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TO: MEMBERS OF THE FACILITY ASSOCIATION

ATTENTION: CHIEF EXECUTIVE OFFICER

NOVA SCOTIA RISK SHARING POOL PROJECT MANAGER

BULLETIN NO.: F17–091

DATE: NOVEMBER 29, 2017

SUBJECT: NOVA SCOTIA RISK SHARING POOL

- OCTOBER 2017 OPERATIONAL REPORT

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

Please be advised that the October 2017 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, 2017 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 \$1.0 million **unfavourable** impact on the month's net result from operations, adding an estimated 6.9 points to the year-to-date Combined Operating Ratio (ending at 116.4%). The impact is summarized in the tables at the top of the next page¹.

¹In 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".

NS	unfav / (fav) for the month and ytd							14,762	(actual)				
	IMPACT in \$000s from changes in:							IMPACT unfav / (fav) as % ytd EP from changes in:					
	ults & payout patterns dsct rate margins							ults & payout patterns dsct rate r					
	Nominal apv adj. sub-tot apv adj. a		apv adj. TOTAL		Nominal apv adj		sub-tot apv adj.		apv adj.	TOTAL			
	[1]	[2]	[3]	[4]	[4] [5]		[1]	[2]	[3]	[4]	[5]	[6]	
PAYs	1,490	106	1,596	(364)	-	1,232	10.1%	0.7%	10.8%	(2.5%)	-	8.3%	
CAY	164	3	167	(189)	-	(22)	1.1%	-	1.1%	(1.3%)	-	(0.1%)	
Prem Def	42	42 <mark>(20)</mark> 22 <mark>(207)</mark> -		-	(185)	0.3%	(0.1%)	0.1%	(1.4%)	-	(1.3%)		
TOTAL	1,696 89 1,785 (760) -		1,025	11.5%	0.6%	12.1%	(5.1%)	-	6.9%				

The valuation result is due to changes generated from updated nominal ultimate selections and projected cash flows (generating a \$1.8 million <u>unfavourable</u> impact – see column [3] in the left table above), partially offset by the impact of a 56 basis point <u>increase</u> in the selected discount rate (from 1.17% to 1.73%, generating a \$0.8 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 no change in the margins for adverse deviation for claims development as selected at the coverage / accident year level (hence generating no impact – see column [5] in the left table above).

Management has observed favourable *total* valuation impacts over the last 12 valuation implementations, although with 8 of 12 valuation implementations being <u>unfavourable</u> over that period, as shown in the table below (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 [4] are largely outside of the control of FA (as being related to macroeconomic factors).

RSP: Nova Sco	tia,								
as at: 2017 Q3				Valuation Impler		act (\$000s)	\$000s		
Valuation	updated LRs &	updated LRs &	APVs @ prior	updated dsct	updated	Total Impact	Booked Policy	Total Impact as	Nominal Impact
	exp [1]	exp [2]	assumptions [3]	rate [4]	margins [5]	[6]	Liabilities [7]	% Book Liabs [8]	as % Book Liabs [9]
	[1]	[2]	[3]	[4]	ادا	= sum([1] to [6])	[7]	= [6] / [7]	= [2] / [7]
2014 Q4	Mar	836	88	62	-	986	34,089	2.9%	2.5%
2015 Q1	May	(74)	(25)	551	(218)	234	35,839	0.7%	(0.2%)
2015 Q2	Aug	1,510	195	(265)	(116)	1,324	39,491	3.4%	3.8%
2015 Q3	Oct	(117)	12	216	-	111	39,941	0.3%	(0.3%)
2015 Q4	Mar	(772)	(56)	48	-	(780)	39,517	(2.0%)	(2.0%)
2016 Q1	May	294	94	33	-	421	41,963	1.0%	0.7%
2016 Q2	Aug	(92)	(43)	67	(918)	(986)	43,376	(2.3%)	(0.2%)
2016 Q3	Oct	836	88	62	-	986	45,643	2.2%	1.8%
2016 Q4	Mar	(1,416)	(140)	(535)	-	(2,091)	43,088	(4.9%)	(3.3%)
2017 Q1	May	103	10	92	-	205	45,635	0.4%	0.2%
2017 Q2	Aug	(3,429)	(363)	(286)	(87)	(4,165)	47,893	(8.7%)	(7.2%)
2017 Q3	Oct	1,696	89	(760)	-	1,025	52,341	2.0%	3.2%
12-qtrs	-	(625)	(51)	(715)	(1,339)	(2,730)			
% of total		22.9%	1.9%	26.2%	49.0%	100.0%			
Averages									
12-qtrs		(52)	(4)	(60)	(122)	(228)	42,401	(0.5%)	(0.1%)
2014 Q4 to 2016 Q3		303	44	97	(179)	287	39,982	0.7%	0.8%
2016 Q4 to 2017 Q3		(762)	(101)	(372)	(22)	(1,257)	47,239	(2.7%)	(1.6%)

The FA valuation approach is focused on providing best estimates on a nominal basis, and we expect this to manifest itself as a close-to-zero 12-quarter impact for column [2] in the table above. This objective has not been met, and the most recent 4 valuations have a worse result than the earlier 8-quarter period ("worse" in terms of absolute magnitude). That said, we are not overly concerned about this at this point, as the nominal changes remain within 2 percent of policy liabilities.

Please see "Effect of Quarterly Valuation" on page 5 for additional detail.

Summary of Financial Results

The calendar year-to-date Operating Result is -\$2.4 million and the incurred loss ratio to the end of 10 months is 72.9%, as summarized in the table below.

Α	October	October	Year to date	Year to Date	
Amounts in \$000s	2017	2016	Oct 2017	Oct 2016	
Premium Written	2,509	1,244	21,403	13,659	
Premium Earned	1,902	1,318	14,762	12,320	
Incurred Losses	3,010	2,301	10,757	12,367	
Underwriting & Admin Expense	653	513	6,415	4,944	
Operating Result	(1,761)	(1,496)	(2,410)	(4,991)	
Ratios:					
Loss ratio - Prior Accident Years	61.9%	69.7%	(25.9%)	(3.6%)	
- Current Accident Year	96.4%	104.9%	98.8%	104.0%	
Total	158.3%	174.6%	72.9%	100.4%	
Underwriting & Admin Expense	34.3%	38.9%	43.5%	40.1%	
Combined Operating Ratio	192.6%	213.5%	116.4%	140.5%	

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 2017" attached to this bulletin.

Updated Projection to Year-end 2017

The projected calendar year Operating Result to December 2017 is -\$3.7 million and the estimated combined operating ratio to December 2017 is 120.0%, as summarized in the table at the top of the next page.

NS RSP Yr-end Projection	Current	Prior Mth		Final 2017
Amounts in \$000s	(Oct 2017)	(Sep 2017)	Change	Outlook*
Premium Written	25,882	27,032	(1,150)	15,943
Premium Earned	18,788	18,996	(208)	15,564
Incurred Losses	14,572	13,584	988	15,512
Underwriting & Admin Expense	7,959	8,638	(680)	5,752
Net Result from Operations	(3,743)	(3,226)	(516)	(5,700)
Ratios:				
Loss ratio - Prior Accident Years	(20.9%)	(27.2%)	6.3%	(5.1%)
- Current Accident Year	98.5%	98.7%	(0.2%)	104.8%
Total	77.6%	71.5%	6.1%	99.7%
Underwriting & Admin Expense	42.4%	45.5%	(3.1%)	37.0%
Combined Operating Ratio	120.0%	117.0%	3.0%	136.7%

rounding differences may occur

*as posted to FA's website Sep. 28, 2016

This updated projection to the end of the year has deteriorated by \$0.5 million from the projection provided last month (see table above), mainly due to the overall <u>unfavourable</u> impact of the September 30, 2017 valuation, as summarized in the table below (see also the "Effect of Quarterly Valuation" on page 5). Remaining differences were driven by changes in projected premium volumes, and the associated impacts on claims and expense projections. Variances in written/earned premium and prior accident year and current & future accident year loss ratio changes impacts (driven by valuation results) are the main drivers of variances from the Final 2017 Outlook based on August 2016 Operational Report.

NS		unfav ,	/ (fav) proje	ected for fu	II year	year EP	10,585	(projected	d this mont	h)			
	IMPACT in \$000s from changes in:							IMPACT unfav / (fav) as % full year EP from changes in:					
	ults 8	ults 8	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	1,490	98	1,588	1,588 (343)		1,245	14.1%	0.9%	15.0%	(3.2%)	-	11.8%	
CAY	209	(1)	(1) 208 (234)		-	(26)	2.0%	-	2.0%	(2.2%)	-	(0.2%)	
Prem Def	1	(25)	(24)	(211)	-	(235)		(0.2%)	(0.2%)	(2.0%)	-	(2.2%)	
TOTAL	1,700 72 1,772 (788)		-	984	16.1%	0.7%	16.7%	(7.4%)	-	9.3%			

Current Month Results

The Nova Scotia Risk Sharing Pool produced a -\$1.8 million Operating Result in the month of October 2017, a \$0.3 million deterioration from the same month last year. This deterioration is composed of an estimated \$0.7 million unfavourable impact associated with the \$0.6 million increase in earned premium (at a combined ratio of 213.5%), offset by a \$0.4 million improvement stemming from the overall decrease in the combined ratio (from 213.5% to 192.6% applied to \$1.9 million in earned premium). 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 105.1% at the end of

9 months to 116.4% at the end of 10 months. The 11.3 percentage point increase is composed of a 13.0 percentage point increase in the Prior Accident Year loss ratio, offset by a 0.4 percentage point decrease in the Current Accident Year loss ratio, further offset by a 1.3 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 2017	Actual	Projection	Difference	Difference %
Written Premium	2,509	3,659	(1,150)	(31.4%)
Earned Premium	1,902	2,017	(115)	(5.7%)
Reported Losses				
Paid Losses	1,183	1,024	159	15.5%
Paid Expenses	42	32	10	31.3%
Change in Outstanding Losses	212	327	(115)	(35.2%)
Total Reported Losses	1,437	1,383	54	3.9%
Change in IBNR Provision *	1,573	546	1,027	
Change in Premium Deficiency (DPAC) *	(171)	27	(198)	

(Amounts in \$000's) rounding differences may occur

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 reporting patterns. Actual reporting patterns vary from month-to-month, sometimes considerably. Although variances from our projections are expected, management investigates variances beyond set thresholds and responds as appropriate.

For the month of October 2017, reported losses were \$54 thousand higher than projected. The Current Accident Year had a \$332 thousand <u>unfavourable</u> variance in reported losses, while the Prior Accident Years had a \$278 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 2017 Nova Scotia Risk Sharing Pool Operational Report reflects the results of an updated valuation as at September 30, 2017, with the associated impacts in relation to the results for October 2017 summarized in the table at the top of the next page.

^{*}Detailed information is included at Nova Scotia RSP October 2017 Operational Report - Actuarial Highlights.

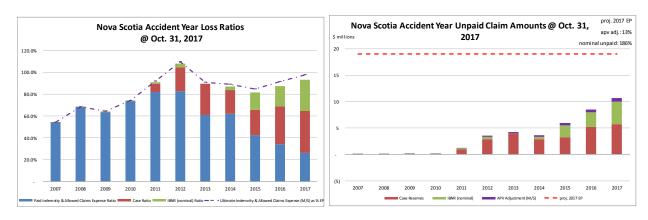
NS	unfav / (fav) for the month and ytd												
		IMPACT in \$000s from changes in:											
	ults &	payout patt	erns	dsct rate	margins								
	Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL							
	[1]	[2]	[3]	[4]	[5]	[6]							
PAYs	1,490	106	1,596	(364)	-	1,232							
CAY	164	3	167	(189)	-	(22)							
Prem Def	42	(20)	22	(207)	-	(185)							
TOTAL	1,696	89	1,785	(760)	-	1,025							

mun ep	1,902	(actual)									
IMPACT unfav / (fav) as % mth EP from changes in:											
ults &	payout pat	terns	dsct rate	margins							
Nominal	apv adj.	sub-tot	apv adj.	apv adj.	TOTAL						
[1]	[2]	[3]	[4]	[5]	[6]						
78.3%	5.6%	83.9%	(19.1%)	-	64.8%						
8.6%	0.2%	8.8%	(9.9%)	-	(1.2%)						
2.2%	(1.1%)	1.2%	(10.9%)	-	(9.7%)						
89.2%	4.7%	93.8%	(40.0%)	-	53.9%						

1.002 (actual)

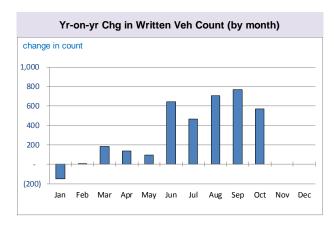
The charts below summarize the current view of the historical loss ratios (indemnity and allowed claims adjustment expenses on a nominal basis) and the associated claims liabilities.

mth ED

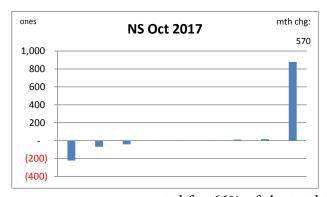


The preceding charts, latest valuation results, and related actuarial present value assumption updates are discussed in more detail in the <u>Nova Scotia RSP October 2017 Operational Report – Actuarial Highlights</u>. The Actuarial Quarterly Valuation Highlights Risk Sharing Pools as at September 30, 2017 are expected to be posted on or before December 15, 2017. The actuarial valuation will be updated next as at December 31, 2017 and we anticipate the results will be reflected in the March 2018 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 570 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 1,473 vehicles, indicating a variance of 903 from the actual transfers. This variance was mainly due to one member company group transferring a lower number of vehicles to the pool in October than projected.



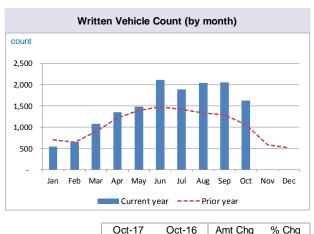
The chart on the left shows the overall change in the **month**, broken down by member company group changes (each blue bar represents the change for a single member company group), sorted by magnitude of change. Five member company groups transferred fewer vehicles to the pool this month compared with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

company group accounted for 66% of the total transfer decrease for these "decliner" members. Of the 4 member company groups transferring more vehicles, 1 member company group accounted for 97% 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.

October's vehicle count transfers to the pool represent a 53.8% <u>in</u>crease from October 2016, and vehicle counts were up 30.0% year-to-date. Average written premium was up 31.0% in October 2017, and was up 20.5% year-to-date (see charts immediately below and at the top of the next page).



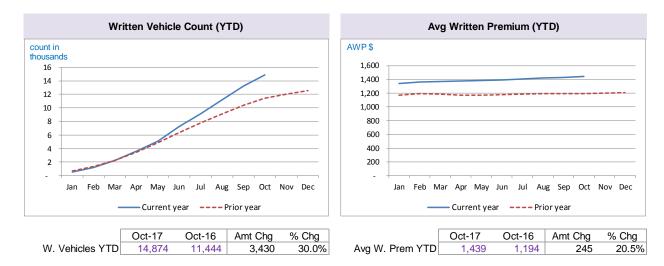
1.628

1.058

W. Veh curr mth



53.8%



As a result of the movements in transfer vehicle counts and average written premium, the transferred premium was up 101.6% for the month compared with the 194.0% <u>increase</u> we projected last month (based in particular on a significant increase in transfers projected by one member), and was up 56.7% year-to-date (see charts immediately below).



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 2017 Operational Report – Actuarial Highlights

SUMMARY OF OPERATIONS - CALENDAR YEAR 2017

Risk Sharing Pool - Nova Scotia Operating Results for the 10 Months Ended October 31, 2017 (Discounted basis) Source: Monthly Operational Report (thousands of dollars)

												CY2017 12 MONTHS	CY2016
	January	February	March	April	May	June	July	August	September	October	CY2017 YTD	Updated Projection	12 MONTHS Actual
Underwriting Revenue:													
Net Premiums Written	\$739	\$895	\$1,493	\$1,876	\$2,082	\$3,012	\$2,757	\$3,005	\$3,035	\$2,509	\$21,403	\$25,882	\$15,184
Decrease (Increase) in Unearned Premiums	529	241	(193)	(566)	(684)	(1,570)	(1,189)	(1,329)	(1,273)	(607)	(6,641)	(7,094)	(383)
Net Premiums Earned	\$1,268	\$1,136	\$1,300	\$1,310	\$1,398	\$1,442	\$1,568	\$1,676	\$1,762	\$1,902	\$14,762	\$18,788	\$14,801
Claims Incurred:													
Prior Accident Years:													
Undiscounted	(\$35)	(\$36)	(\$1,321)	(\$9)	(\$27)	(\$8)	(\$17)	(\$2,163)	(\$4)	\$1,485	(\$2,135)	(\$2,135)	\$441
Effect of Discounting	(88)	(47)	(566)	(42)	12	(64)	(52)	(509)	(31)	(308)	(1,695)	(1,792)	(1,075)
Discounted	(\$123)	(\$83)	(\$1,887)	(\$51)	(\$15)	(\$72)	(\$69)	(\$2,672)	(\$35)	\$1,177	(\$3,830)	(\$3,927)	(\$634)
Current Accident Year:									-	·			
Undiscounted	\$1,272	\$1,146	\$1,252	\$1,274	\$1,418	\$1,412	\$1,546	\$1,051	\$1,628	\$1,922	\$13,921	\$17,674	\$14,225
Effect of Discounting	117	93	52	77	113	104	110	(11)	100	(89)	666	825	1,155
Discounted	\$1,389	\$1,239	\$1,304	\$1,351	\$1,531	\$1,516	\$1,656	\$1,040	\$1,728	\$1,833	\$14,587	\$18,499	\$15,380
Claims Incurred	\$1,266	\$1,156	(\$583)	\$1,300	\$1,516	\$1,444	\$1,587	(\$1,632)	\$1,693	\$3,010	\$10,757	\$14,572	\$14,746
Underwriting Expenses:													
Expense Allowance	\$225	\$274	\$461	\$581	\$645	\$933	\$853	\$931	\$941	\$777	\$6,621	\$8,008	\$5,288
Change in UPDR/DPAC:													
Undiscounted	5	5	(73)	(2)	60	(7)	(3)	(685)	(73)	12	(761)	(816)	(184)
Effect of Discounting	(50)	(22)	(99)	48	77	131	100	(37)	92	(183)	57	80	(22)
Discounted	(\$45)	(\$17)	(\$172)	\$46	\$137	\$124	\$97	(\$722)	\$19	(\$171)	(704)	(\$736)	(\$206)
Underwriting Expenses	\$180	\$257	\$289	\$627	\$782	\$1,057	\$950	\$209	\$960	\$606	\$5,917	\$7,272	\$5,082
Net Underwriting Gain (Loss)	(\$178)	(\$277)	\$1,594	(\$617)	(\$900)	(\$1,059)	(\$969)	\$3,099	(\$891)	(\$1,714)	(\$1,912)	(\$3,056)	(\$5,027)
Het Orido Willing Gain (2005)	(\$1.10)	(4211)	ψ1,004	(\$011)	(4555)	(ψ1,000)	(4555)	ψ0,000	(\$00.)	(\$1,114)	(41,512)	(40,000)	(40,021)
Administrative Expenses	\$46	\$61	\$45	\$51	\$62	\$48	\$46	\$50	\$42	\$47	\$498	\$687	\$474
Operating Result	(\$224)	(\$338)	\$1,549	(\$668)	(\$962)	(\$1,107)	(\$1,015)	\$3,049	(\$933)	(\$1,761)	(\$2,410)	(\$3,743)	(\$5,501)
Ratios:													
Claims & Expenses Incurred (Earned)													
Prior Accident Years	-9.7%	-7.3%	-145.2%	-3.9%	-1.1%	-5.0%	-4.4%	-159.4%	-2.0%	61.9%	-25.9%	-20.9%	-4.3%
Current Accident Year	109.5%	109.1%	100.3%	103.1%	109.5%	105.1%	105.6%	62.1%	98.1%	96.4%	98.8%	98.5%	103.9%
All Accident Years Combined	99.8%	101.8%	-44.9%	99.2%	108.4%	100.1%	101.2%	-97.3%	96.1%	158.3%	72.9%	77.6%	99.6%
Underwriting & Administrative Expenses (Earned)	17.8%	28.0%	25.7%	51.8%	60.4%	76.6%	63.5%	15.5%	56.9%	34.3%	43.5%	42.4%	37.5%
Combined Operating Ratio	117.6%	129.8%	-19.2%	151.0%	168.8%	176.7%	164.7%	-81.8%	153.0%	192.6%	116.4%	120.0%	137.1%

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 Facilty Association premium dollars invested directly by members.

Rounding difference may apply