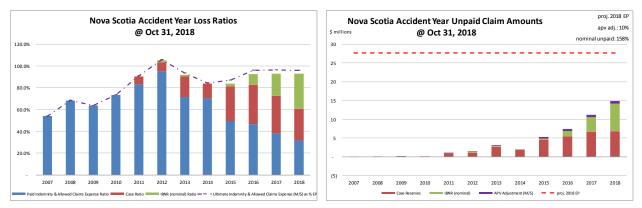
For the month of October 2018, reported losses were \$0.4 million higher than projected. The Current Accident Year had a \$0.4 million unfavourable variance in reported losses, while the Prior Accident Years had a \$17 thousand favourable variance. No single Prior Accident Year had a reported loss variance in excess of \$1.0 million.

### **Effect of Quarterly Valuation**

The October 2018 Nova Scotia Risk Sharing Pool Operational Report reflects the results of an updated valuation as at September 30, 2018, with the associated impacts in relation to the results for October 2018 summarized in the tables below.

NS		unfav	/ <mark>(fav)</mark> for t	he month a	nd ytd	mth EP	2,427	(actual)				
		IMPA	CT in \$000s	from chang	es in:	IMPACT unfav / (fav) as % mth EP from changes in:						
	ults &	payout pat	tterns	dsct rate	margins	ults 8	a payout pa	tterns	dsct rate	margins		
	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL
	[1]	[2]	[3]	[4]	[5]	[6]	[1]	[2]	[3]	[4]	[5]	[6]
PAYs	1,061	131	1,192	(289)	-	903	43.7%	5.4%	49.1%	(11.9%)	-	37.2%
CAY	(160)	2	(158)	(191)	-	(349)	(6.6%)	0.1%	(6.5%)	(7.9%)	-	(14.4%)
Prem Def	(32)	4	(28)	(155)	-	(183)	(1.3%)	0.2%	(1.2%)	(6.4%)	-	(7.5%)
TOTAL	869	137	1,006	(635)	-	371	35.8%	5.6%	41.5%	(26.2%)	-	15.3%

The charts at the top of the next page summarize the current view of the historical loss ratios (indemnity and allowed claims adjustment expenses on a nominal basis) and the associated claims liabilities.



The valuation result is due to changes generated from updated nominal ultimate selections and projected cash flows (generating a \$1.0 million <u>un</u>favourable impact – see column [3] in the left table above), partially offset by the impact due to a 42 basis point <u>in</u>crease in the selected discount rate (from 1.86% to 2.28% generating a \$0.6 million favourable impact – see column [4] in the left table above). There was no change in the margin for adverse deviation in investment yield (remains at 25 basis points), and our usual practice is to only update margins for adverse deviation for claims development (selected at the coverage / accident year level) at the June 30 valuation, these were also left unchanged (hence \$0 in column [5] in the left table above).

Management has observed favourable *total* valuation impacts over the last 12 valuation implementations, with 5 valuation implementations being favourable over that 12-quarter period, as shown in column [5] of the table at the top of the next page (summarizing the same information as provided in the left table above as relates to the most recent 12 valuation implementations). It should be noted that the impacts in column [3] are largely outside of the control of FA (as being related to macroeconomic factors).

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as at: 2018 Q3		unfavourab	le / (favourable)	Valuation Impler	nentation Imp	act (\$000s)	\$000s		
Valuation	period	updated LRs &	APVs @ prior	updated dsct	updated	Total Impact	Booked Policy	Total Impact as	Nominal Impact
Varaation	implemented	exp	assumptions	rate	margins	·	Liabilities	% Book Liabs	as % Book Liabs
		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
						= sum([1] to [5])		= [5] / [6]	=[1]/[6]
2015 Q4	Mar 2016	(772)	(56)	48	-	(780)	39,517	(2.0%)	(2.0%)
2016 Q1	May 2016	294	94	33	-	421	41,963	1.0%	0.7%
2016 Q2	Aug 2016	(92)	(43)	67	(918)	(986)	43,376	(2.3%)	(0.2%)
2016 Q3	Oct 2016	836	88	62	-	986	45,643	2.2%	1.8%
2016 Q4	Mar 2017	(1,416)	(140)	(535)	-	(2,091)	43,088	(4.9%)	(3.3%)
2017 Q1	May 2017	103	10	92	-	205	45,635	0.4%	0.2%
2017 Q2	Aug 2017	(3,429)	(363)	(286)	(87)	(4,165)	47,893	(8.7%)	(7.2%)
2017 Q3	Oct 2017	1,696	89	(760)	-	1,025	52,341	2.0%	3.2%
2017 Q4	Mar 2018	(2,038)	26	-	-	(2,012)	52,371	(3.8%)	(3.9%)
2018 Q1	May 2018	1,505	96	(256)	-	1,345	56,182	2.4%	2.7%
2018 Q2	Aug 2018	68	(50)	95	(51)	62	59,463	0.1%	0.1%
2018 Q3	Oct 2018	869	137	(635)	-	371	62,791	0.6%	1.4%
12-qtrs	-	(2,376)	(112)	(2,075)	(1,056)	(5,619)			
% of total		42.3%	2.0%	36.9%	18.8%	100.0%			
Averages									
12-qtrs		(198)	(9)	(173)	(88)	(468)	49,189	(1.0%)	(0.4%)
2015 Q4 to 2017 Q3		(348)	(40)	(160)	(126)	(673)	44,932	(1.5%)	(0.8%)
2017 Q4 to 2018 Q3		101	52	(199)	(13)	(59)	57,702	(0.1%)	0.2%

The FA valuation approach is focused on providing (i) best estimates on a nominal basis (i.e. the longer term average of nominal changes in column [1] should be close-to-zero); (ii) the nominal changes of any one valuation in relation to policy liabilities<sup>2</sup>, should be "small" (less than 2.5%); and (iii) the valuation results should not indicate bias – that is, we generally anticipate approximately  $1/3^{rd}$  of nominal valuation impacts will be <u>unfavourable</u>, and  $2/3^{rds}$  will be favourable (due to the skewness of the development). On these 3 measures:

- (i) Best estimate measurement: This objective has <u>not</u> been met, as the 12quarter nominal change in column [1] is \$2.4 million favourable. That said, the average favourable impact over the 12 quarters at \$0.2 million (nominal only) represents 0.4% of ending policy liabilities, which we would view as not significant. We do note that the latest 6 valuations have been on average less variant in magnitude than the earlier 6 valuations.
- (ii) **Nominal size measurement**: **This objective has** <u>not</u> **been met**, as there were 5 individual valuations showing nominal changes in excess of 2.5% of ending policy liabilities per column [8] in the table above.
- (iii) **Bias evidence measurement**: **This objective has** <u>not</u> been met, as 7 of 12 valuations show <u>un</u>favourable changes (column [1] of the table above), higher than our expectation (4 of 12).

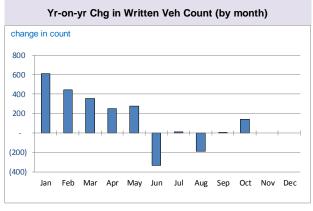
In summary, while challenging as a small RSP, we believe the nominal valuation impacts are moving toward our target impacts (long term zero impact; individual valuation impact of no

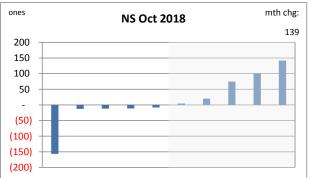
 $<sup>^{2}</sup>$ We also consider changes in nominal estimates relative to beginning claims liabilities, with this metric also ideally being small, but in this case, less than 5.0%. Over time, our view of "small" for each of these metrics may change.

more than 2.5% of policy liabilities; no bias evident).

The preceding charts, latest valuation results, and related actuarial present value assumption updates are discussed in more detail in the <u>Nova Scotia RSP October 2018 Operational Report</u> – <u>Actuarial Highlights</u>. The Actuarial Quarterly Valuation Highlights for Risk Sharing Pools as at September 30, 2018 is expected to be posted during December 2018. The actuarial valuation will be updated next as at December 31, 2018 and we anticipate the results will be reflected in the March 2019 Operational Report.

# Management Comments

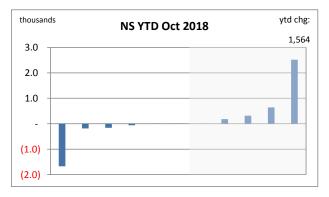




The chart on the left shows the year-on-year change in the vehicles transferred to the pool by month, with October showing an <u>in</u>crease of 139 vehicles. Our projection last month (in part based on previous projections provided by select member company groups) was for an <u>in</u>crease of 33 vehicles, indicating a variance of 106 from the actual transfers. This variance was mainly due to one member company group transferring a greater number of vehicles to the pool in October than projected.

The chart on the left shows the overall change in the **month**, broken down by member company group changes (each blue bar represents the change for a single member company group), sorted by magnitude of change. Five member company groups transferred fewer vehicles to the pool this month compared with a year ago, while five transferred more. Of the 5 member company groups transferring fewer vehicles, 1 member

company group accounted for 78% of the total transfer decrease for these "decliner" members. Of the 5 member company groups transferring more vehicles, 3 member company groups accounted for 93% of the total transfer increase for these "grower" members.



The chart on the left presents the same information as the previous chart, but on a **year-to-date** basis. That is, it shows the overall change in transfer counts year-to-date, broken down by member company group changes (each blue bar represents the change for a single member company group), sorted by magnitude of change.

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October's vehicle count transfers to the pool represent an 8.5% <u>in</u>crease from October 2017, and vehicle counts were up 10.5% year-to-date. Average written premium was up 4.1% in October 2018, and was up 5.2% year-to-date (see charts immediately below).



As a result of the movements in transfer vehicle counts and average written premium, the transferred premium was up 13.0% for the month compared with the 3.9% <u>increase</u> we projected last month, and was up 16.3% year-to-date (see charts at the top of the next page).



Should you require any further information, please call Norm Seeney, Vice President, Finance and Member Services at (416) 644-4914.

David J. Simpson, M.B.A., FCIP, C. Dir. President & CEO

### **Related links:**

Nova Scotia RSP October 2018 Operational Report – Actuarial Highlights

#### SUMMARY OF OPERATIONS - CALENDAR YEAR 2018

Risk Sharing Pool - Nova Scotia Operating Results for the 10 Months Ended October 31, 2018 (Discounted basis) Source: Monthly Operational Report (thousands of dollars)

											0.7004.0	CY2018 12 MONTHS	CY2017
	January	February	March	April	Мау	June	July	August	September	October	CY2018 YTD	Updated Projection	12 MONTHS Actual
Underwriting Revenue:													
Net Premiums Written	\$1,773	\$1,686	\$2,164	\$2,385	\$2,593	\$2,674	\$2,844	\$2,722	\$3,209	\$2,834	\$24,884	\$29,300	\$25,298
Decrease (Increase) in Unearned Premiums	389	337	118	(124)	(232)	(373)	(449)	(418)	(898)	(407)	(2,057)	(1,570)	(6,335)
Net Premiums Earned	\$2,162	\$2,023	\$2,282	\$2,261	\$2,361	\$2,301	\$2,395	\$2,304	\$2,311	\$2,427	\$22,827	\$27,730	\$18,963
Claims Incurred:													
Prior Accident Years:													
Undiscounted	(\$29)	(\$8)	(\$2,276)	\$0	\$1,366	(\$10)	(\$6)	\$104	(\$7)	\$1,061	\$195	\$195	(\$2,136)
Effect of Discounting	90	(39)	(48)	(32)	(79)	(23)	(63)	(122)	(53)	(208)	(577)	(711)	(1,836)
Discounted	\$61	(\$47)	(\$2,324)	(\$32)	\$1,287	(\$33)	(\$69)	(\$18)	(\$60)	\$853	(\$382)	(\$516)	(\$3,972)
Current Accident Year:													
Undiscounted	\$2,026	\$1,877	\$2,194	\$2,118	\$2,283	\$2,177	\$2,262	\$2,112	\$2,169	\$2,113	\$21,331	\$25,886	\$17,837
Effect of Discounting	117	92	108	100	50	87	89	87	92	(103)	719	850	817
Discounted	\$2,143	\$1,969	\$2,302	\$2,218	\$2,333	\$2,264	\$2,351	\$2,199	\$2,261	\$2,010	\$22,050	\$26,736	\$18,654
Claims Incurred	\$2,204	\$1,922	(\$22)	\$2,186	\$3,620	\$2,231	\$2,282	\$2,181	\$2,201	\$2,863	\$21,668	\$26,220	\$14,682
Underwriting Expenses:													
Expense Allowance	\$534	\$509	\$653	\$720	\$783	\$807	\$859	\$821	\$969	\$856	\$7,511	\$8,844	\$7,829
Change in UPDR/DPAC:													
Undiscounted	25	24	173	8	72	(2)	1	29	22	13	365	554	(773)
Effect of Discounting	(21)	(18)	17	8	(55)	21	23	40	53	(123)	(55)	(70)	37
Discounted	\$4	\$6	\$190	\$16	\$17	\$19	\$24	\$69	\$75	(\$110)	310	484	(\$736)
Underwriting Expenses	\$538	\$515	\$843	\$736	\$800	\$826	\$883	\$890	\$1,044	\$746	\$7,821	\$9,328	\$7,093
Net Underwriting Gain (Loss)	(\$580)	(\$414)	\$1,461	(\$661)	(\$2,059)	(\$756)	(\$770)	(\$767)	(\$934)	(\$1,182)	(\$6,662)	(\$7,818)	(\$2,812)
	(****)	(+ · · ·)	••,•••	(****)	(+_,)	(*****)	(*****)	(****)	(*****)	(+ - , ,	(+-,)	(+ , ,	(+_,- : _)
Administrative Expenses	\$40	\$56	\$59	\$48	\$55	\$47	\$48	\$56	\$45	\$56	\$510	\$707	\$600
Operating Result	(\$620)	(\$470)	\$1,402	(\$709)	(\$2,114)	(\$803)	(\$818)	(\$823)	(\$979)	(\$1,238)	(\$7,172)	(\$8,525)	(\$3,412)
Ratios:													
Claims & Expenses Incurred (Earned)													
Prior Accident Years	2.8%	-2.3%	-101.8%	-1.4%	54.5%	-1.4%	-2.9%	-0.8%	-2.6%	35.1%	-1.7%	-1.9%	-20.9%
Current Accident Year	99.1%	97.3%	100.9%	98.1%	98.8%	98.4%	98.2%	95.4%	97.8%	82.8%	96.6%	96.4%	98.4%
All Accident Years Combined	101.9%	95.0%	-0.9%	96.7%	153.3%	97.0%	95.3%	94.6%	95.2%	117.9%	94.9%	94.5%	77.5%
Underwriting & Administrative Expenses (Earned)	26.7%	28.2%	39.5%	34.7%	36.2%	37.9%	38.9%	41.1%	47.1%	33.0%	36.5%	36.2%	40.6%
Combined Operating Ratio	128.6%	123.2%	38.6%	131.4%	189.5%	134.9%	134.2%	135.7%	142.3%	150.9%	131.4%	130.7%	118.1%

Note: Amounts shown above do not reflect costs incurred directly by member companies e.g. income and premium taxes, health levies, association dues, cost of capital as a result of their compulsory participation in Facility Association and investment income earned on Facility Association premium dollars invested directly by members.

Rounding difference may apply